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Paving the Way for Motor Trucks

With good roads now available Michigan farmers should lose no time in getting together and developing motor truck routes for shipping their products to the markets.

By C. B. Ford

NOW that the several stretches of unimproved roads have been put into condition to bear heavy traffic, practically connecting up the main trunk lines between central Michigan points and Detroit, farmers in several communities are beginning to study the problem of utilizing motor trucks for marketing farm produce of all kinds, including live stock. The truck has already demonstrated its value and efficiency in the fruit-growing and trucking districts where prompt marketing is one of the first essentials of success. As it happens, the commercial fruit-growing and trucking regions of the state are fairly well served as regards good roads, because the character of the soil in these districts renders the problem of maintaining dirt roads comparatively easy. Along some of the main traveled roads in central Michigan the soil conditions are vastly different; besides, on some of these trunk lines the traffic has been so heavy during the past three or four years as to render the unimproved stretches almost impassable at times. It is a well known fact that the load hauled by a motor truck can be no greater than it will carry over the portion of the roads that are in the worst condition.

Outside of a few months during the winter the motor truck can be used to solve the marketing problem of farmers in central and southern counties of the state. Except in the case of live stock the open season for motor trucks coincides with the season for the movement of all farm products, that is, if the roads are so constructed as to stand up under heavy loads and steady hauling. In some cases snow storms may prove an obstacle, but such periods are usually of short duration. Farming is becoming more and more a business that demands prompt transportation and marketing of the products, and from present indications the time is past when farmers can depend up-

on the railroads for short hauls, which include additional delivery charges after the products reach the city terminals. Every well-posted farmer and market expert realizes the necessity of providing means other than the railroads for transporting the farm produce of the country, especially if some of the grasping middlemen are circumvented on the route.

Before the motor truck can successfully replace the present system of freight and express shipments it is important that considerable educational work be done to familiarize the farmers with the problems of packing, grading and classifying their products so that they may be shipped direct to the trade, or through as few channels as possible before they reach the home of the consumer. Probably eggs and live poultry shipments result in greater losses to shippers than any other products of Michigan farms. This problem could easily be solved by having cooperative packing stations in various communities where the eggs and fowls could be assembled, graded, packed and classified so that they would be ready to ship through direct to buyers by motor truck. I believe that I am conservative in saying that such a system of sales and distribution of poultry products would save more than two million dollars to the farmers of Michigan every year, besides with a proper sales organization to handle the eggs and fowls there would be no complaint about individual shippers failing to get a square deal in the mat-

ter of prices and losses due to breakage and shrinkage on the road to the market.

Further benefits of such a cooperative system of handling and selling poultry products would be that of encouraging farmers to keep better-bred flocks and to produce more uniform products. A few farmers will claim this is small business, but right here I want to say that under such a system of cooperative marketing, aided and supported by several good field men from the agricultural college at East Lansing the poultry industry in Michigan would easily outstrip every other single line of farming. The Michigan Farm Bureau will be overlooking one of its best bets if it neglects to federate the poultry interests of the state, show them the benefits to be derived from cooperative selling, breeding better fowls and shipping their products direct to the city trade, rather than produce mixed lots of inferior products and accept anything the city dealers and their country agents see fit to offer. With the present trunk lines and new roads being completed there is absolutely no reason why the poultry interests should not be organized for better production and more businesslike methods of marketing.

With an adequate system of transportation and marketing for poultry products, growers of small fruit and vegetables would find it possible to utilize the system for handling their products which in the aggregate amount to thousands of dollars annu-

ally. People who live in large cities frequently complain that farmers neglect to harvest a portion of their small fruit and truck crops, but the fault is with the system of shipping and distributing rather than with the farmers themselves having a disposition to allow their produce to spoil. Given the proper means of shipping such small products to market and the amount of waste fruit and produce on the farms would be a negligible quantity. The express companies have been tried and found wanting, but motor trucks can solve the problem. But first of all must come some sort of an organized effort on the part of farmers themselves to provide means of collecting the stuff at some particular point in sufficient volume to insure a load at the time shipment is to be made.

Another problem confronting farmers who are developing such a system is that of securing return loads for the trucks. This is a matter that requires more or less pioneer work in familiarizing patrons with its uses and advantages. In many cases such a service demands an assembling station where the truck can be loaded for the return trip with as little delay as possible. Practically every failure to make the return load profitable has resulted from depending upon the driver to spend too much time doing pick-up work in the city.

The marketing of live stock affords a profitable field for study and investigation in the use of motor trucks for marketing. The shipping of carloads of mixed animals, always a perplexing problem, is easily solved by the use of large trucks. Besides the losses due to overcrowding and injury are minimized when the animals are loaded promptly and put on the market with the least possible delay. In some instances motor trucks with solid tires have failed to give complete satisfaction in the transportation of farm pro-

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CURRENT COMMENT

The Milk Situation Improved

AS noted on the market page of our last issue, Judge Tuttle, of the United States District Court for Eastern Michigan, issued a restraining order against the enforcement of the finding of the federal fair price committee by which the retail price of milk in Detroit was reduced to fourteen cents per quart on Tuesday of last week, on the ground that Section 4 of the Lever act under which the committee operated is unconstitutional. Later, this temporary injunction was made permanent to facilitate an early appeal to the Supreme Court of the United States. In the meantime the old milk price as fixed by the Detroit Area Milk Commission was reinstated and a heavy cut in the price to producers was avoided.

In the meantime it was reported that shipments were withheld by many individual producers, resulting in a decline of about ten per cent in the receipts of market milk, which indicates the attitude of producers toward an unjust and unwarranted reduction in milk prices at a time when production costs are at the highest point in the history of milk production in this state.

What the final outcome of the pending litigation may be cannot, of course, be foretold, but the present results are a matter for congratulation, not alone to the dairymen of the Detroit area, but to the consumers of Detroit as well, whose milk supply would have been seriously threatened by the enforcement of the findings of the fair price committee.

Sugar Beet Conference Not Called

IN our last issue the hope was expressed that a fair settlement of the sugar beet controversy might result from a conference of the contending parties. Since that issue was closed current press reports indicate that the governor will not call the conference, the ostensible reason being that the manufacturers could not be interested in the move.

This proposed conference was commented on in our last issue as "A Last Chance for Sugar Beets." With the passing of that chance for an adjustment of the differences between beet growers and sugar manufacturers, it is probable that no adjustment will be reached before the beet planting season. This will mean a very greatly curtailed production of sugar in Michigan this year, notwithstanding the claims as to the acreage which will

be planted advanced by some of the factories. It will also mean that many farmers will substitute other crops for sugar beets this year. As a possible aid to these we have published several articles on substitute crops for sugar beets in recent issues.

While it is most regrettable that this situation has been brought about in this year of sugar shortage by the attitude of the manufacturers in refusing to meet with the growers for the discussion of contract terms, this apparently unavoidable evil may not be wholly unmixed with good results, since it will undoubtedly demonstrate to the manufacturers the wisdom of maintaining fair and open relations with the great body of Michigan farmers on whom they are dependent for their raw material.

Printing Your Paper

EVERY farmer encounters serious and unusual difficulties in operating his farm under present conditions, and is thus in a position to appreciate the difficulties encountered by others, including those whose business it is to serve him. As noted in the last issue the publishers of the Michigan Farmer were confronted by serious and most unusual difficulties in getting out your last paper. Owing to a shortage of coal and the impossibility of replenishing the supply because of the

railroad switchmen's strike, the Detroit Edison Co., from whom we secure electric power for the operation of our plant, was obliged to restrict power consumption, and cut off service from the electrotype foundry where the page plates from which our paper is printed are made. In order to get them made we were obliged to load our page forms in automobiles and drive with them to Cleveland, where the plates were made in the Ohio Farmer plant, and brought back by the same overland route. This necessitated driving all of two nights and most of two days by four members of the Michigan Farmer staff, over exceedingly difficult roads and through the flood of rain which swept Ohio last week. In the meantime a tractor was purchased, a fuel supply secured, and all necessary arrangements made to generate our own electrical current with which to print the paper.

But notwithstanding these serious and unusual difficulties, they were successfully surmounted and every subscriber's paper was mailed on schedule time. Slightly improved conditions have made the proposition an easier one this week, but no matter what difficulties may be encountered they will be surmounted so far as is humanly possible, to get your paper to you on time each week, as well as to make it afford you a maximum of service value in each issue.

Farmer Legislation Held Up

Congressmen Loath to Enact Laws Designed to Help Producers, Until After Election.

IF the Capper-Hersman farmers' collective bargaining bill is ever reported out of the House Judiciary Committee, it will undoubtedly be revised to such an extent that the authors of the original bill will hardly recognize it. Representative Andrew J. Volstead, of Minnesota, chairman of the judiciary committee, has prepared a tentative bill which he hopes will be a satisfactory substitute for the Capper-Hersman bill, giving the farmers a law that will meet their demands, without certain objectionable features the committee is said to have found in the original measure.

Mr. Volstead's bill is designed to authorize by law the association of producers of agricultural products. It provides that farmers may act together in associations, corporations or otherwise, with or without capital stock, in collective processing, preparing for market, handling and marketing in interstate and foreign commerce the products of their members, provided that each member has an equal voice in the management of his association irrespective of the amount of capital he may have contributed thereto, and that no one is entitled to be a member or to share in the profits of the association unless he is a farmer engaged in the production of agricultural products, and also providing that the association is for the mutual help of its members and not for profit upon

the property of the association or upon the stock or share owned by members, and such profit shall not exceed seven per cent annually upon the amount invested.

If the secretary of agriculture should have reason to believe that any such association, either by reason of its size or because of the form of its organization, or the methods used by it in carrying on its business, is monopolizing or restraining trade or lessening competition to such an extent that the price of any agricultural product is unreasonably enhanced by reason thereof, he shall serve upon such association a complaint stating his charge in that respect. A hearing shall be had not less than thirty days after the service of the complaint, requiring the association to show cause why an order should not be made directing it to desist from its monopolistic practices. If upon such hearing the secretary of agriculture shall be of the opinion that the association is monopolizing trade to such an extent that the price of any agricultural product is enhanced thereby, he shall direct such association to cease therefrom, and may order that it reorganize in such manner as the secretary of agriculture may deem necessary. The Department of Justice is to have charge of the enforcement of the secretary of agriculture's orders. The court may issue a temporary injunction forbid-

ding the association from violating such order until the matter can be settled in court.

Gray Silver, Washington representative of the American Federation of Farm Bureaus, regards the Volstead bill as supplementary to, rather than a substitute for the Capper-Hersman bill. He refers to a case in Tennessee where it was shown that several dealers in lumber who were members of an organization formed on the open competition plan, exchanged with one another through a common secretary, reports showing their respective rates of production and stock in hand, and also the prices which each member had received on actual sales of lumber. The federal district judge, after hearings were held, last month, decided that this was a violation of the Clayton amendment to the anti-trust law.

All farmers who, when assembled in groups, discuss the prices of farm products, costs and actual sales made, are guilty under this decision; and who ever saw a group of farmers together who did not discuss these matters? We can have cooperative work done only through a common secretary, so that the decision of the federal judge forbids all cooperation of farmers and provides jail sentences for the violators. In fact, it places a jail in every farmer's yard.

Mr. Silver thinks the Volstead bill should supplement the Capper-Hersman (Continued on page 702).

News of the Week

Tuesday, April 30.

PREMIER LITTI of Italy comes out boldly at the international conference at San Remo, Italy, for general official recognition of Soviet Russia. —Pittsburgh railroad strikers are returning to work. —The United States Chamber of Commerce is planning for an increased production convention to be held at Atlantic City. —The burning of warehouses near Hamburg, Germany, results in a loss of \$5,000,000 worth of foodstuffs. —Julius H. Barnes, United States wheat director, opposes extension of guaranteed wheat prices.

Wednesday, April 21.

THE Chicago Yardmen's Association calls meeting to settle railway strike if possible. —President Wilson and his cabinet meet for the second time since his illness last fall. —Judge Tuttle, of the Federal Court, makes injunction against Fair Price Committee from prosecuting milk distributors under Lever Act, permanent. —Tornadoes sweep Mississippi, Alabama and Tennessee, resulting in a death list of over 140 persons and property losses aggregating many millions of dollars. —Stock exchanges of Japan are forced to close because of a money panic. —A severe earthquake shock is felt at Mexico City and nearby towns.

Thursday, April 22.

THE Allied Supreme Council is fully prepared to execute the Turkish treaty by military force if necessary. —The railway strike situation shows some improvement with a few of the old men returning to work. —Canada proposes a tax on luxuries. —The world's W. C. T. U. convention is meeting in London, England. —The general assembly of Rhode Island passes a bill permitting the sale of four per cent beer. —Fourteen persons are injured in a fight between strikers and local police at Butte, Montana.

Friday, April 23.

FEDERAL reserve agents fear increased living costs for the coming year because of the high rentals and big wages farmers must pay in producing this year's crop. —The deadlock between France and Great Britain over the proposition of inviting Germany's representative to the San Remo conference continues. —Railroads are opposed to the proposed congressional action regarding seasonal tariffs for carrying coal. —President Wilson refuses to take part in the settlement of the outlaw railroad strike. —It is rumored that Japan has declared war on Russia.

Saturday, April 24.

ACCORDING to the decision reached by the supreme council, Armenia is to be created an independent state. —Two American warships have been dispatched from San Diego to Mexican waters to protect American (Continued on page 723).

Wool Pool Becomes Popular with Farmers

IT may interest our readers to know that already wool is arriving at the Farm Bureau warehouse at Lansing in generous quantities. Much of it is being hauled in by motor trucks from Clinton, Eaton and nearby counties. Judging from the interest wool growers are taking in the new method of handling the 1920 wool clip it is quite likely that the aim of the Farm Bureau to handle two million pounds of wool this year will be exceeded. It has not taken long to demonstrate the benefits of the new pooling arrangements to growers. In many localities the local buyers have been forced to advance their prices to nearly ten cents per pound more than they were four weeks ago.

Growers of Canner Crops Organize

Michigan Pea Growers and Producers of Other Canner Crops will be Interested in the Present Organization in York State--A. H. Pulver

THE New York Canning Crops Cooperative Association, organized by county branches in the principal canning crop counties of the state, is a just answer of the growers to the canners, who for many years have maintained a state organization and at all times have known exactly what they wanted. Until the present season the growers as individuals have made contracts with an organized class. Since the infancy of the business with the canning factories the growers of fruits and vegetables have been at a disadvantage. Contracts have been made at the dictum of the canners. Payment for the crops has nearly always been held up until late in the fall or winter when the finished products were sold by the canners. In a sense, this has made the farmer carry much of the capital represented in the industry. Contracts with the growers have not been uniform on the same items grown under similar conditions and some minor irregularities have crept in on seed distribution.

That these evils, many of which were not so pressing in the infancy of the business, might be remedied the growers have started a movement which is rapidly sweeping the state and many look for its extension far and wide outside of New York. While often the growers have received fair pay for most of their crops, they have always been obliged to take whatever the canners have offered. They have never had any opportunity before this year of negotiating a price for such crops as peas, corn, string beans, etc.

It is the general belief that when the organization becomes fully operative the canners will rejoice also in the new movement, as under old conditions the factory interests had a multitude of details incident to the

planting of the crops desired to look after, which will now be taken over by the growers' organization. Instead of the many individual contracts the canners will deal directly with the county branch, thus eliminating the bulk of the routine work, no member of the association being expected to sell his crops except through the central county agency. In each county there is a central organization which will represent the growers in all transactions with the canners. In so far as possible the contract prices will be uniform throughout the state, though slight variations will be in order to meet differing conditions under which the same crops are grown. However, there will be no more wide differences in price for the same crop, which on the item of tomatoes varied from eight to ten dollars per ton in adjoining counties last season with cultural conditions about the same in both sections.

Allowing for slight fluctuation, due

to local conditions, here is the schedule or scale effective between grower and canner for the 1920 season: Peas are to be graded into five classes, with the price of each class as follows: No. 1, ten cents per pound; No. 2, eight cents per pound; No. 3, three cents per pound; Nos. 4 and 5, two cents per pound. The grades of peas are decided by sorting and grading one hundred pounds from a given lot. By the terms of the agreement, the canners will guarantee to pay at least \$81.75 per ton for Early June peas, and \$76.25 for Sweet Wrinkle peas. Added to these minimum prices to the growers, will go as much more as the grading indicates. The peas are to be weighed as cleaned by the squirrel cage cleaner. Careful computations made from the records of 1918 show that many crops delivered that year would have brought, if figured on the basis of the new 1920 prices, \$90 and more per ton.

The year 1919 was disastrous for

the pea grower, and both he and the canner lost money, and lots of it, on peas. Because of these facts, the canners negotiated with the association for a considerable increase on the price of last year. The association in turn agrees to renew a general interest in the crop and gives assurance of the desired acreage.

For tomatoes, \$22.50 per ton will be paid, though some counties are holding out for \$25. This item perhaps has caused more controversy than all the others combined as growers in Monroe and one or two other counties stoutly insist that no profit can be realized at this figure. In support of this contention the dissatisfied growers call attention to the much higher scale prevailing in Maryland, Delaware and New Jersey, where contracts have been made at \$30 and \$35 a ton.

For sweet corn, \$28.50 per ton on a husked basis will be paid, husks to be returned to grower if desired. In some districts it is customary to buy sweet corn at a stated price per gross ton, with husks and ear together. Most growers are coming to believe it fairer to sell on a husked basis. By this method the man who not only grows good crops, but is careful in selecting and breaks the ear off close, thus marketing a minimum amount of stalk, receives pay for the actual corn he delivers. The man who is careless and indifferent in his work also receives what his corn is actually worth. When sold on a gross tonnage basis, the good grower virtually is penalized and the poor grower rewarded.

While heretofore the growers have received their pro rata of ensilage from peas free, under the new schedule of prices they will pay two dollars per ton for silage and one dollar per ton for spoiled silage. About two tons

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What About the Future of Orcharding in Michigan?

Mr. Pickford, Horticultural Expert Thinks Thoughtful Farmers Should give the Fruit Business a Square Look.

SOME years ago the small orchard on the general farm in Michigan was supplying most of the deciduous fruit consumed. Not much attention was paid to the cost of production; indeed, the cost was small. It consisted of planting the trees, "trimming" occasionally, and harvesting. When the crop was good the price was very low. This idea of low prices for orchard products was so firmly fixed in the minds of our farmers that many cannot forget it. Times have changed, however. There are fewer orchard men, production costs are high, and naturally prices are up. Coupled with these considerations, the marketing process is better, due to organization and more efficient distribution. The bugbear of overproduction is apparently over the horizon, out of immediate sight. Some of our fruit associations are in the million-dollar class regarding sales and the people eager to buy.

It is not my intention to argue that farmers ought to rush into the orchard game; that would be folly. The idea is worthy of the most serious study. To make a mistake in attempting to establish an orchard business is costly and not easily corrected. Many times it can not be overcome. The pity is that some men and companies rush in where angels fear to tread. In the first place there ought to be a real regard for the business; you might say a love of the game. Then in addition, a good knowledge of all the details of production and sales is more or less necessary. Such knowledge would prevent the too frequent mistakes of poor location, wrong selection of varieties, and under-financing.

Michigan has the reputation of being able to produce fruit with quality. Her name for packing has been poor but is rapidly improving. We are not growing anywhere near the amount of fruit which we might. The gist of the matter is that there are

farms by the hundreds without fruit trees which are capable of growing some kind of a profitable orchard. Its care could be effected without serious detriment to other crops. It would increase land values materially.

Why not advise the orchard, then, as a general item on all our Michigan farms? There are several reasons, as were intimated above: 1, the owner does not like "monkeying with trees;" 2, he does not have the requisite amount of information and does not care to learn; 3, it would interfere with his system of farming; 4, there is not a reasonably good location; 5, climatic conditions are too severe to be usually safe; 6, lack of capital in some cases; 7, shortage of labor; 8, too far from market or railroad; 9, the individual farmer fears overproduction; 10, the individual farmer fears lack of sufficient production. The last two named may not be general conditions; however, such notions become relevant when they assume the proportions of a "bogey man" and paralyze a man's initiative to do business.

I might name many instances where a few trees of a regular orchard had paid big returns. Equally easy it would be to quote cases of failure. Figure for yourself what a production of two hundred bushels of apples per acre would mean. That is a conservative estimate. Admittedly there are years when the weather conditions are beyond the power of man to combat; but we wish it was more generally understood that information is available to formulate orchard practices capable of getting satisfactory returns in an average year.

Study the methods of the most successful man in your vicinity. Ask the college to help you. Don't be afraid of information. Never rely on superstitions, quacks, or "rules of thumb" that have no foundation.

The Cost Plus Basis for Farm Products

Mr. Lillie Believes that Such a Program is Easily Within the Sphere of Possibility Once Farmers are Efficiently Organized.

SINCE the farmer cannot control production in so far as yield of crops is concerned, it is argued that he can never organize to put his business on a cost plus basis as industrial producers do.

It is true that the farmer never knows beforehand what the season will be and how it will affect crop yields. A most favorable season may produce a surplus while an unfavorable season may result in a deficiency or, in some instances, in an actual crop failure. Therefore, it is argued that because the farmer cannot know just how much he is going to have to sell, he can have nothing to say as to the price for his products but must take what some unknown combination or organization sees fit to offer him.

I do not believe this is so. I am convinced that by proper organization and the exercise of good business judgment, the farmer can control, to a large extent, the price he receives for his products and, at the same time be fair and just to the consuming world. I also believe the farmer, through organization, has the moral and legal right to do this very thing.

How It Can Be Done.

First. Limit production. We know the amount of food that has been consumed in the world for, say, the last ten years. We can get a fairly accurate average of the amount of each kind of food that was consumed annually and we can reason from this data approximately the amount of food of different kinds that will be consumed in the future. Also, we can ascertain the particular foodstuffs that were produced in such quantities that they had to be sold below the cost of production. These products that have not been profitable to the farmer can certainly be limited in the amount produced. Cut down the acreage—do it systematically and try to produce what the world needs at a price that will bring a profit to the farmer. This acreage can be turned to other crops of which there has been a shortage of supplies.

I have heard people argue that the farming industry is so vast and complicated that anything of this sort could not be accomplished, but with the proper organization that the farmers had faith in; with the proper realization of the benefits that would naturally result, the American farmer is ready and willing to accomplish just such a thing. If the farm bureau was thoroughly organized in every state in the Union, and its national organization, after ascertaining the desired facts, would advise the farmers to sow ten per cent less wheat or a ten per cent less acreage of oats or any other product, this advice would be followed loyally and intelligently.

Intelligent Marketing Necessary.

Second. Withhold products from the market until they will sell for the cost plus. Here again we are told that this is impracticable—that the farmer cannot be controlled—that many of them are so obligated that it is necessary to sell their crops as soon as they are marketable and consequently, they cannot take care of their market by withholding excessive supplies at certain times. This is not impossible. This is not so. The farmer doesn't have to sell at a certain time as some people think and, as I will admit, some of the farmers think. To illustrate: Some years, the farmers in a particular section, have a very poor crop, or a crop failure, and yet those farmers

manage some way to get through until they produce another crop. He perhaps has to wear the same suit of clothes for another year. Perhaps the boy has to stay away from college for a year, or until the next crop puts them on their feet, but some way he manages. Now, why would he be compelled to sell when he had a good crop, at a sacrifice. Couldn't he and wouldn't he, if he had faith in this organization, withhold a portion of it until a hungry world would pay him a fair price?

It would not be necessary for everybody to hold their entire crop, only a small portion of it would have to be held back in order to relieve the market so that prices could be sustained. If, by this process, it should be found at the end of the season that the world could not consume the entire crop and we would have a surplus, then this surplus could be held over for the next year and that particular crop limited in acreage accordingly.

In the case of cereals, imperishable products, there would be no trouble whatever in holding them over right on the farms. That would be the cheapest and best place to hold them. Many of these products the farmer could divert into other sources. If he had too much wheat, for instance, he could use this as a stock food, providing it would be profitable, and dispose of it in that way. In the case of perishable foods, like apples or other fruits, vegetables and potatoes, they could be preserved and held over in a different form until the next year, when there would be liable to be a crop failure in these products. There are processes on the market now which, if farmers would get behind them, as they have a business right to do, if necessary, that would convert all surplus of fruits and vegetables into an edible product that could be stored indefinitely. One man says the commercial world would not build factories and do this work for the farmer. Well and good. Let the farmer do it himself. The farmers of this country represent more wealth than any other industry. Why should they not help themselves, if necessary? Of course, a sufficient amount of dehydrating plants could not be put up in one season to take care of a large surplus crop. This whole idea cannot be worked out in one season but it can be worked out, and I believe it will

be. Manufacturers of beet sugar claim right now, I understand, that unless they can buy beets at a certain price, they will not manufacture sugar. Now, if this price is not fair to the farmer, then why should not the farmer own and operate his own beet sugar factory? The farmers are buying many of the elevators of the country; the farmers are cooperating in shipping their live stock to market. Why could not the farmers cooperate to convert their sugar beets into sugar? Why could they not have a canning factory that would can all the surplus fruit or dehydrate the surplus crop of potatoes or other vegetables etc.? The only reason that could be given why the farmer cannot do this is because he is not organized properly in a business way, since everyone must admit that the farmer has sufficient resources to do this if he thinks it advisable.

At the present time, powerful combinations of food speculators take advantage of the fact that the farmer is not organized and when any particular crop is ready for market, it is their business to see that the market is depressed, if possible, so that they can buy cheap and then the market naturally advances and they reap the reward. If the ultimate consumer was benefited by any such process as this, it would not be so bad, but it makes little difference whether we have a good or a poor crop, the ultimate consumer pays the price year after year.

How Markets Can Be Juggled.

It is known at the present time that English buyers representing the English government are stocking up with wheat from other countries so that they will have a sufficient amount when our American crop comes into the market so they will not be compelled to buy. They want to depress the market. They don't want our wheat crop to have too much of a send-off. In other words, they want to take advantage of the fact that the American farmer is not organized and consequently can have nothing to say. He must accept what they offer because home prices of farm products are governed largely and, in some instances, almost entirely, by foreign demand and foreign prices. Now, the American farmer should be and can be so organized that he can withhold his crop from the market if foreign buyers are not willing to pay a fair

price. Let England and all the world understand that she is up against an intelligent organization of farmers in America who propose to have a just price as remuneration for their labor.

The Farmer Must Be Just.

The most important thing in this whole plan is that the farmer must be just and fair. He has the power but he must be just or the whole plan will fail. Agriculture is a basic industry. Food products are fundamental to the existence of the world and it is necessary that they be furnished to the people of the world at a reasonable cost and the farmer has no right, if he has the power, to demand exorbitant prices. He must, through this organization, reason out year by year and period by period, what would be fair and just and then he must not step over this line else he will become just as bad as the food combination that forces him to sell cheap and forces the consumer to pay dear.

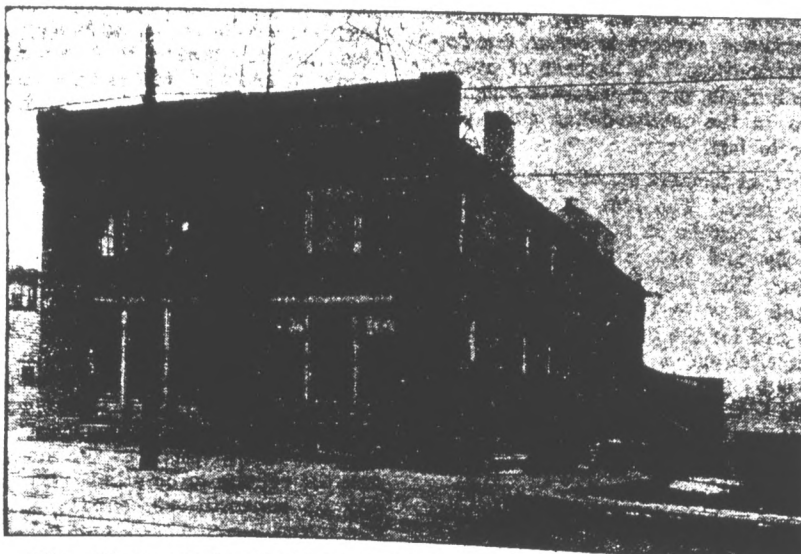
Cost of Production Necessary.

In order to place the farmer's products on the market at a just and equitable price, we must know to a close approximation the average annual cost. I conceive that this is the duty of the County Farm Bureau under the supervision of the county agricultural agent. A careful accounting system should be put in force in every county of the United States so that the farmers could show to the world that they were not profiteering—that they were not asking anything unjust—that they were simply demanding that they receive proper remuneration.

This data about cost should be furnished to the State and National Farm Bureaus and I conceive it to be their duty to largely regulate the food supply thereon.

The farm bureau is the only farmers' organization ever attempted, or organized on a sufficiently broad basis to properly handle this proposition, and I believe that this organization, The American Farm Bureau, will ultimately work this entire proposition out satisfactorily to the farmer and to the consumer. Of course, it will not be satisfactory to a certain class of profiteers and speculators. We don't expect to please them. They are just the ones who are going to argue that it is impracticable, that it cannot be done and that it is a crazy idea and that it never will be done. The farmer never has been able to have such an organization and they reason from this that he never will have, but they are going to be disappointed. The American farmer is ripe for a proposition of this sort. They can afford to be ridiculed by these men but they must not be deceived by them and in order to bring it about they must, first, last and all the time, be loyal to the farm bureau, not only to the County Farm Bureau but to the State Farm Bureau and the National Farm Bureau. They must be willing, and I believe they are willing at the present time, to pay the price necessary to maintain this organization. I believe they are electing men at the head of this organization that they can depend upon and men with sufficient ability to properly handle this proposition. I believe that this organization will be the means of putting American agriculture on a business basis and giving the farmer proper remuneration for his labor and his capital invested.

New Home of the Michigan Farm Bureau



New Home of the Michigan State Farm Bureau at 221 North Cedar Street, Lansing. Wool and Seed Warehouse and State Offices of Organization are now locating in this building.

Dairy Interests Jeopardized

Will the Great Dairy Industry be Sacrificed by Selfish Politicians and Would-be Economists?

THE world war and the readjustment which is now in progress have brought a closer relationship and a greater interdependence between all the nations of the earth. Today every industry of any consequence in this country must be measured by world standards," says Fred Rasmussen, secretary of agriculture for Pennsylvania, in a recent address given at Cornell University. "An analysis of the present dairy situation shows that the crisis it is now facing is the result of the change in the relation and proportion of different dairy manufactured products, the extraordinarily great and rapid change in our import and export trade, and the great increase in the cost of producing and distributing dairy products."

Mr. Rasmussen then told how immediately preceding the war the importation of dairy products, such as cheese, butter and condensed milk was rapidly increasing and was the cause of much alarm among the dairymen in this country. The war changed all this, however. Importations were suddenly stopped while the exports of the country grew by leaps and bounds. The

English pound sterling, normally worth \$4.86 in New York, was worth only \$3.34. A German mark, valued at 23.83 cents before the war, can now be purchased for 1.06 cents in American money. Danish kroners, ordinarily worth 28.06 cents, are now valued at 15.10 cents.

Before the war, England imported much butter and cheese from Denmark, Holland, and other countries where dairying was an important industry. Her importations in butter alone just before the war were half a billion pounds a year. Now, however, England is still on a butter ration, with the price fixed by the government. At present she imports only two hundred million pounds—less than she formerly imported from Denmark alone—and most of this comes from her colonies. So the British Isles, as an outlet for Europe's surplus of butter, holds forth little promise at present.

This condition, combined with the drop in exchange rates, drew the attention of European dairymen to America as the natural and most profitable outlet for their products. The Danish dairyman can now export his butter to

Here Are Mr. Rasmussen's Ideas in Brief

1. The world war created entirely new demands upon the American farmer.
2. Following the signing of the armistice the old problems again reappeared in new form.
3. A greatly depreciated foreign exchange finally kills all hope of continued exportations of American dairy products, but encourages importations from Denmark while Danish dairymen go to countries where exchange is low to buy feeds.
4. American dairymen must meet the situation through more economic production—cheaper feeds, and better cows—and distribution.
5. These ends will come only through organization of dairymen for selling dairy products and buying supplies, for improving quality and for advertising the value of these products to the consumer.
6. Until the business can be put on a substantial basis it is bound to confront a most serious crisis and it should not be hamstrung, pampered or throttled by selfish politicians and persons with unsound economic theories.

war brought about a decrease in the number of cattle in Europe, a decrease in the amount of grain exported from this country and South America, and a consequent reduction in milk production throughout Europe.

The dairy manufacturers of this country were quick to adjust themselves to the new conditions, and factories and plants for the manufacture of condensed milk and other milk products sprang up like magic to take the place of the products which were formerly imported.

With the cessation of hostilities, however, the old problems have again arisen in new form, and these have demanded all the ingenuity and business ability of American dairymen for solution. Competition with Europe has again sprung up, and this has been stimulated by the phenomenal readjustment of exchanges.

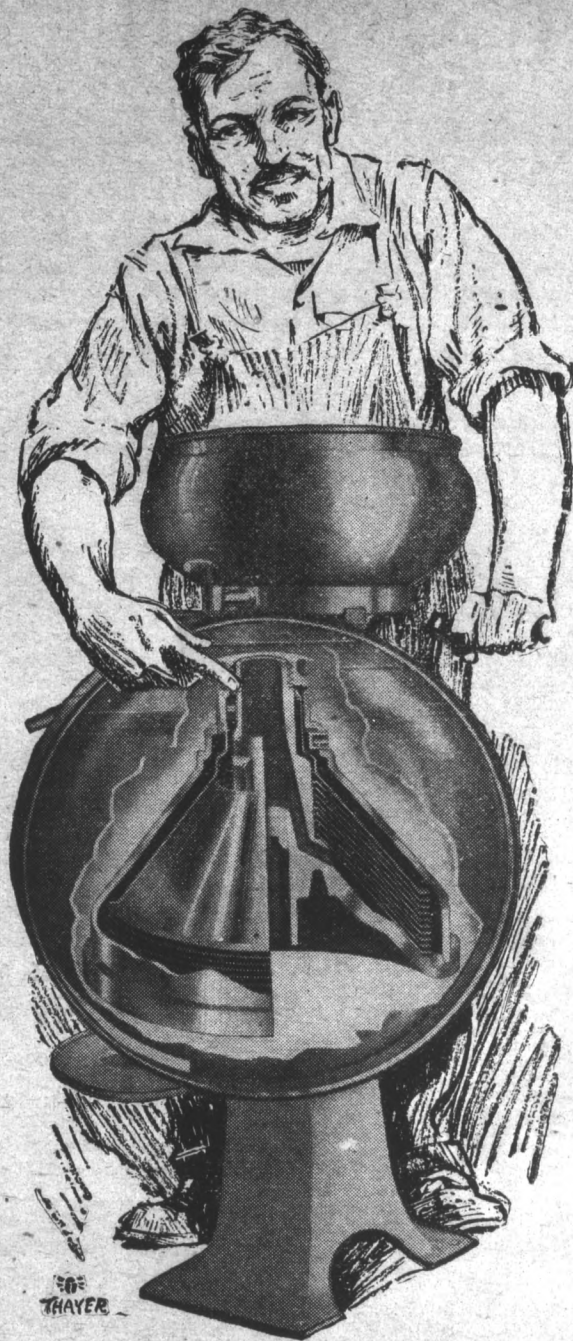
The American dollar is now the monetary standard of the entire world, and European exchange has dropped to a much lower level than ever before. At the close of business on February 7,

New York, sell it in the open market at the market price, receive in exchange for his butter American dollars, which he can immediately convert into Danish kroner, receiving six hundred kroner where he formerly received but four hundred kroner in exchange, and return home with a larger profit than he ever received before. His feed-stuffs, formerly bought in this country, can be purchased in South America or some other country, where the rate of exchange is low.

The American dairymen, to meet this competition, are facing problems which are difficult of solution. As long as the exchange rate continues at its present level, there is only one important way for the dairymen to overcome the difficulties, and that is by cutting down on the cost of production by more efficient methods.

There are various ways in which this can be done. First, the dairyman should reduce his feed bill by raising as many feed crops as possible at home. A productive alfalfa field is one

(Continued on page 721)



Where Butter Profits are Made or Lost

YOU know better than we can tell you that the bowl of the separator is the place where butter profits are made or lost. Right there you have the big fundamental reason why over a million dollars was spent in bringing the bowl of the EMPIRE-BALTIC to its present state of perfection. Years of constant study and experiment on the part of the world's foremost centrifugal engineers stand back of the EMPIRE-BALTIC—the Separator with the Million Dollar Bowl.

And here's what we have accomplished; A bowl that is absolutely self-centering and self-balancing—a bowl that is free from vibration. We have solved the problem of self-centering and self-balancing by the unique method in which the bowl rests on the flange of the spindle instead of on the top of it—it adjusts itself.

Vibration unfailingly shakes the cream back into the milk after it has been separated. Possibly you thought that a bowl free from vibration could not be manufactured. But we have accomplished it, in the EMPIRE-BALTIC—the Separator with the Million Dollar Bowl.

Many other exclusive features make the EMPIRE-BALTIC stand out as an above-the-ordinary separator. For instance, the rope neck-bearing absorbs all shocks and wear and tear—the ratchet coupling avoids the "jerk in turning"—the great simplicity of the driving arrangement means easier turning and smoother running—the oiling system is as simple as it is efficient, and so on.

Your experience enables you to judge separators as accurately as you can judge cows. Knowing this, we ask you to call on the nearest EMPIRE-BALTIC dealer. And—write for our literature 105-S

Empire Cream Separator Co., Bloomfield, N. J.

Manufacturers of Empire
Milk and Gasoline Engines

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



The "Family Coat of Arms" of the leading line of Dairy Machinery—EMPIRE.

EMPIRE-BALTIC

The Separator with the MILLION DOLLAR BOWL



News of the Agricultural World

DORR D. BUELL TO HEAD MARKETING DEPARTMENT OF STATE FARM BUREAU.

DORR D. BUELL, for the last two years president of the Cadillac Potato Growers' Exchange, one of the most successful farmers' cooperative associations in the United States, will become director of the marketing department of the Michigan State Farm Bureau early in May.

The commercial operations of the Farm Bureau will be placed under Mr. Buell's direction and his successful development of the Cadillac Exchange, from a local community institution into an establishment linking up one hundred community cooperative associations and doing hundreds of thousands of dollars of business annually, is expected to guarantee the development of an elaborate marketing and purchasing program for the thousands of Farm Bureau members in the state.

Mr. Buell will be located at Lansing, where the headquarters of the State Farm Bureau will be in May, moving there from Birmingham.

In the last week, the Farm Bureau membership campaign was completed in Jackson county. More than nineteen hundred members were obtained. The start of a campaign in Hillsdale indicates a result corresponding to that in Jackson. Next week the campaign will be under way in Saginaw and Branch counties. The membership of the State Farm Bureau is now forty-five thousand.

SAYS WHEAT SHOULD BRING \$3; CORN CROP \$2 A BUSHEL.

THE people of the United States are demanding automobiles, musical instruments, jewelry, fine clothes and recreation more than they wish food," said Prof. G. I. Christie, of Purdue University, in a statement issued on the agricultural situation in Indiana. "These people are willing to pay high prices for all such articles that laboring men engaged in the manufacture of these materials may be paid wages two, three and five times as great as the farmer can afford to pay.

"Cheap land and cheap labor have gone," continues Professor Christie, "and so the last of cheap food has been seen. From now on consumers must pay the price that allows the farmer a fair return for his labor and his investment." A conference of the members of the agricultural staff of Purdue University was held to consider phases of the present agricultural situation. Many reports received from the various counties in the state are alarming and show an unsettled condition.

The statement concludes: "Food is absolutely necessary—more than a hundred millions of people in the United States must be fed, while, in addition, many millions in Europe must have food from American farms. People of the cities must realize that farmers must have a fair price for their products. Cheap land and cheap labor have gone and so the last of cheap food has been seen. From now on consumers must pay a price that will give a fair return for the farmer's labor and his investment. Under the conditions, if wheat was worth \$2.20 per bushel in 1917, the crop of 1920 should bring not less than \$3.00.

"If corn was worth eighty cents in 1914, the 1920 crop should return \$1.75 to \$2.00 per bushel. Prices for other crops, for live stock, dairy and poultry products, should be increased accordingly. Food production should be maintained, but this can only be hoped

for when farmers are assured of reasonable prices. The situation demands the serious and careful consideration of all the people. The farmer should go ahead and do the best possible under conditions."

NO MORE GUARANTEED PRICES.

WHEAT Director Julius H. Barnes has come out very strongly against any further guarantee of wheat prices after the expiration of the present guarantee on July 1 next. In this Mr. Barnes, as usual, takes an absolutely sound position. By many

production. In the case of wheat this is no longer necessary, as the present supplies forecast a carry-over which will be sufficient to supplement a normal crop for ordinary domestic and export purposes. The only other reason for guaranteeing the price would be to benefit the farmers financially. If this were done then every other producer would be justified in hastening to congress and demanding a minimum guarantee for his product whatever it might be.

If congress is justified in guaranteeing farmers \$2.25 for wheat as against a pre-war price of say \$1.00, then the

ducer.

From the economic standpoint, it is better to let water find its own level. The grain exchanges should be reopened to wheat trading, and normal influences allowed to set the price. The great consuming public has just as much right to consideration as the farmers, and if wheat naturally is to be cheaper, no action by the government should prevent it. The reduction of the high cost of living must begin somewhere at some time, and certain elements of the community must naturally be the first to feel it, although they will benefit ultimately in reduced costs to themselves.

It does not appear from the present outlook that even with open trading we can look for materially lower prices than have recently prevailed, nor is it likely that previous high records will be exceeded. Speculation only temporarily affects prices, for one speculator has to lose for another to win, and ultimately prices equalize themselves. The main point to be considered is that restrictions of every kind that would limit legitimate trading should be removed.

PAVING THE WAY FOR MOTOR TRUCKS.

(Continued from first page).

ducts and live stock, but in all cases where pneumatic tires have been used to insure smooth riding the results have been far more satisfactory than express shipments. The return of egg crates, coops and other boxes and packages is another factor of importance in shipping farm products, and the present conditions surrounding our transportation systems are almost intolerable for shippers of small lots of farm produce. The motor truck can solve many problems, but not until we study the problem from all sides and endeavor to cooperate and devise means of fitting it into our present system of marketing and distributing farm products. Or, putting it the other way, I might say that we must endeavor to cooperate and develop a system of marketing and distributing our farm products which would make it possible for us to use motor trucks. In either case the use of motor trucks should prove a prominent factor in bringing the farmer and consumer together.

GROWERS OF CANNER CROPS ORGANIZE.

(Continued from page 695).

of silage is the average from an acre of peas. Pea seed will be furnished at four dollars per bushel. Tomato plants will be furnished growers at seven dollars per thousand plants.

The state association of growers is so devised that in the various counties it functions in just the particular crops handled by the canneries, whether fruits or vegetables. It is thought reasonably certain that after a season's tryout the canners will be that pleased with the methods of the cooperative effort that they would not have it displaced by the old system if such a course were possible. It will mean much to the canners to have the details of production attended to by the association and it will end for them the occasional trouble of getting after a grower who defaults on his contracts. This now will be a matter of attention for the growers' association.

The following officers were elected: President, J. A. McCollum, Niagara county; vice-president, M. L. Hakes, Orleans county; secretary-treasurer, Frank E. Rupert, Seneca county.

Norton Joins Holstein Forces

THE Michigan Holstein-Friesian Association has secured the services of H. W. Norton, Jr., as field secretary, to begin about May 1. The drive for memberships in Michigan has so far resulted in about eighteen hundred memberships being paid in, with two or three meetings yet to be held.

Michigan breeders generally are much elated at their good fortune in being able to enlist the services of a man so thoroughly conversant with their needs and so well and favorably known throughout the entire country as Mr. Norton.

The son of one of the veteran breeders of Black-and-Whites in Livingston

Shaw in his work at the M. A. C. Last summer he was elected one of the directors of the National Holstein Association.

His work as chairman of the sale committee that handled the Michigan Holstein breeders first annual sale last January, needs little comment. An inspection of the results of the sale when seventy-three head brought \$60,980, or an average of \$835 per head, surely confirms the belief that Holstein matters are his special province.

Now with an opportunity to devote his entire time to the welfare of Michigan breeders and herds we think results are bound to come, and congrat-



Holstein Breeders at Michigan Agricultural College.

county, he has had a life-long experience in matters pertaining to Holstein cattle and knows the problems of the breeder of purebred cattle from every angle.

After graduation from Michigan Agricultural College, Mr. Norton spent six years in live stock experimental and instruction work at that institution, leaving the college in 1909 he returned to the home farm and in his own community he was always found in the lead in managing high-class sales, boosting for better sires, healthier herds and in fact, any progressive movement in live stock circles found him one of the moving spirits. Since 1917 he has been assisting Dean

ulations seem entirely in order for the Michigan breeders.

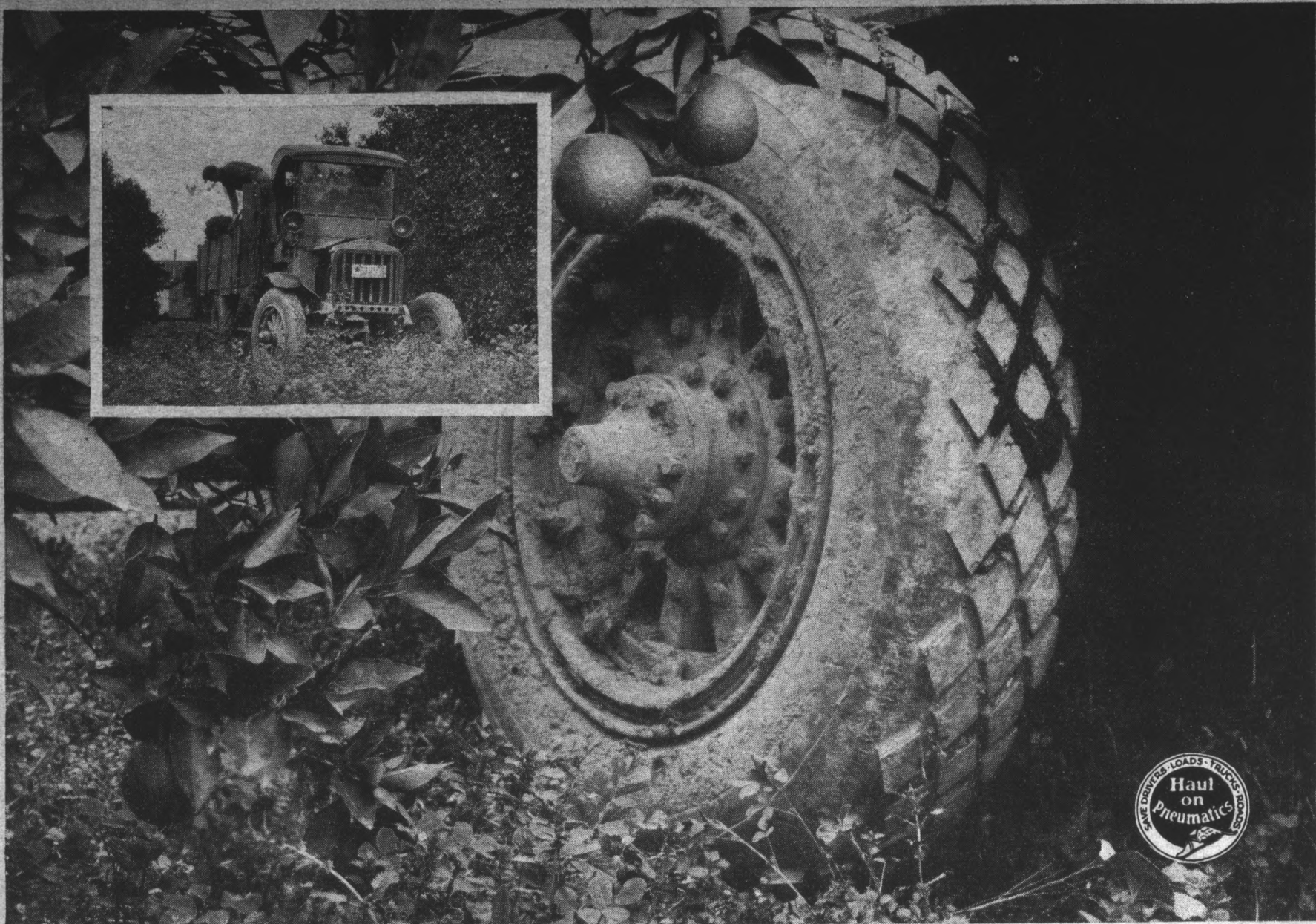
Mr. Norton will be located in Lansing, Michigan, where he may be found after May 1 in the old State Block. Plans have already been made for promoting high-class sales semi-annually in May and October at various points within the state.

The executive committee in session at Lansing, Mich., elected the following officers: President, Dudley E. Waters, Grand Rapids; vice-presidents, Dr. T. C. Tiedebohl, Coloma; George L. Spillane, Flint, and R. J. Bird, Ypsilanti; secretary, Albert E. Jenkins, Eagle; treasurer, Silas H. Munsell, Howell.

economists the continuance of the guarantee for the present year was considered a mistake, although as matters turned out, the actual price was at most times above the minimum guaranteed.

It is time to remove all artificial props or restrictions from business of every kind. The government guarantee of a wheat price or of any other price for that matter, can be regarded only as a war measure, and for one definite purpose, namely, to stimulate

cotton farmers would have an equal right to ask a minimum guarantee of forty-six cents a pound for cotton as against a pre-war price of say sixteen cents. If congress were to start in with minimum guarantees just to benefit certain classes of the community, there is no knowing where it would stop. The lumber people would have an equal right, as would the fruit growers, to say nothing of the potato farmers, tomato growers, and, as has been said, every other kind of pro-



Copyright 1920, by The Goodyear Tire & Rubber Co.

"It is of distinct advantage for us to use Goodyear Cord Tires instead of solid tires on our trucks hauling from orchards, because these big pneumatics track nicely through loose soil or plowed ground and do not really pack it. Solid-tired trucks are assessed \$10 a ton here—pneumatic-tired trucks are assessed only \$5 a ton because they save roads."—A. M. Edwards, of Edwards & Patillo, Fruit Growers and Truckmen, Fullerton, California

THE gripping and agile qualities of Goodyear Cord Tires on trucks have won for them many significant rural endorsements like the one presented above.

Whether an orchard lies in soft soil, or fencing is to be done in a grassy field, or a mud-bottomed hollow separates the back acres, the big Goodyear Cord Tires go through quickly. So today farmers frequently point to the tracks of these tires in miry hog lots, soggy meadows and acres strewn with fertilizer, where they have made short cuts and saved time many times.

In all parts of the country, the observer can

note crop loads, cushioned on the husky Goodyear Cord Tires, being hauled through sand and bogs, across furrowed earth and up slippery hillsides with impressive ease.

This intense serviceability of the pneumatic truck tire, founded on the supple toughness of Goodyear Cord construction, has been built out of that ceaseless endeavor to improve, which protects our good name.

Now a large amount of information, supplied by farmers and describing the advantages of pneumatic truck tires, can be obtained by writing to The Goodyear Tire & Rubber Company, Akron, Ohio.

GOODYEAR
CORD TIRES

Handling the 1920 Wool Clip

WOOL growers throughout the state are showing unusual interest in the method of handling wool to be practiced by the State Farm Bureau. In order that individuals, firms and cooperative organizations may have a thorough understanding of the rules governing the selling of wool through this organization we present the following instructions and blank contracts prepared by the office of the Secretary of the State Farm Bureau:

In counties where the Farm Bureau Membership Campaign has been completed or is now under way, Kent, Tuscola, St. Clair, Allegan, Oakland, Barry, Van Buren, Gladwin, Lapeer, Genesee, Montcalm, Monroe, Macomb, Shiawassee, Eaton, Wayne, Ottawa, Washtenaw, Livingston, Berrien, Calhoun, Clinton, St. Joseph, Cass, Lenawee and Jackson, the County Farm Bureau will appoint the firm, individual or cooperative organization to handle the assembling of wool.

Any cooperative organization, firm, or individual selected by the County Farm Bureau organization may assemble wool upon signing contract and complying with instructions and regulations issued by the Michigan State Farm Bureau.

In counties where the Michigan State Farm Bureau Membership Campaign has not been completed and is not now under way, county agents are requested to arrange for assembling wool in their respective counties by a responsible individual, firm, cooperative organization, Grange, Gleaner Arbor, or other agency.

The assembling agent must sign a contract with the Michigan State Farm Bureau and comply with the instructions and regulations issued by the Michigan State Farm Bureau.

No assembling agent of the Michigan State Farm Bureau will be permitted to purchase wool on his own account or act as agent for any other individual firm or corporation in buying, handling, storing or marketing of wool.

All persons marketing wool through the Michigan State Farm Bureau will be required to sign wool growers' contract and abide by all rules and regulations issued by the same.

County agents or other Michigan State Farm Bureau representatives must secure signature of assembling agent upon assembler's contract as issued by the Michigan State Farm Bureau and forward same, with full name and address plainly written thereon, to the Michigan State Farm Bureau Wool Department, East Lansing, Michigan.

Instructions.

1. Weigh each lot of wool delivered to you accurately and issue receipt (Form No. W-2) in quadruplicate, one copy for the grower, one copy for your records, one copy to go in envelope (Form No. W-3) which must be placed on the inside of one of the sacks containing this particular lot of wool. One copy, (the original) to be mailed on the date wool is delivered to you to the Michigan State Farm Bureau, Wool Department, Lansing, Michigan.

Important.—All sets of Form No. W-2 and Form No. W-6 must be accounted for. In the event that any of these forms are spoiled mark them "VOID" and send the full sets to Michigan State Farm Bureau, Wool Department, Lansing, Michigan.

2. Sacking.—Provide proper sacking rack equipped with ring for holding mouth of sack open. Said wool rack to be made with standard dimensions. To economize on sacks, pack as solidly as possible each grower's wool in separate sacks except as follows: When two or more small lots of wool are re-

Rules Governing the Handling of Wool By the State Farm Bureau

ceived tag each fleece separately with out a tag to be wired on the inside of tag (Form No. W-1) properly filled out each additional sack. These tags must and place wool in one sack properly be filled out in detail and securely packed. Sacks must be securely sewed (see instructions on tags and envelopes for inside of sacks).

3. Attach envelope (Form No. W-3) to inside of sack. Note.—When a lot comprises more than one sack, make

4. Storage.—Proper storage must be provided until sixteen thousand pounds (a minimum carload) has been accumulated in order to get the carload rate. Less than carlot shipments

are to be made only when it is impossible to secure full carlots or to combine this less than carlot quantity with shipment from other assemblers. Do not store wool in basement or in places where there is excessive moisture. First floor storage and even temperature is preferable.

5. Loading.—Large sized cars are best for shipping wool as it is difficult to get the minimum weight, sixteen thousand pounds, in a small car. In all cars sacks must be tightly packed.

6. Billing.—Bill car to the Michigan State Farm Bureau, Wool Department warehouse, at 221 North Cedar Street, Lansing, Michigan. Make out bill of lading in duplicate, one copy to be held in assembler's possession. Copy to be mailed immediately to the Michigan State Farm Bureau, Wool Department, at Lansing.

Important.

7. Insurance.—Insurance is carried on the wool from the time it comes into your possession. The copy of receipt, (Form No. W-2) which you mail to the Michigan State Farm Bureau Wool Department, constitutes your daily report on quantity of wool you have received. These reports must be mailed each day without fail.

8. Information.—All wool is weighed separately and accurately when it reaches the Michigan State Farm Bureau, Wool Department, warehouse and a comparison of weights made at that time. In case a serious discrepancy in weights is discovered, the wool will remain in the original sack until matter is investigated.

Agreement and Contract with Wool Grower

The Michigan State Farm Bureau Agrees:

1. To pay all transportation and labor charges, including trucking, handling, grading, sacking, shipping, salesmanship and all expenses incident to the proper handling and marketing of wool, including all book-keeping and clerical work.

2. To furnish the necessary sacks and tags, storage facilities for proper handling of wool.

3. To carry such insurance as may be necessary to protect the consignor against loss or damage by fire while wool is in possession of the Michigan State Farm Bureau.

4. To investigate and handle any claims for loss of or damage to wool consigned to the Michigan State Farm Bureau.

5. To arrange for advancement to the consignor on application, of credit loans at six (6%) per cent interest on wool consigned, in amount not to exceed seventy-five per cent of the estimated value of the wool so consigned, and to be deducted from final settlement.

6. Final settlement to be made within a reasonable time after all wool has been sold.

In consideration of this agreement, the consignor agrees:

7. To accept the warehouse certified weights and grades as a basis for payment on all wool consigned, as may be fixed by the Michigan State Farm Bureau.

8. To accept as a basis for advance loans the estimated value as fixed by the Michigan State Farm Bureau.

9. To allow the Michigan State Farm Bureau to deduct such sum as may be charged against the wool for freight, sacks, and other expenses, and for services as are necessary, from the final payment due the shipper.

Date, Blank.

I hereby agree to ship not later than July 15, 1920, approximately, blank fleeces of wool to the Michigan State Farm Bureau to be graded, stored, and marketed under the terms of the above agreement.

Assembler's Contract

Blank Assembler of Blank Postoffice, agrees to assemble the wool of the wool growers of Blank County for the Michigan State Farm Bureau, as specified in the terms of the several contracts and agreements in force between the Michigan State Farm Bureau and the wool growers of Michigan.

Also Blank Assembler agrees to handle the assembling, weighing, sacking, storing, and shipping of said wool as described in the printed instructions issued for that purpose by the Wool Department of the Michigan State Farm Bureau.

The Michigan State Farm Bureau, in consideration of above services, agrees to pay a service charge of not to exceed one cent per pound for wool assembled and shipped in accordance with the printed instructions of the Michigan State Farm Bureau.

The payment of this service charge to be made by the Wool Department of the Michigan State Farm Bureau from the receipts obtained from sales of said wool.

For Corn and Other Crops

THE members of the soils section being conducted cooperatively with the Michigan Agricultural Col- several county agents and farmers, lege are running many demonstra- and also with county organizations. In tions and tests to determine the needs the spring of 1919, L. C. Wheetting in- of the soils of the state. These are augurated such a series on his fath-

The results from the different treatments given these plots are here visualized for the benefit of the reader:

Untreated—35 Bu. Corn

8 Tons Manure—43 Bu. Corn

8 Tons Manure and 2 Tons Lime—55.4 Bu. Corn

8 Tons Manure and 217 lbs. Acid Phosphate—57 Bu. Corn

8 Tons Manure, 217 lbs. Acid Phosphate and 2 Tons Lime—84.5 Bu. Corn

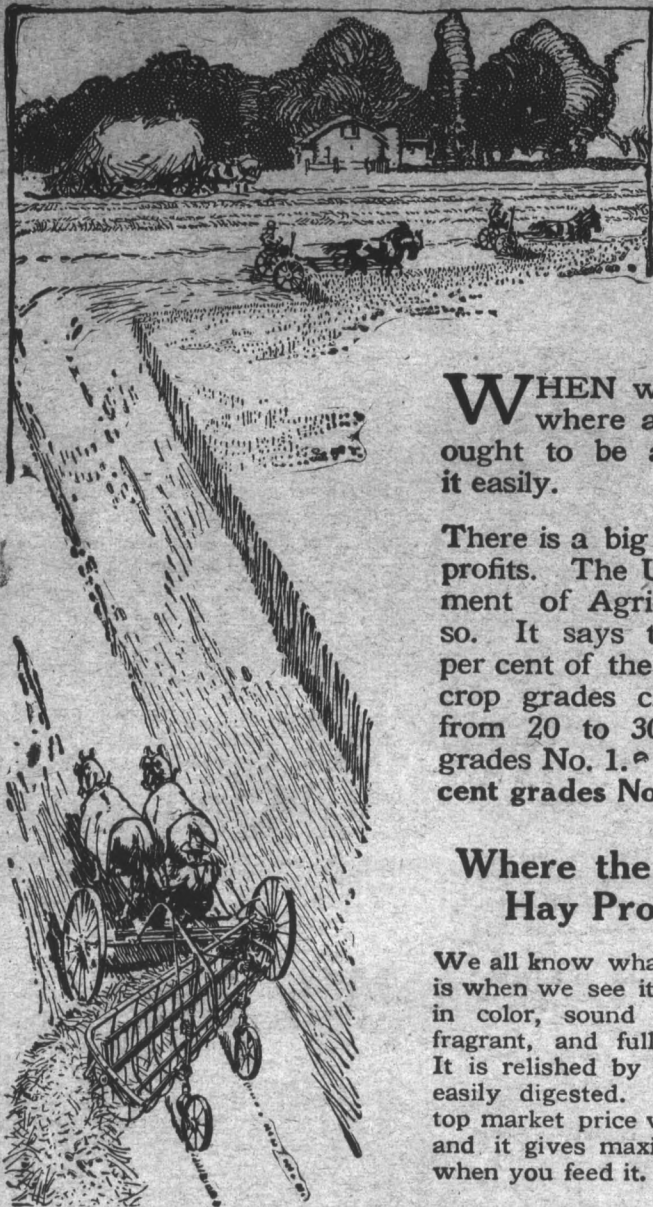
er's farm near Imlay City. A portion of a field—composed of rather light soil—was untreated, another with about eight tons of manure, another with the same amount of manure and two tons of pulverized lime per acre, another with manure and two hundred and seventeen pounds of acid phosphate, and still another with lime, manure and acid phosphate. The results were indeed satisfactory from a financial standpoint. The yields of corn obtained were as follows:

	Bu. per Acre.	Stover Lbs.
Untreated	35.0	2800
Manure	43.0	2860
Manure and lime	55.4	3640
Manure and acid phos.	57.0	3800
Manure, lime and acid phosphate	84.5	5110

Now what were the returns on the investment from the use of the acid phosphate and lime when used with manure? The two tons of lime cost about twelve and one-half dollars on the land and the acid phosphate about three and one-fourth dollars per acre, or a total of about fifteen and three-fourths dollars. When the increased cost of harvesting and marketing the larger yields of products resulting from the use of the lime and acid phosphate are considered there still remains a handsome profit on the investment. Yet it should be distinctly understood that the lime will endure in this soil about six years and the acid phosphate two years, it being customary to charge about two-thirds of the cost of the latter to the first crop that is grown.

In view of the results that we have obtained from investigations of the composition of many of Michigan's representative soils, as reported in Bulletin 284, and the returns from the above and many others, we consider that there are great possibilities in improving Michigan soils, thus resulting in a more efficient use of human energy.

M. M. McCool.



Hay harvested by the Dain System means more dollars in profit whether you market your hay or feed it. The Dain System Rake enables you to use this system.

Stop the Leak in Your Hay Profits

WHEN we know just where a leak is, we ought to be able to stop it easily.

There is a big leak in hay profits. The U. S. Department of Agriculture says so. It says that only 10 per cent of the annual hay crop grades choice. Only from 20 to 30 per cent grades No. 1. And 60 per cent grades No. 3.

Where the Leak in Hay Profits Is

We all know what "choice" hay is when we see it. It is bright in color, sound as to foliage, fragrant, and full of nutrients. It is relished by live-stock and easily digested. It brings the top market price when you sell, and it gives maximum returns when you feed it.

We all know what No. 3 hay is when we see it. It is "off color." It has lost much of its foliage. It is tasteless. Stock will not eat it readily. And it carries but little nutrition, in proportion to its non-digestible fiber. It is all right for stall litter, but it is very unsatisfactory for feeding or selling. Its market price is about \$10 a ton less than that of choice hay.

The big difference between choice hay and No. 3 hay is mainly a matter of curing. The leak in hay profits is in incorrect curing methods.

Curing in the Swath is Costly

Letting the hay lie in swaths to cure under a hot sun is the method that frequently causes the big loss. And here is the reason:

You have noted that hay, when cut by the mower, falls back in a position similar to shingles on a roof, with the heads and leaves exposed to the sunshine and the stems underneath in the shade.

TWO hours of hot sunshine sears the exposed leaves and stops the process of draining water from the plant. The pores in the leaves are closed and the water is sealed up inside the stems. The sun continues to shine on the heads and leaves until the water is slowly steamed out through the stems. The leaves are sunburned long before this unnatural process has continued until the hay will go into stack or mow without spoiling. They will crumble between your finger and thumb. Many of the leaves fall off in the process of raking and stacking or loading and storing. The hay does not have the color, the fragrance, the palatability, the digestive qualities nor the nutrition of the "choice" or the No. 1 grades cured in the proper way.

Use of the Dain System Stops the Leak

By doing away with the old-style method of swath-curing, and using the Dain System of Air-curing Hay, many hay growers have stopped the leak in their hay profits. They are making "choice" or "No. 1" hay instead of the lower, unprofitable grade that they used to make.

The Dain System is called "Nature's Way of Curing Hay." It puts into practice the principle that properly curing hay is merely taking the water out of the hay rapidly and efficiently while keeping the nutrients in, and that the best way to accomplish this is to let the water pass out of the plant in the natural way.

Water leaving a plant in the natural way passes out through the leaves in the form of perspiration. Examine a blade of green hay under a microscope, and you will see little drops of water oozing out all the time. How rapid and thorough this natural process is can be best understood when one remembers that from 200 to 400 tons of water per acre are utilized in maturing a hay crop.

THE Dain System Rake was built for the special purpose of handling hay while it is still green. Using this rake, you follow the mower before the sun has had the opportunity to sear the leaves. The rake picks the hay up while the leaves are still active and delivers it on clean stubble in a medium-sized, loose windrow.

The action of the rake places the bulk of the leaves on the shady inside, and the stems on the sunny outside of the windrows. The windrows, being loose, air passes through freely. The leaves continue to function normally in draining water rapidly from the plant. More quickly and with less labor than in swath curing, the hay is ready for the stack or mow. And only by this method of curing can hay be given the feeding qualities that bring you the greatest returns when you feed it or when you sell it.

Find Out all About the Dain System

Don't fail to find out about the Dain System and the Dain System Rake before your next haying season begins. Make it the means of stopping the leak in your haying profit.

Ask your John Deere dealer to show you this rake. He will show you how easily it works—how its operation makes the Dain System of air-curing hay the simplest, as well as the most profitable method that you can use.

Note the inclined frame that distinguishes the Dain from other rakes of its type. You will find that this inclined frame is as important as a properly-shaped moldboard on a plow. The frame is low at the front end and increases in height toward the rear—its capacity increases as the volume of hay increases. The low front end is set slightly ahead of the tooth bars, causing the hay to come up against the frame and pitch forward in the loose coil that characterizes the Dain way—the way that puts the leaves inside, the stems outside, and allows plenty of air to pass through the windrow.

WRITE TODAY FOR A FREE BOOKLET. We have prepared a booklet that explains the Dain System thoroughly. Many thousands of copies of this booklet have been distributed. You will find it interesting and profitable reading. Send for your free copy today. Address John Deere, Moline, Illinois. Ask for booklet DS-126.

JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS



For Land Clearing

Just punch a hole under the stump or boulder you want to remove and load in it two or more cartridges of



Red Cross Dynamite

Light the fuse, walk quickly away, and watch that stump or boulder shoot up out of the ground!

Red Cross will clear land with one-tenth the labor of grubbing or stump pulling. It is equally effective for ditch digging and tree planting and is economical and safe.

Put this Giant Farm Hand to work for you. If your project warrants, we will send a demonstrator to show you the easiest and cheapest way of doing your work.

See your Dealer. In any case, find out what Red Cross can do for you—and how. Write for "Handbook of Explosives" today.

E. I. du Pont de Nemours & Company, Inc.

Sales Dept., Explosives Division
WILMINGTON, DELAWARE

Every Farm Needs a Concrete Mixer

Concrete improvements have saved money for so many farmers that their Sheldon Farm Concrete Mixer has become as important a piece of farm equipment as their corn sheller or cultivator. Do away with the old-fashioned, expensive, back-breaking, unsatisfactory hand and shovel method. Mix your concrete the Sheldon way and get a uniform mix every time. Save labor, save time and save the cost of the Sheldon on the first job.

SHELDON CONCRETE MIXER

does the same high grade work as a \$300 mixer, yet costs only a fraction as much. Solidly built to stand strain and vibration for years. Easy to operate—easy to move—mixes two wheelbarrowful at a batch—a 1 1/2 H. P. engine will run it.

MAIL COUPON TODAY

and get our 1920 Book on Concrete. It will tell you how you can save money on your concrete work. Shows all types of Sheldon Mixers and gives our direct-to-you low prices. It's FREE. Get your copy today.

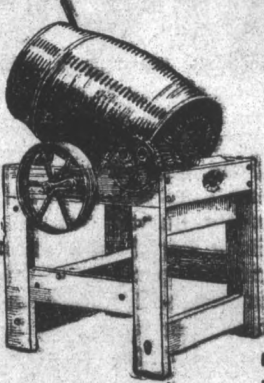
Sheldon Mfg. Company
Box 770 NEHAWKA, NEB.

Sheldon Mfg. Co.,
Box 770, Nehawka, Neb.

Please send me your new 48-page book.

Name _____

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FOR SALE: Engine, pump, hose, 12 H. P. Fairbanks-Morse; good as new; cash price, \$250.00. Mingo Shovel Metal Machinery Co., 728 Vermont Ave., Detroit, Mich., Tel. Glendale 1117.

BEEKEEPERS Send for Griggs' Big, Free Catalogue of beekeeping supplies. Also for prices of the Italian Bees. THE GRIGGS BROTHERS CO., Toledo, Ohio. Dept. 27.

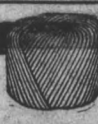
BINDER TWINE

Get our outstanding low price to Grange, Equity, Union, Farm Bureau, etc. Farmer agents wanted. Free samples. THRO. BURT & SONS, Box 46, MELROSE, OHIO.

Mention The Michigan Farmer When Writing Advertisers

Don't Waste Wool

Old methods of shearing leave too much wool on the sheep. Shear the modern way with a good machine. The Stewart No. 9 Ball Bearing Shearing Machine works wonders with fleeces up to 300 head. Saves time and money—shaves 15% more wool. Shave away with second cuts. Soon pays for itself. Price only \$19.25. You can get it by sending \$2.00 now balance on arrival. Or write for catalogue. CHICAGO FLEXIBLE SHAWT COMPANY, Dept. B127, 12th St. and Central Ave., Chicago, Ill.



Standard Binder Twine, 500 ft. to lb., 15% per lb. Less in carloads. Write for circular. Dept. M-14. Louis J. Jones, Milwaukee, Wis.

FARMER LEGISLATION.

(Continued from page 694).

man bill. The first thing to be done is to remove the jail from the farmer's yard, and the Volstead bill in its present form only partly does this. Neither the Capper-Hersman bill or the Volstead bill is complete. It is thought that we should have both for the protection of the farming interests.

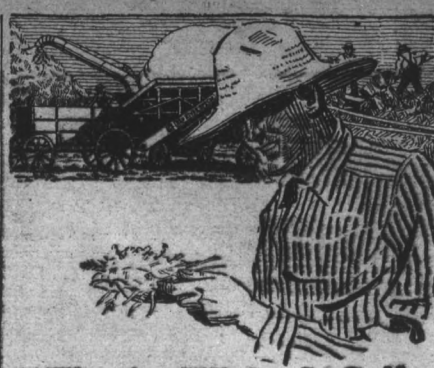
If the National Grange, American Farm Bureau Federation and National Board of Farm Organizations' representatives give their endorsement to this bill, I am told that there are strong probabilities that it may be reported out onto the floor of the house—sometime; but not until after the election. The cold storage bill, packer legislation, and other bills in which farmers are interested are being held up, and a man who is in close touch with legislative matters tells me that he does not look for any of these bills to pass until next winter. However good the intentions of the average congressman may be, he realizes that this is election year, and it is safer not to vote at all than to record his vote for or against a measure upon which his constituency may be divided in sentiment.

Every farmer who possesses land, the value of which, exclusive of improvements, is in excess of \$10,000, will be subject to an excise tax of one per cent on all above the \$10,000, if the Nolan bill, H. R. 12397, should become a law. This bill is already meeting the strong opposition of the organized farmers. Dr. T. C. Atkeson, the Washington representative of the National Grange, says the Nolan bill "is a deliberate effort to shift federal taxation to the land. No account is taken of present taxes on real estate or on the farmers' incomes. They are to remain as at present, and in addition to that a further burden of a billion dollars a year is to be placed on the shoulders of the farmers of the country by this bill. The propaganda for this bill is addressed to 'business men.' It is claimed that thirteen hundred million dollars in capital is represented by the firms and corporations that endorse the Nolan bill, and demand its passage." Men prominent in the American Federation of Labor are among the backers of this scheme to put the taxes on the land.

The most recent development in "Truth in Fabric" legislation is the appointment of a sub-committee of the House Interstate and Foreign Commerce committee, to go over the French "Truth in Fabric" bill, the Rainey "Stamped Fabric" bill, the Barkley "Misbranding" bill, and the Rogers bill, and report back to the full committee their recommendations. The most authoritative statement I have been able to secure from the members of the committee is that there will be some legislation along the line of misbranding, but it will differ somewhat from the French "Truth in Fabric" bill.

Sheep raisers, representatives of the farm organizations and all others who have investigated the subject from the standpoint of the wool producer and consumer quite generally agree that any bill which does not compel the stamping of the fabrics with their content of virgin wool and shoddy will be of little value either to the wool grower or to the public. Everyone who is interested in pure fabrics can do much toward promoting the interests of the French "Truth in Fabric" bill by writing to his or her congressman, requesting that he use his influence to secure early action of this bill.

A "Blue Jean and Patched Shoe Club" has been organized in the Department of Agriculture. The members of this club are pledged to wear blue denim overalls and jumpers and not to purchase any shoes, but will (Continued on page 704).



"That's What I Call Clean Threshing"

That's always the answer when looking over straw behind a Red River Special. All over America there are thousands of farmers who insist upon having only a

Red River Special

do their threshing. They know that Red River Special Threshers thresh clean.

They are the threshers that beat out the grain. The big cylinder throws intermingled straw and grain violently against the "Man Behind the Gun," and Beating Shakers keep tossing and beating the straw until the last kernel of grain drops out.

The Red River Special saves enough of your grain and time to pay your cost of threshing.

Hire the thresherman with a Red River Special. Or if you have enough grain to require a machine of your own, get a "Junior" Red River Special. Write for circulars.

Nichols & Shepard Co.

(In Continuous Business Since 1848)
Builders Exclusively of Red River Special Threshers, Wind Stackers, Feeders, Stacks and Oil-Gas Traction Engines.
Battle Creek, Michigan

THIS SIGN SELLS
PRODUCE AT FRONT DOOR
A QUICKER, MORE PROFITABLE WAY TO CASH YOUR BUTTER, EGGS, POTATOES, ETC. Tells what you have for sale—what you want to buy. Works for you every hour of daylight. NEAT. Reflects Thrift. Insures passerby products are sanitary and fresh. Get this Bulletin Board NOW.
Every farm needs one. PAYS FOR ITSELF QUICKLY. Brings city buyers to your gate. Eliminates week end trips to town with perishable produce. BUILDS REGULAR PATRONS FOR GARDEN AND DAIRY PRODUCTS. Earns big profit for you. Saves time of marketing to city dealers. Write for free circular and testimonials from users.
WANTED: FARM AGENTS — MAKE \$10.00 TO \$20.00 DAILY. Its easy—every farmer wants one. Show the sign and the sale is made. Write or wire county territory.
THE FARM BULLETIN COMPANY
40 Detroit Street LAGRANGE, IND.

AN AEROPLANE - BUILT RADIATOR ON YOUR FORD CAR OR TRUCK

A REAL Radiator that will keep your Ford engine cool and guaranteed against damage from freezing. Same cooling system as we built into DeHaviland War Plane Radiators.

ADDS 262% Cooling Surface
426% Water Capacity
500% Motor Efficiency

Built into stock models for Ford cars and trucks, same size and shape and takes same hose connections. Write for literature TODAY.
KUENZ RADIATOR CO. JACKSON, MICH.

Do Your Own Concrete Work
Build silos, culverts, foundations, floors, walks, etc., when you want them at half contractors' prices by using the handiest, most economical farm mixer made.
REMMELE
MIXRITE CONCRETE MIXER
All iron and steel. Handles any kind of mixture—concrete, mortar, etc.—in minutes. Can be used either high or low. Side gear prevents interference with wheels. Always in gear—loaded and dumped from either side. Operated easily by 11-13 H. P. Farm Engine. Iron-clad guarantee. Write for circular. If your dealer does not mail it we will ship direct.
Remmele Manufacturing Company, Dept. 1, Neenah, Wis.

Save 25% on Roofing

CENTURY Roll Roofing is sold direct from factory to you. Best and cheapest in America. Long guarantee. Freight paid. 14 shipping points. FREE. Send for samples, catalog and bargain prices. Write today.
CENTURY MFG. CO. 235 Metropolitan Bldg. E. St. Louis, Ill.

ASKS FARM BUREAU TO ASSIST.

MR. GEORGE B. SMITH, of Addison, Secretary of the Tri-State Beef Growers' Association, called at the office of the Michigan State Farm Bureau at Birmingham, and asked for assistance in developing a home-packing industry which will enable growers of choice beef cattle to ship to Detroit rather than Chicago. A large percentage of choice meats used in Detroit is shipped in the form of dressed meat, while the growers of this grade of cattle are compelled to find their market at points outside of the state.

Mr. J. P. Powers, of the Farm Bureau office, has been assigned to investigate plans for encouraging the development of the packing industry in Detroit and has already had one conference here with Mr. Smith in the project.

The beef growers began a market campaign here some time ago and a car of Angus steers was shipped from the farm of Hon. L. W. Watkins, of Manchester. They were killed by a local butcher. A canvass was made among the meat retailers, intended to show the merits of finished beef bred cattle as compared with the cattle of the dairy breeds which have been coming to this market in large numbers, almost to the exclusion of the better cattle, which are attracted to Chicago because of the better prices quoted there for such beef.

Lists of retailers who were willing to handle better Michigan beef if supplied here, were published by the Detroit Daily Market Report and distributed by the Detroit Board of Commerce and by leading city banks.

To supply the demand thus created Detroit needs additional killing and storing facilities, as this choice beef is improved by ageing and refrigerating for several weeks, which gives it a better flavor. A better Detroit market for beef will greatly assist Michigan dairymen who wish to increase their profits by taking on beef raising as an adjunct to their milk business in lieu of the lower prices now prevailing for that commodity. Dairy cows are not themselves of beef type and tendency, but grade dairy cows are not strongly prepotent in transmitting type and tendency to calf, while the purebred beef sire is especially so.

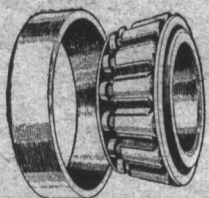
BANKERS SUPPORTING DAIRY-MEN.

FINANCIAL backing for dairymen who wish to build up their industry through the introduction of purebred foundation stock has been guaranteed in at least one Michigan county. At a recent meeting of Guernsey breeders in Berrien county, the First National Bank of Watervliet went on record as ready to loan up to \$50,000 to men who want to purchase purebred Guernsey stock. Berrien is already one of the leading Guernsey counties of the whole middle west, and the plans now call for the importation of at least one hundred additional head of purebred females. This foundation stock is expected to give a tremendous boost to the industry in this section of the state.

PUREBREDS ON FARMS.

WORD comes from Missouri that a statewide survey is being made this spring covering all the farms of that state where purebred registered animals are owned. This action was approved by the Missouri State Board of Agriculture at its March session. The farm census of 1919 located one or more registered animals on 15,745 farms out of 221,205, which was eighty per cent of all the farms in the state, the assessors having missed twenty per cent in the census.

Do You Know—



STANDARD PRACTICE

The use of Timken Tapered Roller Bearings at points of hard service in the great majority of motor-vehicles is proof of leadership established on the tapered principle of design, quality of manufacture, performance on the road, and service to the automotive industry.

that few lawyers, manufacturers, or business men have as much real need for a motor car as has the average farmer?

that farmers continually use their cars for long drives at high speeds over rough-rutted roads—the very sort of driving that tries the bearings?

that the durability of the Timken Tapered Roller Bearing and its easy adjustability are of particular value in this service?

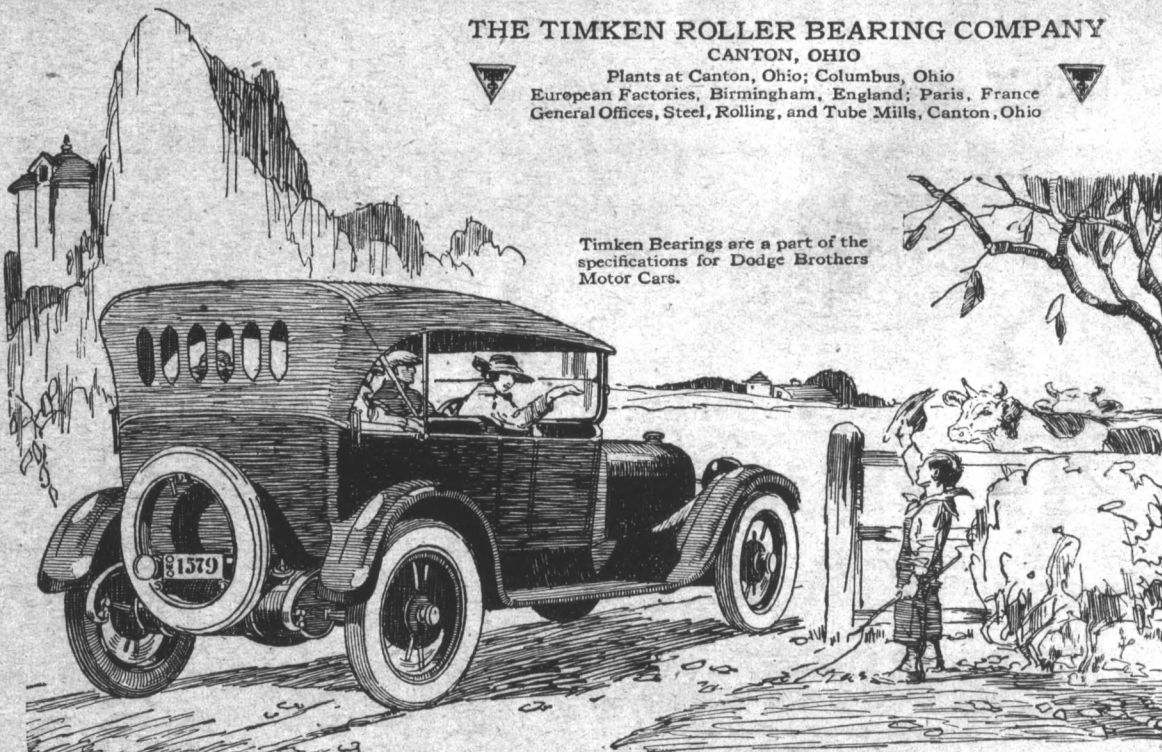
that the tapered roller bearing is the type of bearing that will function properly under radial load, or thrust load, and all possible combinations of the two?

that 85 per cent of the passenger cars built today are equipped with Timken Tapered Roller Bearings at points of hard service?

THE TIMKEN ROLLER BEARING COMPANY

CANTON, OHIO

Plants at Canton, Ohio; Columbus, Ohio
European Factories, Birmingham, England; Paris, France
General Offices, Steel, Rolling, and Tube Mills, Canton, Ohio



Timken Bearings are a part of the specifications for Dodge Brothers Motor Cars.

TIMKEN BEARINGS

Increase Production with Planet Jrs.

Simply, yet scientifically designed for their intended work. They economize time and labor; enable you to cultivate easier, quicker and more thoroughly than with old-time, out of date tools and methods. Built to last a life time and fully guaranteed.

No. 72 Planet Jr. 2-row, 2 horse Pivot-Wheel Cultivator saves a man, a team and a cultivator every day it is used. Cultivates two rows of corn, potatoes, beans, etc., at one passage, even if rows are crooked or of irregular width. In check-rows and listed corn it also beats any other tool. Has pring lift and plant shields. Can be equipped with spring trip standards, discs, sweeps, hoe steels and furrowing shovels. Our especially hardened steels add 50% to wear.

No. 17 Planet Jr. is the highest type of single wheel-hoe made. It is a hand machine whose light, durable construction enables a man, woman or boy to cultivate the garden in the easiest, quickest and best manner.

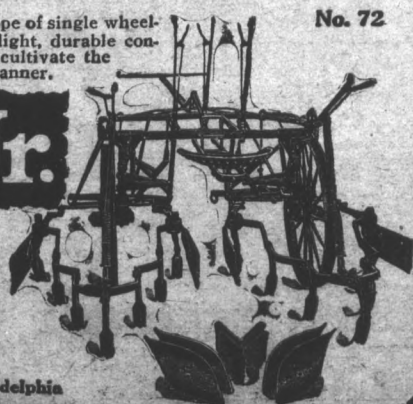
Planet Jr.

Free 72-page Catalog illustrates tools doing actual farm and garden work and describes over 55 Planet Jrs. including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet and Pivot-Wheel Riding Cultivators. Write for it today.

S. L. ALLEN & CO., Inc.

Box 1107 M

Philadelphia



One Man

Saws 25 Cords a Day

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



I Can Ship Your Engine

When You Want It—Save You \$15 to \$500. Any Style—Stationary, Portable or Saw Rgr. Any Size—2, 3, 4, 6, 8, 12, 16, 22 or 30 H.P. Cash or Easy Terms. BOSCH Ignition on order. Catalog FREE. WITTE ENGINE WORKS 2194 Oakland Ave., Kansas City, Mo. 2364 Empire Bldg., Pittsburgh, Pa.

TOMATO AND CABBAGE PLANTS

Early Jersey, Charleston, Wakefield and Flat Dutch Cabbage and Stone, Eariana and Livingston Globe Tomato. *100 for 50 cents; 500 for \$1.75; 1000 for \$3.25 postpaid. By express collect. 1000 for \$1.75; 5000 for \$7.50. Satisfaction guaranteed. W. L. BEARDIN, TIFTON, GEORGIA

Mention The Michigan Farmer When Writing Advertisers



**First
Out of
the
Line!**

*More Power to
You - Little Ford!*

"One good turn deserves another"—but it's easier if you start the good old Ford on Columbia Hot Shot Ignition Current.

A Single Dry Battery—4 Cellpower

A solid unit—no joints—no connections to keep tightened—no metal parts to protect from rust or to keep in running order—just the two binding posts you see in the picture.

This Columbia Hot Shot Dry Battery for Starting Ignition has been tested by the Ford owning public, and has made good. It's backed with the O. K. of the most severe testing laboratory in the world—the open market.

It's the job of a moment to put this handy bucket of jazz under the seat and ready to work. You just connect one binding post to the frame and the other to the induction coil.

Tell the man Columbia Hot Shot No. 1461 for Starting Ignition on your Ford, and see that he gives you that.
At electrical, hardware, auto, and general stores—garages—hardware, auto, and electrical departments.

NATIONAL CARBON COMPANY

Incorporated

Cleveland, Ohio San Francisco, Calif.

Canadian National Carbon Co., Limited, Toronto, Canada

**Columbia
Dry and
Storage Batteries**



121220

The New United States Cream Separator

With perfected DISC bowl

Leads All Others in

Closest skimming—due to the simplified, self-centering bowl with fewer discs, interchangeable and unnumbered.

Easiest running—due to slow crank speed, (only 42 turns per minute for the larger sizes) simple bell speed indicator and perfect oiling.

Longest wearing—due to solid one-piece frame construction, enclosed gears and automatic oil-splash system.

Easiest cleaning—due to few and simple parts and many sanitary features.

If you do not know the U. S. local selling agent, write for descriptive and illustrated catalogue to

Vermont Farm Machine Corporation

Bellows Falls, Vt.
Salt Lake City, Portland, Ore.

Chicago, Ill.
Oakland, Cal.

Mention The Michigan Farmer When Writing to Advertisers

FARMER LEGISLATION.

(Continued from page 702).

have their old shoes patched and will wear the same to work until prices of clothing and shoes are reduced. All members who are fortunate enough to have a Sunday suit of clothes or a pair of unpatched shoes, reserve the right to wear the same on Sundays and holidays.

The migratory bird act of 1918, designed for the protection of migratory birds, was held constitutional by the supreme court the other day. The statute was attacked by Missouri authorities who alleged that it was in conflict with the sovereignty of the state. This decision will be hailed with delight by all bird lovers.

That there will be a bitter fight over the methods proposed for raising the funds to pay the soldiers' bonus, is indicated by several clashes that have already occurred during the discussion of this proposition. The House Ways and Means Committee recommends a tax of one-half of one per cent on all purchases. Some congressmen profess to see in this a scheme to substitute a sales tax for the excess profits tax, thereby unloading the burdens of the government directly onto the shoulders of the people. These representatives insist that a retroactive tax should be levied on war profits of the men who were enriched by the war.

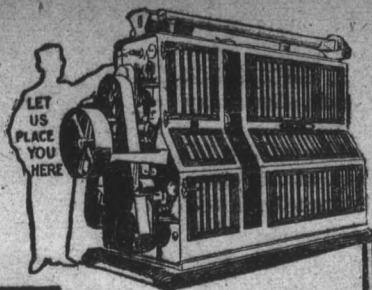
Representative Rainey of Illinois, presented estimates submitted to him by the treasury department, showing that sixty-nine thousand men made more than three billion dollars in addition to their normal income during the war, and figures from the internal revenue department showed that twenty-one new millionaires were created.

As congress seems unable to cut down government expenses to fit the income, it is evident that various attempts will be made to devise means of taxing the people other than those now in use, and it will be well for folks on the farms as well as elsewhere to keep close watch on the proceedings of congress. The government is now spending nearly two million dollars a day, the total for the year ending June 30, being estimated at \$6,750,000,000.

The army and navy expenses are still exceedingly high, notwithstanding the attempts to get back onto a peace footing, and the men in charge of these departments are continually asking for more. One senator, in speaking on the army appropriation bills, said that "our appropriations for agriculture and for many other worthy objects were cut to the bone, apparently because they had no paid bureau of lobbyists to urge their cause."

If there is anything which will force congress to take action on some of the demands made by the farmers, it is the present and prospective food situation. The inability of the farmers to compete with the railroads, mines, factories and building trades in the labor market, because of a lack of remuneration from the sale of their products to pay the increasing wages, is depleting the farms of labor. Assistant Secretary of Agriculture Clarence Ousley, says that there are actually fewer laborers on American farms today than there were when we had five million men under arms.

Wool growers will no doubt be interested in the announcement made by the Department of Agriculture that excess profits of upwards of a million dollars obtained by wool dealers in transactions during the war, when the wool supply was under government control, will be collected and returned to the growers by the Bureau of Markets. This decision was made at a hearing arranged in response to complaints of Texas wool growers. It is said that eight hundred dealers had operated without a government license.



**You Can Make
\$500 to \$1000
a Month Milling
"Flavo" Flour**

in your community on this New Wonderful Mill — no previous milling experience necessary

Be a Miller

and have a dignified, permanent business that will earn you steady profits the entire year.

Grind your home-grown wheat, supply your community with flour and feed. You save the freight on the wheat going out, and the flour and feed coming in.

Besides earning the regular milling profits you get the extra profit of making "A BETTER BARREL OF FLOUR CHEAPER" on the famous "MIDGET MARVEL." The new process, self-contained, one-man, roller flour mill that is revolutionizing the milling industry. It requires less than half the power and labor of the usual roller mill and makes a creamy white, better flavored flour that retains the health building vitamins and the natural sweet flavor of the wheat.

Our customers are given the privilege of using our Nationally advertised Brand.

"Flavo" Flour
"Famous for its Flavor"

We furnish the sacks with your name printed on them. OUR SERVICE DEPARTMENT examines samples of your flour every thirty days and keeps your products up to our high "Flavo" standard. We start you in business with our "Confidential Selling Plans" and teach you the business of milling and selling flour. You can start in this most delightfully profitable business, with our 15 barrels per day, mill with as little as \$3,500 capital. Other sizes up to 100 barrels.

Over 2000 communities already have Midget Marvel Mills. Start now milling "Flavo" Flour in your own community before some one else takes advantage of this wonderful opportunity.

Write today for our Free Book, "The Story of a Wonderful Flour Mill."

The Anglo-American Mill Co.
814-820 Trust Bldg., Owensboro, Ky.



When it Rains



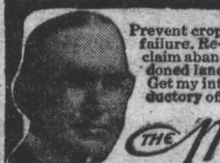
are Wage Insurance and Health Insurance

Look for the REFLEX EDGE

DEALERS
EVERYWHERE

A.J. TOWER CO.
Established 1856
BOSTON MASS

**Ditches
Terraces**



Write for FREE Farm Ditcher, Terracer and Road Grader Book and Prices
All-steel—Adjustable—Reversible—No wheels, levers or cogs to get out of fix. Cuts new farm ditches or cleans old ones to 4 feet deep—grades roads—builds farm terraces, dykes and levees. Does work of 100 men. Every farm needs one. Send your name.
Owensboro Ditcher & Grader Co., Inc.
Box 515 Owensboro, Ky.

10 Days Free Trial

MY EXPERIENCE WITH SUDAN GRASS.

THE editor of The Michigan Farmer requests further data regarding my experience with Sudan grass. The first cutting was made when the grass was about three feet tall and before the heads had fully appeared. This cutting was quite heavy but shrunk in drying so that the weight and volume of hay was somewhat disappointing. I must add, though, that the stock ate it greedily and cleaned up every particle of it. I cannot give a date for cutting as the growing season varies so much. If I were to grow it again, I should certainly cut the grass at about that stage of growth.

The second cutting was purposely delayed because I wished the grass to head out fully and get its full growth. It grew amazingly, considering the poor ground. I might state that the grass was grown on some old clay ground without manure or fertilizer being applied. I allowed the crop to grow until it was fully headed out and beginning to turn a little yellow around the bottom. This time it was over six feet tall and very rank in growth. Individual stems were nearly as large as a lead pencil.

The growth was so dense that the mowing machine broke in attempting to cut it, but it was an old machine. I had to mow it by hand and right here I say—never again. I raised a fine crop of blisters and was wet with sweat. Possibly that was what prejudiced me against the grass. This cutting dried out well but was hard to handle as the grass would not stay on the fork.

The pigs ate it greedily and the horse cleaned it up fairly well but the cow would not eat the stems at all. I had to clean the mangers of stems and it was a problem to get rid of them as they did not rot readily.

I did not make a third cutting, but could have done so as the grass grew up again very quickly. In plowing the ground I turned over a matted sod last fall and I expect the ground to be benefited very much thereby.

If I were to sow it again, I should plant it on warmer ground—sand if possible, and drill it in instead of broadcasting. Then I should cut it the second time with a reaper and handle it in bundles. It certainly will make an astonishing amount of hay on poor soil, and will, of course, do better on good soil. Don't sow it too early and don't be discouraged if it grows slowly and looks spindling at first.

Some might have inferred by the wording of my first article, that the seed was poor. I hasten to say that the seed was first-class and bought right here in Michigan. This year I shall sow Canada peas and oats to cut for hay if the winter ever lets up. I may try Sudan again. Sudan grass belongs to the sorghum family and should not be planted until all danger of frost is past. As an emergency crop Sudan has many good points, but I fear it has been over-rated somewhat. It may be planted as late as the first of July and still make two cuttings if the weather is at all favorable. It loves hot, dry weather and grows until a killing frost. It is not an annual but must be seeded every year. Try an acre or two anyway.

L. BENJ. REBER.

When hatching eggs are shipped by parcel post it is not so necessary to notify the customer as the goods are delivered at the door, but even then it is good business to promptly acknowledge and inform the buyer concerning the time of shipment.



S. E. VAN SLYKE

WHEN asked "How many cows can a milking machine take care of in an hour?" S. E. Van Slyke, a practical dairyman who has owned a Perfection Milker for four years, said: "That all depends on the cows and the operators of the milker. We find that two men can milk as many cows per hour as five or six did by hand and do it much more easily. The Perfection sure is a time saver for the farmer."

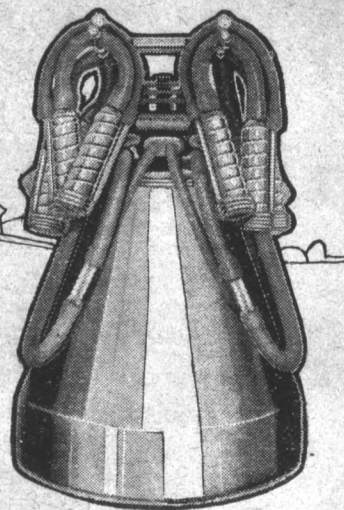
Better Than Hand Milking on A. R. O. Test

"The first winter we used the machine we tested a number of two-year-old heifers on seven-day A. R. O. work. As they had never been milked before we did not use the milking machine on them until the test was completed. You can be sure we were both surprised and pleased to find that their milk flow increased when the Perfection was put on them."

"As they were milked four times a day for some time with the Perfection without any udder

trouble, we are confident the machine will not hurt the cows as long as they are rightly used. We hope to do considerable A.

R. O. work in the next year and will use the Perfection for all of it."



Names, Addresses and Catalog Sent Free

The many satisfied owners are the best recommendation for the Perfection. We will be glad to send you Mr. Van Syke's address together with the names and addresses of many other dairymen to whom you can write. We will also send you FREE, "What the Dairyman Wants to Know," the book that answers every question about milking machines. Write us today.

Perfection Manufacturing Company

2126 E. Hennepin Avenue

Minneapolis, Minn.

The Perfection is the Milker with the Downward Squeeze Like the Calf

PERFECTION MILKER

Harvest 20 to 45 Bushel to Acre Wheat in WESTERN CANADA



Think what that means to you in good hard dollars with the great demand for wheat at high prices. Many farmers in Western Canada have paid for their land from a single crop. The same success may still be yours, for you can buy on easy terms.

Farm Land at \$15 to \$30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows 20 to 45 bushels of wheat to the acre. Good grazing lands at low prices convenient to your grain farm enable you to reap the profits from stock raising and dairying.

Learn the Facts About Western Canada

—low taxation (none on improvements), healthful climate, good schools, churches, pleasant social relationships, a prosperous and industrious people.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., write Department of Immigration, Ottawa, Canada, or

M. V. MacInnes,

176 Jefferson Ave., Detroit, Mich.

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

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and handsome free catalog. Whether dairy is large or small, write today. Western orders from Western points.

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Box 6061 Bainbridge, N. Y.

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Everywhere to ride and exhibit the new Ranger "Motor-bike" completely equipped with electric light and horn, carrier, stand, tool tank, coast-er-brake, mud guards and anti-skid tires. Choice of 44 other styles, colors and sizes in the "Ranger" line of bicycles.

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DELIVERED FREE on approval and 30 DAYS TRIAL.

TIRES Lamps, Wheels, Sun-dries, and parts—at half usual prices. **SEND NO MONEY** but tell us exactly what you need. Do not buy until you get our prices, terms and the big FREE catalog.

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Trained American Fox Hounds Rabbit and Skunk dogs all ages. Send stamp.
W. E. LECKY, Holmesville, Ohio

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The Universal Tractor

DOES all field work—including cultivating, harvesting and belt work. One man operates both the tractor and the implement. The operator sits in complete safety in the usual place—on the seat of the implement.

The work is always in plain sight—no looking backward. Tractor and implement form one unit—can back and turn short.

These indispensable features are particularly profitable at harvest time, when one man instead of two can cut the ripe grain at the rate of 40 acres in 10 hours.

The necessity for saving time and labor is the greatest consideration before the farmer today.

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Shorten Your Harvest Days

WORLD EVENTS IN PICTURES



Queen Mary of England, shown at the right, inspecting the Notting Hill Infants' Welfare Center of London, where the children take great interest in Her Majesty.



"Adjunct" makes a most remarkable jump during the horse show recently held at Pinehurst, N. C.



Engineering Students take charge of big power house to aid in breaking "outlaw" strike.



Union head fights "Outlaw" strikers.



Second daughter of the King of Spain an enthusiastic donkey rider, is enjoying an outing.



Mrs. Herbert Hoover speaks at annual vocational conference at Bryn Mawr College.



Campaign starts to preserve Mark Twain's Hartford Home.

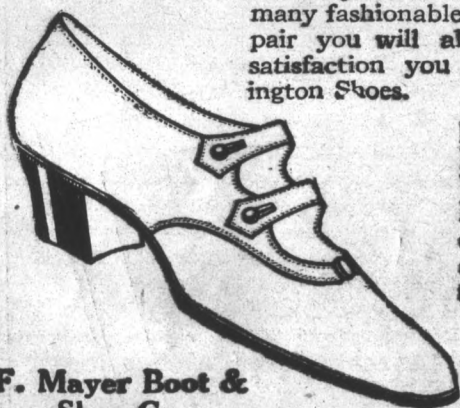
Style, Beauty and Rare Comfort



WOMEN who look for style and beauty first of all, find just what they want in Martha Washington Shoes. Late, correct styles always, and rare comfort built into every Martha Washington Shoe.

Try a pair of these famous shoes. You will like their comfort, the way they wear and the way they hold their shape.

Go to your dealer and choose from the many fashionable styles. After your first pair you will always want the complete satisfaction you get from Martha Washington Shoes.



Beware of imitations. Look for the Martha Washington name and Mayer Trade Mark on the Shoe. If your dealer doesn't handle them, write us.

F. Mayer Boot & Shoe Co.
Milwaukee, Wis.



This shoe has been widely imitated. Look for the name and trade-mark on the sole or label in the top.



Mayer Martha Washington Shoes

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The BOOK That Answers
All Questions About Water

Here's a book that every farmer and home-owner will find very useful. It tells you how to install water systems to supply running water in house and barns—How to lay piping—Where to locate pump for best results—The value of water—How to find water capacity of tanks—Irrigation tables, etc. This book also tells about the popular line of

HUMPHRYES
Perfected Pumps

How and why they are the cheapest and best pumps to buy—How and why they never freeze or fail to work. HUMPHRYES PUMPS are the last word in pump building—they are built for service and give it. Your HUMPHRYES dealer can supply you with any style pump you need, whether hand or power. Don't buy any pump until you have seen the HUMPHRYES line. Write today.

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FOR YOUR
COPY
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The Humphries Mfg. Co.
Mansfield, Ohio

A POST
CARD
BRINGS IT
FREE



Preaching in Unexpected Places—By N. A. McCune

"For what shall it profit a man if he shall gain the whole world, and lose his own soul?"

THIS verse is often heard preached on, in the church. And whether preached on or not, it strikes home. There is both point and edge to it. If the reader will give these words half a chance, they will take hold of the conscience. For we have all thought on the time when we would own this and that, have so much interest money coming in every six months, or the income from so much land, finding its way into our pockets every fall. But our Lord says that while all these things may be all right in themselves, there is a danger in it. And the danger is, that we shall be so busy with business and getting ready for a sunshiny old age, that the immortal part of us shall be starved to death. The soul has to be fed, as well as the body. And the man who has succeeded in gathering together considerable property, but whose soul nature has become dwarfed and shrivelled is to be found in most communities.

The danger of this has recently been spoken on by two American business men, in a surprising way. They go at it with all their might. The "Manufacturers' Record" is taken and read by thousands of business men all over the United States. Its editor is Richard B. Edmonds. Listen to a few sentences from a recent editorial from Mr. Edmond's pen: "Above all else, this nation needs a nation-wide revival of old-fashioned prayer meeting religion." That sounds like the parson doesn't it? But it isn't. It is from the pen of an astute business man. Here is another sentence: "The country needs a religion that makes men realize that if there is a heaven there must also of necessity be a hell, a religion that makes men realize that every act is recorded on his own conscience, and that though it may slumber it can never die. We need a revival of religion which will make every man and woman strive in every act of life to do that which on the great Judgment Day they will wish they had done, as with soul uncovered they stand before the judgment seat of the Eternal." That is putting it straight, but not a whit more straight than it should be. If Jesus Christ really is the Way, the Truth and the Life, ministers are not the only ones who should say so. Business men should say so. Farmers and factory men should say so. And there will be a new birth of happiness, fraternity and peace in the land.

But we must turn to the other man referred to. That is Mr. Babson, of Boston, generally admitted to be the greatest authority on business conditions in America. In his "Barometer Letter to Merchants, Bankers and Investors," Mr. Babson recently said: "The need of the hour is not more legislation. The need of the hour is more religion." "It is one thing to talk about plans and policies, but a plan and policy without a religious motive is like a watch without a spring or a body without the breath of life." That sounds pretty preacherified doesn't it? Sounds as it does when you drop off into your first doze, during the sermon. But it is time to quit dozing during the sermon, and to take the words of the Son of Man seriously. What shall it profit a man, to get things nicely arranged for his comfort in old age and for his children, and then to slip off into the great beyond and have no hope for what lies ahead? And it is not a matter of the great beyond, only. This life has to be lived, and without religion and morality it would be chaos. Without honesty on the part of business men, there could be no business. Back of business and industry lie integrity and honest purpose. Back of that lies some source, somewhere, of this integrity and purpose. And what is that but the Bible, the word of the living God? An educator some years ago published a bulletin in which he goes on to show that the rural church has a money value for the section where it exists; that where the rural church is prosperous, the community is prosperous, and where there is no religion and the church is dying, the condition of the farm tends toward a decline. Recognizing our duty toward God and our fellowman now is the only wise course, the only safe course. It is easy to lose the finest things in life, because we are so busy. And after all, what does it profit to gain success and lose one's life?

The Art of Walking

OUR ancestors before the railway run away with the idea that it is only era, being obliged to walk, knew the leg muscles that are employed, little of chronic indigestion, insomnia. When one leg is thrust forward the muscles of the back on the opposite side of the body go into action, too. How many people in these days could breakfast off a pork pie and a pint of ale at half-past six in the morning? How many could endure an amputation without an anaesthetic? Yet those were common practices with our ancestors.

Modern locomotion, the railway train, the motor car, and the aeroplane have made men physically lazy, and they do not use their muscles until a railway strike comes along and hits them in the eye. Then they discover what a glorious and health-giving exercise walking really is.

It is the only exercise that employs good, square walking, not ambling and all the muscles of the body. Don't shuffling along a road. That kind of

and what employs and strengthens the limb muscles also strengthens the heart muscle. The stomach is also a muscular organ, and walking gives the stomach vigor and "tone" to digest. One is to muscles what a good address is to a man of business, or a woman in society.

But walking as an exercise means

walking tires and bores, but does not invigorate. Try and get a good steady swinging regulation pace of thirty inches. Keep that up for three or four miles. Don't spurt. If it is to be a long walk, then after one hour's walking there should be a rest of ten minutes. Square the shoulders, keep the head erect, and swing the arms rhythmically. If you can do a good steady walk of eight or ten miles you will be astonished how your troubles and cares will diminish in magnitude. Life becomes a very simple affair then.

One or two hints and cautions may be valuable. The body loses fluid both by perspiration that can be felt, and by that which cannot. During vigorous walking, a definite amount for so many miles, this must be replaced by fluid of some kind. Water is needed after each four miles of walking, or the body temperature gets raised. When the walk is over do not sit down immediately to a hearty meal. Have a rest first; loll in an armchair and relax every muscle, and take your boots off. If you eat heartily when the muscular system is tired you may not digest well. Take particular care of the feet. Thick woolen socks are the best and cold water is the thing to bathe tired feet in.

Finally, many of the maladies of modern civilization, such as insomnia, chronic constipation, chronic dyspepsia, melancholia, boredom and "nerves" can be banished by systematic walking as an exercise.

Sunshine Hollow Items

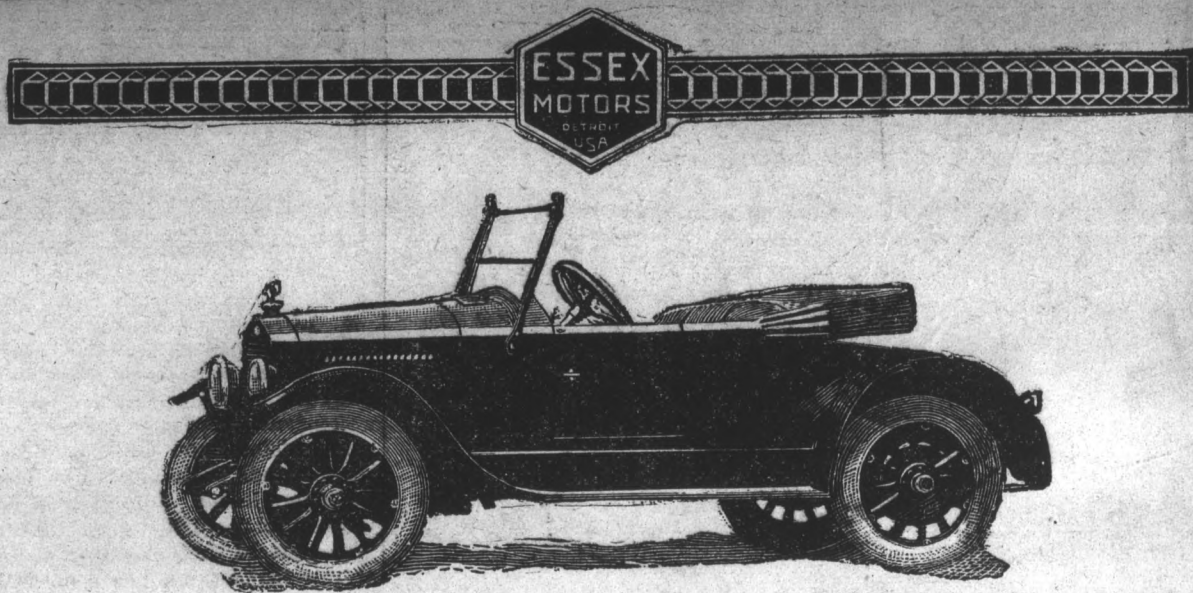
By Rube Rubicon

Sunshine Hollow folks that like their job seem to look a little bit happier than some of the tired business men that live in the big cities. Of course, they all have their troubles but there is plenty to eat and lots of fresh air and when the real estate agents don't coax them to sell they seem quite satisfied. Nothing keeps farm folks more uneasy than constantly hearing about farm prices advancing and wondering if they ought to cash in on the old homestead before prices drop. William Elkins says there won't ever be any more land in Sunshine Hollow than there is now so its good stuff to keep. He says cities can double in size but you can't make two eighty-acre farms where one grew before.

Melvin Hogan says he won't buy any new clothes until prices come down. He has two suits and wears one until it looks worse than the other. Then he wears the second until it looks worse than the first. He always has a change of clothes for Sunday. And Melvin is a highly respected citizen who pays his bills promptly. He looks neat and works hard. A lot of folks may wish they had saved some of their clothes money about twenty years from now. That's what Melvin says.

Sunshine Hollow folks do better work when they feel sort of optimistic. Nelson Dickinson once read an awful sad story about farming just when a big rain was coming up. He knew the roof leaked but didn't have the pep to fix it after reading about farming being such a bum business. The rain spoiled the new wallpaper. When Nelson cheered up after the storm he got right up on the roof and fixed the shingles so the next rain will all drizzle right down in the cistern where it belongs.

Aunt Catherine Selby says she could have made a lot of money writing for the magazines if she had only tried. She gets lots of pleasure thinking about it. Her niece says its a good thing aunty never tried, as lots of folks get more fun thinking about what they could do if they would than what they couldn't do when they tried.



The Roadster, Too, Has All the Noted Essex Qualities

Speed—Power—Endurance—Economy—Utility. It is an Ideal Car for Business as Well as Pleasure

The wide uses for which the Essex Roadster is adapted in farming activities are instantly apparent.

Besides fast, comfortable communication with the city, it has many valuable utilities. The carrying arrangements in the rear deck provide space for large crates, cases, boxes, etc. But no evidence of them is revealed when the Roadster is used as a pleasure car. Every line is smart, trim and graceful. It takes but a moment to make the change.

A World Endurance Record Proves Essex Dependability

A large class of Essex buyers are farmers. They choose it for utility and dependable transportation. It becomes, in fact, a part of their business system. It must be on the job, keep all engagements on time, and be as responsible as an engineer's watch.

These same qualities, with its rare good looks, make the roadster unsurpassed as a smart car for pleasure.

Economy, durability and train-like regularity are the standards set by Essex. These things have been shown in the hands of more than 30,000 owners.

It was more dramatically proved on the Cincinnati speedway when an Essex stock chassis set the world's long distance endurance record of 3,037 miles in 50 hours. The same car, in three separate tests traveled 5,870 miles at an average speed above a mile a minute. Another stock Essex set the world's 24-hour road mark of 1,061 miles over snow-covered Iowa roads.

Its endurance and riding ease make it ideal for those who must cover wide territory, quickly and frequently. Though not large, the Essex is commodious. There is plenty of room for passengers, and its special arrangements for carrying even bulky, heavy loads make it an unusual convenience in farm service.

Come see the Essex Roadster. Ride in it. Try its paces. Whether you want it for business or pleasure, you will appreciate why Essex in its first year set a new world's sales record.

Essex Motors, Detroit, Michigan



33 1/3 Per Cent Saved At One Clip!

HERE'S where I offer a bargain that will open your eyes! A Kalamazoo Wick Oil Range at a price that will put a full third of the usual cost back into your pocket. I am a manufacturer—and sell direct to you. That's why I can sell at such low prices.

KALAMAZOO

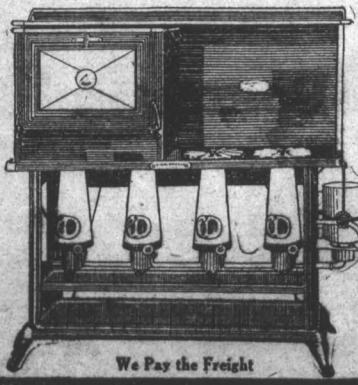
"The Old Stove Master" Kerosene Range Sold Direct to You

Built with the famous Long Blue Chimney—intense heat without smoke or odor. Gets oven hot enough for any baking in 10 minutes. No waiting or watching. Heat easily controlled and kept at steady temperature. Equipped with perfect oven thermometer. Sold on cash or easy payments—on unconditional guarantee. And, remember, you save 1/3 of regular prices.

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Kalamazoo Stove Company, Mfrs. KALAMAZOO MICHIGAN

"A Kalamazoo Direct to You"



We Pay the Freight

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's Caustic Balsam

IT HAS NO EQUAL

For —It is penetrating, soothing and healing, and for the Old Sores, Bruises, or Wounds, Folds, Human Bolls, Corns and Bunions. CAUSTIC BAL-SAM has no equal as a Liniment.

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

Perfectly Safe and Reliable Remedy for Sore Throat Chest Cold Backache Neuralgia Sprains Strains Lumbago and all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES Cornhill, Tex. —"One bottle Caustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills." OTTO A. BEYER. Price \$1.75 per bottle. Sold by druggists or sent by us express prepaid. Write for booklet B. The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

Mention The Michigan Farmer When Writing to Advertisers



FOR THE MAN WHO WORKS

Men used to wear hob-nailed shoes because they wanted long wear. They got it but lost comfort and neat appearances.

This Hirth-Krause shoe will outwear the hobnails and will never pinch the foot nor appear clumsy.

They are made from leather, scientifically prepared in a Hirth-Krause Tannery, are moisture and acid proof, with double vamp and full counter covering.

The man who works will appreciate the advantage of manufacturing as we do, complete "from hide to shoe".

Go see the Hirth-Krause dealer. Let him show you this aristocrat among shoes with the mileage guarantee.



More miles per dollar
More smiles per mile.
Found only in
Hirth-Krause Shoes

Hirth-Krause
Shoemakers for three Generations
Shoes

Tanners and Shoe Manufacturers
Grand Rapids, Mich.

100% Comfort In A Table Beverage is supplied by INSTANT POSTUM

A rich coffee-like flavor with none of coffee's harmful after-effects makes POSTUM the ideal table drink.

Why not use POSTUM instead of coffee?

"There's a Reason"

Made by Postum Cereal Co. Battle Creek, Mich.

Mention The Michigan Farmer When Writing to Advertisers

THE VALLEY OF THE GIANTS

A ROMANCE OF THE REDWOODS

By Peter B. Kyne

CHAPTER VII.

ALONG the familiar streets of Sequoia Bryce Cardigan and his father walked arm in arm, their progress continuously interrupted by well-meaning but impulsive Sequoians who insisted upon halting the pair to shake hands with Bryce and bid him welcome home. In the presence of those third parties the old man quickly conquered the agitation he had felt at this long-deferred meeting with his son, and when presently they left the business section of the town and turned into a less-frequented street, his emotion assumed the character of a quiet joy, evidenced in a more erect bearing and a firmer tread, as if he strove, despite his seventy-six years, not to appear incongruous as he walked beside his splendid son.

"I wish I could see you more clearly," he said presently. His voice as well as his words expressed profound regret, but there was no hint of despair or heartbreak now.

Bryce, who up to this moment had refrained from discussing his father's misfortunes, drew the old man a little closer to his side.

"What's wrong with your eyes, pal?" he queried. He did not often address his parent, after the fashion of most sons, as "Father," "Dad" or "Pop." They were closer to each other than that, and a rare sense of perfect comradeship found expression, on Bryce's part, in such salutations as "pal," "partner" and, infrequently, "old sport." When arguing with his father, protesting with him or affectionately scolding him, Bryce, with mock seriousness, sometimes called the old man John Cardigan.

"Cataracts, son," his father answered. "Merely the penalty of old age." "But can't something be done about it?" demanded Bryce. "Can't they be cured somehow or other?"

"Certainly they can. But I shall have to wait until they are completely matured and I have become completely blind; then a specialist will perform an operation on my eyes, and in all probability my sight will be restored for a few years. However, I haven't given the matter a great deal of consideration. At my age one doesn't find very much difficulty in making the best of everything. And I am about ready to quit now. I'd like to, in fact; I'm tired."

"Oh, but you can't quit until you've seen your redwoods again," Bryce reminded him. "I suppose it's been a long time since you've visited the Valley of the Giants; your long exile from the wood-goblins has made you a trifle gloomy, I'm afraid."

John Cardigan nodded. "I haven't seen them in a year and a half, Bryce. Last time I was up, I slipped between the logs on the old skid-road and like to broke my old fool neck. But even that wasn't warning enough for me. I cracked right on into the timber and got lost."

"Lost? Poor old partner! And what did you do about it?"

"The sensible thing, my boy. I just sat down under a tree and waited for George Sea Otter to trail me and bring me home."

"And did he find you? Or did you have to spend the night in the woods?"

John Cardigan smiled humorously. "I did not. Along about sunset George found me. Seems he'd been following me all the time, and when I sat down he waited to make certain whether I

was lost or just taking a rest where I could be quiet and think."

"I've been leaving to an Indian the fulfillment of my duty," Bryce murmured bitterly.

"No, no, son. You have never been deficient in that," the old man protested.

"Why didn't you have the old skid-road planked with refuse lumber so you wouldn't fall through? And you might have had the woods-boss swamp a new trail into the timber and fence it on both sides, in order that you might feel your way along."

"Yes, quite true," admitted the old man. "But then, I don't spend money quite as freely as I used to, Bryce. I consider carefully now before I part with a dollar."

"Pal, it wasn't fair of you to make me stay away so long. If I had only known—if I had remotely suspected—"

"You'd have spoiled everything—of course. Don't scold me, son. You're all I have now, and I couldn't bear to send for you until you'd had your fling." His trembling old hand crept over and closed upon his boy's hand, so firm but free from signs of toil. "It was my pleasure, Bryce," he continued "and you wouldn't deny me my choice of sport, would you? Remember, lad, I never had a boyhood; I never had a college education, and the only real travel I have ever had was when I worked my way around Cape Horn as a foremast hand, and all I saw then was water and hardships; all I've seen since is my little world here in Sequoia and in San Francisco."

"You've sacrificed enough—too much—for me, Dad."

"It pleased me to give you all the advantages I wanted and couldn't afford until I was too old and too busy to consider them. Besides, it was your mother's wish. We made plans for you before you were born, and I promised her—ah, well, why be a cry-baby? I knew I could manage until you were ready to settle down to business. And you have enjoyed your little run, haven't you?" he concluded wistfully.

"I have, Dad." Bryce's great hand closed over the back of his father's neck; he shook the old man with mock ferocity. "Stubborn old lumberjack!" he chided.

John Cardigan shook with an inward chuckle, for the loving abuse his boy had formed a habit of heaping on him never failed to thrill him. Instinctively Bryce had realized that tonight obvious sympathy copiously expressed was not the medicine for his father's bruised spirit; hence he elected to regard the latter's blindness as a mere temporary annoyance, something to be considered lightly, if at all; and it was typical of him now that the subject had been discussed briefly, to resolve never to refer to it again. He released his hold on the old man's neck and tapped the latter's gray head lightly, while with his tongue he made hollow-

GUESTS.

I met Mr. Cair at de gate,
An' I say to him, Sir, doan yo' wait.
Go right on yo' way case I's got dis
to say
No welcome yo'll get fo' yo' ain't.

I met Mr. Joy at de doah
An' I say, what, yo' back heah once
moah,
Come in, take a seat, stay to sleep an'
to eat.
Yo's welcome, Sir, welcome, dat's
shoah.

sounding noises against the roof of his mouth.

"Ha! I thought so," he declared. "After your fifty-odd years in the lumber business your head has become packed with sawdust—"

"Be serious and talk to me, Bryce."

"I ought to send you to bed without your supper. Talk to you? You bet I'll talk to you, John Cardigan; and I'll tell you things, too, you scandalous bunko-steerer. Tomorrow morning I'm going to put a pair of overalls on you, arm you with a tin can and a swab, and set you to greasing the skidways. Partner, you've deceived me."

"Oh, nonsense. If I had whimpered that would only have spoiled everything."

"Nevertheless, you were forced to cable me to hurry home."

"I summoned you the instant I realized I was going to need you."

"No, you didn't, John Cardigan. You summoned me because, for the first time in your life you were panicky and let yourself get out of hand."

His father nodded slowly. "And you aren't over it yet," Bryce continued, his voice no longer bantering but lowered affectionately. "What's the trouble, Dad? Trot out your old panic and let me inspect it. Trouble must be very real when it gets my father on the run."

"It is, Bryce, very real indeed. As I remarked before, I've lost your heritage for you." He sighed. "I waited till you would be able to come home and settle down to business; now you are home, and there isn't any business to settle down to."

Bryce chuckled, for he was indeed far from being worried over business matters, his consideration now being entirely for his father's peace of mind. "All right," he retorted, "Father has lost his money and we'll have to let the servants go and give up the old home. That part of it is settled; and weak, anemic, tenderly nurtured little Bryce Cardigan must put his turkey on his back and go into the woods looking for a job as lumberjack. . . . Busted, eh! Did I or did I not hear the six o'clock whistle blow at the mill? Bet you a dollar I did."

"Oh, I have title to everything—yet."

"How I do have to dig for good news! Then it appears we still have a business; indeed, we may always have a business, for the very fact that it is going but not quite gone implies a doubt as to its ultimate departure, and perhaps we may yet scheme a way to retain it."

"Oh, my boy, when I think of my years of toil and scheming, of the big dreams I dreamed—"

"Belay all! If we can save enough out of the wreck to insure you your customary home comforts, I shan't cry, partner. I have a profession to fall back on. Yes, siree. I own a sheepskin, and it says I'm an electrical and civil engineer."

"What!"

"I said it. An electrical and civil engineer. Slipped one over on you at college, John Cardigan, when all the time you thought I was having a good time. Thought I'd come home and surprise you."

"Bu-bu-but—"

"It drives me wild to have a man sputter at me. I'm an electrical and civil engineer, I tell you, and my two years of travel have been spent studying the installation and construction of big plants abroad." He commenced to chuckle softly. "I've known for years that our sawmill was a debilitated old coffee-grinder and would have to be rebuilt, so I wanted to know how to rebuild it. And I've known for years that some day I might have to build a logging railroad—"

"My dear boy! And you've got your degree?"

"Partner, I have a string of letters after my name like the tail of a comet."



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WHETHER you kill one hog or a hundred hogs, finish the job right with this perfect curing salt. Good meat is worth the best salt you can buy. Colonial Special Farmer's Salt cures more quickly, penetrating and drawing out the moisture, leaving the meat sweet, tender and of excellent flavor. Preserves the color and prevents forming of hard crust on outside.

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No Lumps

Just soft, flaky grains of pure salt without adulteration of any kind. Colonial Special Farmer's Salt is like snow flakes compared with ordinary brands filled with lumps like hailstones. Once you try Colonial Farmer's Salt you will appreciate its superiority over ordinary salts that cake and lump. Dissolves quickly, making a clear, strong solution. Best for every farm purpose—butter making, cooking, baking, etc. Highly refined—never gives foods a gritty taste.

No Waste

A 70 pound bag of this soft, fluffy salt is as big as a 100 pound bag of the ordinary kind. Colonial Special Farmer's Salt does the work quicker and more thoroughly. The strength never varies—never changes.

Packed conveniently in strong, protective bags that make excellent towel material when empty. There is no other salt just as good. If not handled by your dealer, write to us, giving his name. 70 pound bags only.

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and Women's Combination Work Suits

(49)

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St. Louis - Mo.
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"You comfort me," the old man answered simply. "I have reproached myself with the thought that I reared you with the sole thought of making a kind lumberman out of you—and when I saw your lumber business slipping through my fingers—"

"You were sorry I didn't have a profession to fall back on, eh? Or were you fearful lest you had raised the usual rich man's son? If the latter, you did not compliment me, pal. I've never forgotten how hard you always strove to impress me with a sense of the exact weight of my responsibility as your successor."

"How big are you now?" his father queried suddenly.

"Well, sir," Bryce answered, for his father's pleasure putting aside his normal modesty, "I'm six feet two inches tall, and I weigh two hundred pounds in the pink of condition. I have a forty-eight-inch chest, with five and a half inches chest-expansion, and a reach as long as a gorilla's. My underpinning is good, too; I'm not one of these fellows with spidery legs and a barrel-chest. I can do a hundred yards in ten seconds; I'm no slouch of a swimmer; and at Princeton they say I made football history. And in spite of it all, I haven't an athletic heart."

"That is very encouraging, my boy—very. Ever do any boxing?"

"Quite a little. I'm fairly up in the manly art of self-defence."

"That's good. And I suppose you did some wrestling at your college gymnasium, did you not?"

"Naturally. I went in for everything my big carcass could stand."

The old man wagged his head approvingly, and they had reached the gate of the Cardigan home before he spoke again. "There's a big buck woods-boss up in Pennington's camp," he remarked irrelevantly. "He's a French Canadian imported from northern Michigan by Colonel Pennington. I dare say he's the only man in this country who measures up to you physically. He can fight with his fists and wrestle right cleverly, I'm told. His name is Jules Rondeau, and he's top dog among the lumberjacks. They say he's the strongest man in the county." He unlatched the gate. "Folks used to say that about me once," he continued wistfully. "Ah, if I could have my eyes to see you meet Jules Rondeau!"

The front portal of the quaint old Cardigan residence opened, and a silver-haired lady came out on the porch and hailed Bryce. She was Mrs. Tully, John Cardigan's old housekeeper, and almost a mother to Bryce. "Oh, here's my boy!" she cried, and a moment later found herself encircled by Bryce's arms and saluted with a hearty kiss.

As he stepped into the familiar entrance-hall, Bryce paused, raised his head and sniffed suspiciously, like a bird-dog. Mrs. Tully, arms akimbo, watched him pleasantly. "I smell something," he declared, and advanced a step down the hall for another sniff; then, in exact imitation of a foxhound he gave tongue and started for the kitchen. Mrs. Tully, waddling after, found him "pointing" two hot blackberry pies which had but a few minutes previous been taken from the oven. He was baying lugubriously.

"They're wild blackberries, too," Mrs. Tully announced proudly. "I remembered how fond you used to be of wild-blackberry pie—so I phoned up to the logging-camp and had the woods-boss send a man out to pick them."

"I'm still a pie-hound, Mrs. Tully, and you're still the same dear, thoughtful soul. I'm so glad now that I had sense enough to think of you before I turned my footsteps toward the setting sun." He patted her gray head. "Mrs. T." he declared, "I've brought you a nice big collar of Irish lace—bought it in Belfast, b'gosh. It comes down around your neck and buckles right here with an old ivory cameo I picked up in Burma and which former-

ly was the property of a Hindu queen." Mrs. Tully simpered with pleasure and protested that her boy was too kind. "You haven't changed a single speck," she concluded proudly.

"Has the pie?"

"I should say not."

"How many did you make?"

"Two."

"May I have one all for myself, Mrs. Tully?"

"Indeed you may, my dear."

"Thank you, but I do not want it for myself. Mrs. Tully, will you wrap one of those wonderful pies in a napkin and the instant George Sea Otter comes in with the car, tell him to take the pie over to Colonel Pennington's house and deliver it to Miss Sumner? There's a girl who doubtless thinks she has tasted pie in her day, and I want to prove to her that she hasn't." He selected a card from his card-case, sat down, and wrote:

Dear Miss Sumner:

Here is a priceless hot wild-blackberry pie, especially manufactured in my honor. It is so good I wanted you to have some. In all your life you have never tasted anything like it.

Sincerely,

BRYCE CARDIGAN.

He handed the card to Mrs. Tully and repaired to his old room to remove the stains of travel before joining his father at dinner.

Some twenty minutes later his unusual votive offering was delivered by George Sea Otter to Colonel Pennington's Swedish maid, who promptly brought it in to the Colonel and Shirley Sumner, who were even then at dinner in the Colonel's fine burl-wood-paneled dining-room. Miss Sumner's amazement was so profound that for fully a minute she was mute, contenting herself with scrutinizing alternately the pie and the card that accompanied it. Presently she handed the card to her uncle, who fixed his pince-nez and read the epistle with deliberation.

"Isn't this young Cardigan a truly remarkable young man, Shirley?" he declared. "Why, I have never heard of anything like his astounding action. If he had sent you an armful of American Beauty roses from his father's old-fashioned garden, I could understand it, but an infernal blackberry pie! Good heavens!"

"I told you he was different," she replied. To the Colonel's amazement she did not appear at all amused.

Colonel Pennington poked a fork through the delicate brown crust. "I wonder if it is really as good as he says it is, Shirley."

"Of course. If it wasn't, he wouldn't have sent it."

"How do you know?"

"By intuition," she replied. And she cut into the pie and helped the Colonel to a quadrant of it.

"That was a genuine hayseed faux-pas," announced the Colonel a few moments later as Shirley was pouring coffee from a samovar-shaped percolator in the library. "The idea of anybody who has enjoyed the advantages that fellow has, sending a hot blackberry pie to a girl he's just met!"

"Yes, the idea!" she echoed. "I find it rather charming."

"You mean amusing."

"I said 'charming.' Bryce Cardigan is a man with the heart and soul of a boy, and I think it was mighty sweet of him to share his pie with me. If he had sent roses, I would have suspected him of trying to 'rush' me, but the fact that he sent a blackberry pie proves that he's just a natural, simple, sane, original citizen—just the kind of person a girl can have for a dear friend without incurring the risk of having to marry him."

"I repeat that this is most extraordinary." (Continued next week.)

Poultry, running in the orchard and fields, is a great help to the farmer in his work of destroying harmful insects. By all means keep as much poultry in the orchard as you can.

STORY OF THE EMDEN.

SOME time ago a mercantile marine officer, who during the war was on naval service, related to me the following interesting episode in regard to the capture of the Emden. The famous German raider landed a company of men on the Cocos Island in the early hours of the morning when most of the men in the wireless station were asleep. The detachment of Germans were under orders to put the wireless apparatus out of action. Near the beach they came across a Chinese—one of the cooks at the station mess. Him they seized hold of and commanded him to lead them to the telegraph office. Unfortunately for the emissaries of the Fatherland the cook kept his wits about him, and, unknown to his captors, managed to signal to one of his fellow-countrymen, who was also a station servant and who happened to be near, that he was to convey the news of the landing with all speed to his masters.

This man slipped away post haste to the operator's quarters and in the meantime the cook led his guards by a round-about-way through the bush to their destination.

Apprised by the Chinese who had come direct, as to what was happening, the operators were able to send out a wireless that the Emden was in the offing, so that by the time the Germans had arrived on the scene the Sydney had picked up the message and was making at full speed towards the enemy.

The Germans not knowing that their presence had already been betrayed arrived at the instrument room and soon demolished its contents, no doubt feeling they had done a good morning's work. Alas! their calculations were all upset through the presence of mind of a humble Chinese cook. The latter, I believe, was not forgotten by the British authorities, for I have reason to think he now lives a gentleman of ease and leisure in his native town.

PASS THE PLUMBAGO.

A PLUMBAGO pencil! Something new? No. It is just what we falsely call a "lead pencil." Pencils are never made of lead, but of graphite, or plumbago, which is dug out of the earth and consists chiefly of carbon. The graphite is ground fine by machinery, and the powder is mixed with water and clay. After it has been squeezed into a stiff dough, it is forced through a pressing machine with a tube down the center. As the paste is driven down this tube, it is made into long slender sticks. Now the "pencil" is ready to be covered. Cedar wood is cut into long, straight strips of equal length. These are passed through a machine which cuts a groove on the upper side. The groove is filled with a piece of plumbago. Over this a flat strip of wood is placed, and the two strips are glued together. Result: a long, square pencil, which needs only to be planed smooth, stained, polished and cut into convenient sizes.

Uncle Oziah Filkins went to sleep in his new bath tub without turning off the spigot. Fortunately he sleeps with his mouth open or the tub would have overflowed and caused lots of trouble.

Rural school teachers who have planned to supplement the cold lunch carried from home, with some hot soup or cocoa prepared at school, testify that pupils are healthier and make better progress in their school work.



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Your Fordson dealer has a stock of the three lengths of Little Giant belts—50 ft., 75 ft. and 100 ft. If he hasn't, write us direct.

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Eternametal Flues

The flues of the Range Eternal won't burn out, nor rust out, nor wear out. They are made of Eternametal—the strongest, non-corroding material ever used in any range. And the

TEA Shelves—strong—roomy—properly placed—so that no cooking surface is lost from the top. Strong enough to hold a heavy teapot or flat iron—large enough for a pan of biscuits, yet so placed that they are convenient.

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Woman's Interests

Spring House-cleaning as an Insect Control Measure

By Don B. Whelan

SOON the sound of the beaters will echo as they flay the dust from carpet and rug, or the vacuum sweeper will hum as it sucks the dirt from the warp. Spring time is always housecleaning time, when carpets are cleaned, floors scrubbed and windows washed, while the cobwebs are removed from the corners and ceiling. Much dirt will have been brought in during the winter and the furnace will have made a lot of dust to be gotten rid of. Housecleaning time is certainly necessary, not only from the standpoint of dirt, but also with a view to getting rid of many troublesome and injurious insects. Where there is cleanliness few insects will breed. A little knowledge of where they thrive and develop will greatly aid in destroying these places when the general cleaning is going on.

When the cleaning has progressed as far as the kitchen and pantry make the job a thorough one by examining the food supply. Look into the flour bin and into that sack of bran that was purchased a few months back. Take a little out into a dish and examine it for small beetles or see if there is any webbing present. Smell of it to see if there is a "buggy odor." Look into the receptacles that hold other foods that have been stored, and see if there is any infestation of these products. A can that has been kept air-tight may often be found to be literally alive with insect life. Beans, peas, corn meal and graham flour are often the first to become infested. Clean out and destroy any contaminated food. The containers themselves may contain eggs and so must either be destroyed or else washed in boiling water.

Warm, moist places are the favorite breeding places of cockroaches. An ideal spot is found where the under side of the sink is enclosed. This gives the roaches just what they want; warmth, moisture, and darkness, with the food supply close at hand. Besides being unsanitary, these places are a common meeting place for many insects and a retreat for mice.

Where there are cracks between the boards of the floor dust will accumulate in spite of all that you can do. It is very apt to get in between the baseboard and the floor, or in the corners. It is in these places, protected from the disturbance of broom or carpet sweeper, that insects find an admirable place in which to breed or hide. The common cat and dog flea makes use of these places in which to lay their eggs and bring up their ever increasing families. The bed-bug finds these cracks an excellent spot in which to spend the day, their flat bodies easily finding a comfortable place to await the coming of night and a square meal. Of course, they also stay in the cracks of the bed and mattress. Hot soap-suds with a little kerosene added will make a fine solution with which to mop the infested floors. The cracks should be filled with some material to keep the dirt and dust out. The cat or dog should be rid of fleas and kept out-of-doors. If the dog is provided with a rug or article of cloth-

ing on which to sleep it should be cleaned every week during the warm weather.

Clothes that have not been worn for some time and hang, or lie, undisturbed are quite apt, in the summer especially, to serve as feeding places for several insects, not the least of which is the clothes-moth. Their work may not be noticed until last year's coat or gown has been taken down and found to be full of holes that are located in the most conspicuous places. The webs or cases in which the insect feeds will be found near the holes where they are at work. The larvae of carpet beetles are also very fond of clothes and can in a short time so perforate a garment as to make it unusable. They will also get on the under side of the carpet, working near the border, or will follow a crack in the floor and thus cut a long slit. Most boxes and trunks where things are packed are easy to enter and con-

sequently those places are often the first to be ruined. If a carpet or a garment is found to be infested it should be thoroughly beaten or brushed, perhaps sprayed with gasoline and hung in the sunlight as long as possible. The floors themselves should be thoroughly washed, using practically the same treatment as for fleas.

Where the wall-paper is loose will be found a favorite feeding ground for the fish-moth, or silver-fish as it is sometimes called. In infested houses the bed-bug will hide here by day. These loose places should be fixed, and can be with little time or trouble.

If the foundation walls are packed with old straw and manure, see that it is removed for it is a fine breeding place for flies and they will soon take advantage of it. Many a fly nuisance has been traced to these places.

Most of the remedial measures against the household insects can easily be made a part of the housecleaning program with little extra trouble, and much benefit will be derived.

Growing Tea Roses



AT a large gathering of flower growers, Frederick Wallace, an experienced rose grower, gave an address on the successful growing of hybrid tea roses, which are increasing yearly in popularity.

As the matter of soil is most important, the preparation of the plot and proper drainage were considered first. Roses do not like to have their feet in water, and soggy, ill-drained ground may drown them out. Indications of this condition are slow growth in starting, and unhealthy looking plants. Eight to ten inches of good top soil is necessary, and this expert recommends draining by means of tiling.

It is advisable to order plants early for spring planting, the best time for tender roses, and set them out as soon as soil is dry enough, which is when it crumbles. Each bush should be properly "firmed" as it is planted.

Mr. Wallace does not believe in roses grown on their own roots or, pot-grown roses, but says the best results may be obtained from plants budded on stock grown two years in the open. Care must be taken, of course, to remove sprouts from root stock. In order to preserve the labels, names should be written on slips of paper and inclosed in small glass bottles,

well corked and hung with copper wire to the bush.

If stock is dry when received, bury in moist soil for forty-eight hours before planting. Hybrid tea roses are best grown in rows, four feet apart, and bushes sixteen to eighteen inches apart in the rows. This allows plenty of room for cultivation. Plants should be disbudded till they are well established, and it is well not to allow buds to start on new plants until June 15.

Roses are gross feeders. They need plenty of nitrogen, and this should be applied early to stimulate growth. For quick results nitrate of soda, used dry, a handful to a plant, is good, but should not be used after September 20. Potash is also needed and wood ashes supplies this. Apply twice during the season. Plants like to rest during the mid-summer and can be started into growth by using muriate or sulphate of potash, a tablespoonful to a plant. Phosphorus, another ingredient they need, may be applied in the form of bone meal, medium and fine grades mixed, or sixteen per cent of acid phosphorus, followed by lime to sweeten the soil. No fertilizer should be placed nearer than two inches to the crown and spread from there

out eighteen inches to reach the white roots which are the feeders.

Lime should be given in two applications, one in spring and one later, a handful to each bush, powdered, and the ground around each bush should be kept well worked, all the time. Do not overwater your plants, a habit of most amateurs.

The usual pests, rose bugs, can be hand-picked, or treated with Paris green or arsenate of lead. For the common green aphid or plant bee, a strong spray is advised, or treatments of whale oil soap, or black-leaf number forty.

Mildew and black spot can best be overcome by encouraging good growth. For black spot, formaldehyde is advised. One tablespoonful to four or five quarts of water should be sprayed on every other night. Lime and sulphur is sometimes used but discolors foliage. The same treatment is recommended for mildew.

Crown gall, a warty growth about the crown, should be cut off with a sharp knife and the cut covered with grafting wax. In summer pruning take out laterals and let only the end buds bloom. Pinch back the brakes and develop good bushes. "Bull heads" are undeveloped buds which come from overfeeding.

The best bloom comes in autumn up to October 15. Color is fine, substance good and flowers large. For winter protection earth should be banked ten inches high about the bushes, which should be well sprayed with Bordeaux mixture before covering over. About Thanksgiving is the proper time for banking.

As soon as frost leaves the ground in spring remove the banking and spray again to prevent black mold, one of the worst diseases. Put manure on in the spring. Don't use a shovel to remove the banking, but a fork, as there is less danger of barking the bushes. Leave the bushes twenty inches tall before banking for winter if possible, and in the spring remove only dead wood.

Mr. Wallace gives a list of good roses for amateur growing: Yellow—Alexander Hill Gray, Lady Hillingdon and Mrs. Charles Luteau. White—Kaiserin, Augusta Victoria, climber kept cut short. Red—Hoosier Beauty, Rhea Reed, Hadly, and the new roses, Admiral Ward, National Emblem and Richmond. Fancy roses, delicate shades—Duchess of Wellington, Ophelia, Old Gold and the Los Angeles.

E. E. R.

From a half hour to an hour and a half will be saved daily by a dish drainer, a wire rack which holds the dishes after they are washed. Boiling water dashed over the dishes just after they have been cleaned takes away the necessity of drying them with a towel.

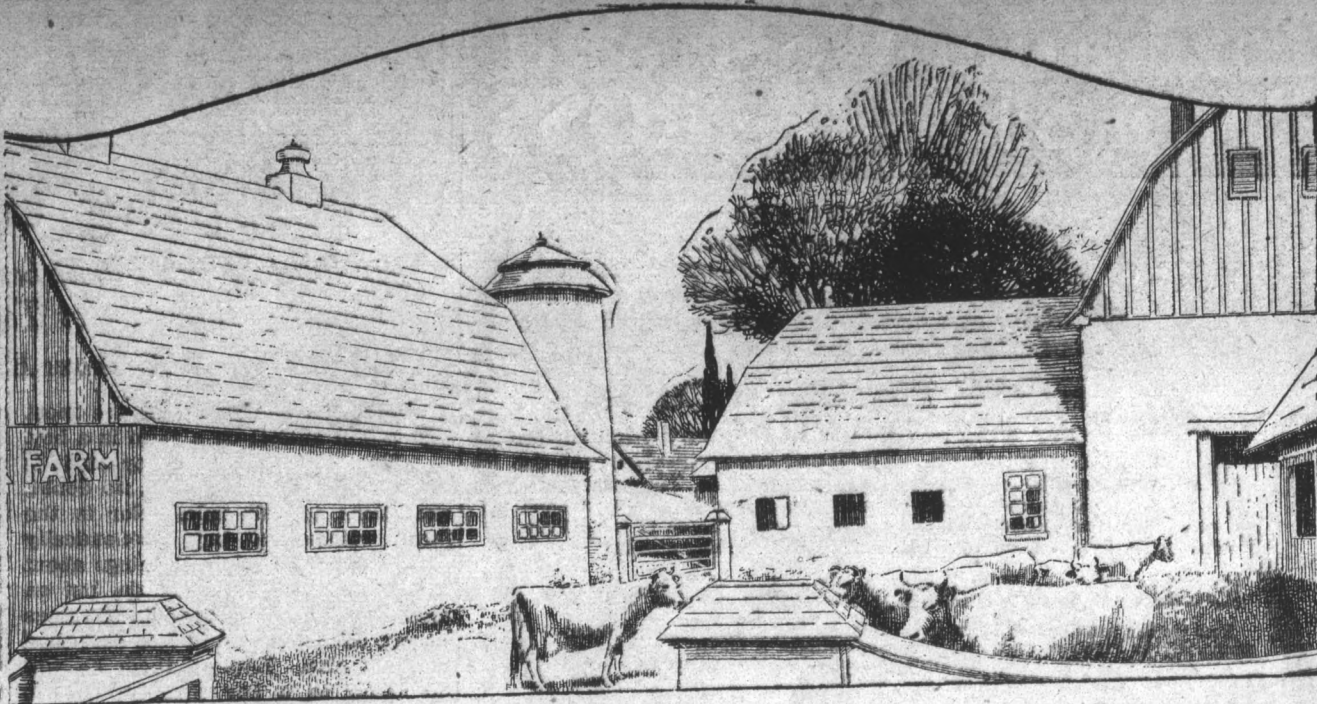
"HENS A HATCHIN'."

BY RAYMA RAYMER.

Breakfast dishes ain't half done,
I hain't touched the broom,
House looks like a hurricane'd
Swept thru every room.
Dirty clothes a layin' here,
Seems like dirt is catchin'.
'Scuse me just a moment, please
Got a hen a hatchin'.

Be'n tryin' to get my washin' done,
Seems like I can't hurry,
Ain't no use to fret and stew,
Ain't no use to worry.
Susie's dress needs buttons on;
Johnnie's pants need patchin';
There, I've got to go again!
I got a hen a hatchin'.

I must get that bread mixed up,
'Twon't be done for dinner,
I want to make some biscuits, too,
Jim eats them like a sinner.
What was that you thot you smelt?
Oh, my beans a scorchin'!
Pull 'em back, I can't stop now,
I got a hen a hatchin'!



Comfort Means Health to Live Stock



IT is not logical to expect any kind of stock to thrive in damp, musty quarters. Good shelter is just as important as good food. When cattle, hogs and horses are protected from cold winds, less food energy is required to keep them warm. And, in hot summer weather, a shady covering is just as important.

That is why it's always a good plan to cover your farm buildings with MULE-HIDE Roofing. Durability and weather-resistance have earned for MULE-HIDE this enviable service record:

"Not a Kick in a Million Feet"

From a purely practical standpoint MULE-HIDE smooth finish Roofing serves with excellent results. But if you wish a more attractive roof, for your home perhaps, MULE-HIDE Slate-Kote Roofing or Shingles will suit your needs. They are made with unfading red or grey-green surfaces.

Ask your lumber dealer. If he doesn't handle MULE-HIDE a letter will bring him samples.

The Lehon Company *Manufacturers*
44th to 45th Street on Oakley Avenue - Chicago

SEND NO MONEY SILK POPLIN SKIRT BARGAIN



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SAVE BY MAIL

Don't pay the prevailing high retail prices for wearing apparel. You know, as we know, that the prices asked for wearing apparel today are exceedingly high. We are making this introductory skirt offer to acquaint women with our fair price method, our quality and service. We will send you this splendid stylish skirt shown here, at an extremely low price, subject to your approval and satisfaction. Just send your name and address, giving the size and color wanted, and we will send skirt, all charges prepaid. On arrival pay the mailman our low "one-shipment" price. If not perfectly satisfied, return at our expense and get your money back.

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Silk Poplin Skirt No. 22451. This beautiful stylish skirt is the very latest spring and summer style, belt trimmed with handsome buckles and silk tassels. Wide heavy inside girdle. Skirt is shirred all around falling in graceful folds.
Colors of Navy Blue or Black. Sizes 24 to 32 waist; 39 to 45 inches in length. Price, on delivery, \$2.95. Extra sizes \$3.45 additional. Order by No. 22451.
Order Now—Remember, we guarantee satisfaction. No money needed until garment is delivered—then pay the mailman our low introductory price.
Howard-Lux Co., Dept. 112, Cleveland, Ohio.

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Get factory prices on all paints. We guarantee quality. We pay the freight.
Franklin Color Works, Dept. 14, Franklin, Ind.

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price direct to you
THIS \$12 OFFICER SHOE
Hand Sewed. First Grade. The factory price—direct to you at only **6.89**

The retail price of this shoe is \$12. It is made of the best waterproof mahogany calf leather. Guaranteed to give the best wear. If these shoes are not just as we say, send them back. You don't lose a cent. If you are sending money orders or check, do not include postage. Pay only \$6.89 for shoes. We pay postage.
These shoes are built to be good for work and dress at the same time.

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ARMY SHOE CO.**
Dept. 353 Westfield, Mass.



COME TO FLORIDA where life is worth while. Eighty acres in the cherry belt for sale cheap. Part cleared and part wooded land. Small hamlet—land partly cleared and planted to oranges, grapefruit, peaches, etc. Owner physically unable to handle. Write for particulars. G. M. DeVries, New Port Richey, Fla.

Farms and Farm Lands For Sale

Wheat and Alfalfa Big Improved Mid-West Farm

250 acres level black loam bottomland in neighborhood where one year's crops alfalfa has paid for farm, good wheat land; big wire fenced pasture; near R.R. town, all conveniences; 12-room house, bathroom, running water, big barn, silo, cattle shed, other buildings; owner retiring, bargain price \$56 an acre, easy terms. Details page 31 Strout's Spring Catalogue Bargains 33 States, copy free. **STROUT AGENCY, 314 D. C. Ford Bldg., Detroit, Michigan.**

220 ACRES, 4 HORSES, 18 COWS, BULL, 9 HEAD YOUNG CATTLE \$7500

Hogs, hens, wagons, harnesses, all modern machinery, only \$2,000. Cash needed, modern 10 room house, 3 mammoth barns, large apple orchard, big sugar bush, 30 acres woods and pasture, business in nearby level fields, 1/2 mile to church and school, easy drive to main line railroad town, immediate possession, write for free catalogue.

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Member New York State Farm Dealers Ass'n Inc.

WE HAVE FOR SALE Four fine Stock Ranches. Well fenced, watered and grassed over. Several improved and past improved farms. 300 acre Sheep Ranch with good buildings, orchard, and 200 fine breeding ewes. 1200 acres of unimproved land, on easy terms.
McClure Stevens Land Co., Gladwin, Mich.

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E. G. O'BRIEN, 21 Griswold St., Detroit, Mich.

Finest Opportunities for diversified farming. How much land do you want and what terms? Improved or unimproved? **RAILROAD FARM BUREAU,** San Antonio, Texas.

For Sale or rent 100 acres near Muskegon. Good potato, hay and pasture land. Apple orchard. All kinds of fruit. (\$3 per acre, rent).
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For Easier Work and Better Silage-The ROSS

HERE is a fair question: Are ensilage cutters "all pretty much alike"--or is there one that really *excels*? And here is the *right answer*--based on the experiences of thousands of American farmers:--

ROSS Ensilage Cutters

do *better* work at *lower* cost than any other cutter that money can buy. *They cut cleaner*--because the knives *cannot* be forced away from the shear-bar. *They last longer*--not only because of the high quality of materials and workmanship, but because *they operate at low speed*. There is very little vibration. No choking. No chattering. No racking strain.

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Ross Cutters are unusually light-running. On the Flywheel Type, the Rock-wood Fibre Pulley absolutely eliminates belt slippage and delivers practically the full power of the engine or tractor. All Ross Cutters are *heavy duty machines*--built strong and sturdy to hum right through the work from daylight to dark, season after season, without a falter! They are extremely simple in construction. They are very easy to feed. They are built to make *better silage*, over a long period of years, at *lowest cost* for power and labor.

Write today for free literature and name of nearest Ross dealer. Find out--now--about this better cutter. Write today. No obligation.

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Hubers Reliable Chicks

500,000 FOR 1920



By Parcel Post Prepaid. Delivered to You. Guarantee Live Delivery. Eggs for Hatching by the Setting or 100.

We have installed the most modern features of the Hatching Industry which will insure chicks as strong as Hen Hatched Chicks and Full of Pep.

This is our 11th season. With the great increased demand for our chicks and the fine reports and praise

we receive from our customers, proves that our chicks are from Stock of Good Quality. Bred for Heavy Egg Production and that they are Properly Hatched. Stop your loss by buying our Reliable Chicks.

We hatch all our chicks from pure bred, free range farm stock. S. S. White and Brown Leghorns, S. O. Anconas, Barred Rocks, S. O. and R. C. Reds, S. C. Black Minorcas, and S. O. Buff Orpingtons. Special combination offer on chicks, hovers and brooder stoves. Before buying elsewhere send for free illustrated catalog and prices. Place your order at once and avoid disappointment in the rush of the season.

Hubers Reliable Hatchery
East High St. FOSTORIA, OHIO

DAY OLD CHICKS

HOMESTEAD FARMS



A cooperative work in Pure Breed Practical Poultry. Chicks and eggs delivered at your door prepaid.

Standard Heavy and Laying Breeds.

You will be interested in the Extra Quality White Leghorns inspected and certified as Heavy Producers by the Poultry Extension Specialist of the Agriculture College.

Live and healthy chicks and satisfactory hatch from Eggs guaranteed.

S. C. Reds. One pen only Cockerel and five Pullets; large egg information.

Send for new Catalog with illustrations; it will help you raise your Chicks. Also it explains the Homestead Farms plan of cooperation.

STATE FARMS ASSOCIATION,
Desk 1, Kalamazoo, Michigan.

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They Lay and Pay!

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

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

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OVIE'S HATCHERY CO.
24 State Street MARION, IND.

DR. HESS Instant Louse Killer Kills Lice on Poultry and Stock

Use it on your lousy hens and chicks--your lousy colts, horses and cattle. You'll get better chicks--bigger, better fowls--more eggs--better contented stock.

Chicks are apt to be lousy now. Give them a chance. Sprinkle Louse Killer into the feathers, about the coops, on roosts, in nests of laying and setting hens. Always keep Louse Killer in the dust bath. For lousy horses and cattle, colts and calves, stroke the hair the wrong way and sift in Louse Killer.

We authorize dealers to return your money if it does not do as claimed.

1 lb. 30c, 2 1/2 lbs. 60c (except in Canada)

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Hot-Water, Copper Tank, Double Walls Fibre Board, Self-Regulated, With \$7.55

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BABY Chick S. O. W. Leghorns, White, Buff Barred Rocks, S. O. R. I. Red, Anconas, White Wyandotts, Buff and Brown Leghorns, 25 for \$6.25, 50 for \$11.00 for \$20. Fenton Chicken Hatchery, Fenton, Mich. Box 244.

chicks: Standard Bred S. C. White and Brown Baby Also English White Leghorns. Bred to lay large white eggs. Safe arrival guaranteed, shipped up to your door by parcel post. Free catalogue with list. **WOLVERINE HATCHERY, R. 2, Zeeland, Mich.**

BARRED ROCKS. Eggs from vigorous early maturing stock from heavy laying strain. \$2 per 15. \$5 per 45. Prepaid by parcel post. R. G. Kirby, Route 1, East Lansing, Mich.

Our Boys' and Girls' Page

Developing the Farm Boy

Pig Club Work Furnishes Opportunity for Many Country Boys to Get Together and Do Things

By James E. Downing

SOMEONE has said that the most of knowing how to make money on the useful animal on a farm is a boy. The farm without a boy on it is not well farmed. There are, no doubt, exceptions to this rule. Nor is the farm without a boy economically farmed. There are lots of things about a farm that a boy cannot do, but on the other hand there are lots of things he can do better and at less cost than anybody else. Lots of them he will do better as a boy than he will do after he grows up.

Pig club work provides an opportunity for boys and pigs to get together and see how much they can do for one another. A boy likes a contest of any kind and the word "prize" is a great stimulator. "Make a pig gain a pound a day," was a great thing in the way of a guide for the boy, but it was sometimes a bit strenuous for the pig.

Three of the pigs shown at the first pig club exhibit in a southern fair during the fall of 1914 were raised, owned and exhibited by three Edwards boys who were the sons of a dairyman living five miles out. A year later the three boys had a bank account, by pooling all of their sales and winnings. Then one of the banks offered a dollar deposit and a metal savings bank to all of the club boys who exhibited at the fair and delivered the county leader a complete record book. Of the forty-two boys who enrolled in the club the following spring, thirty-two of them called for banks, and the three Edwards boys were included in that number.

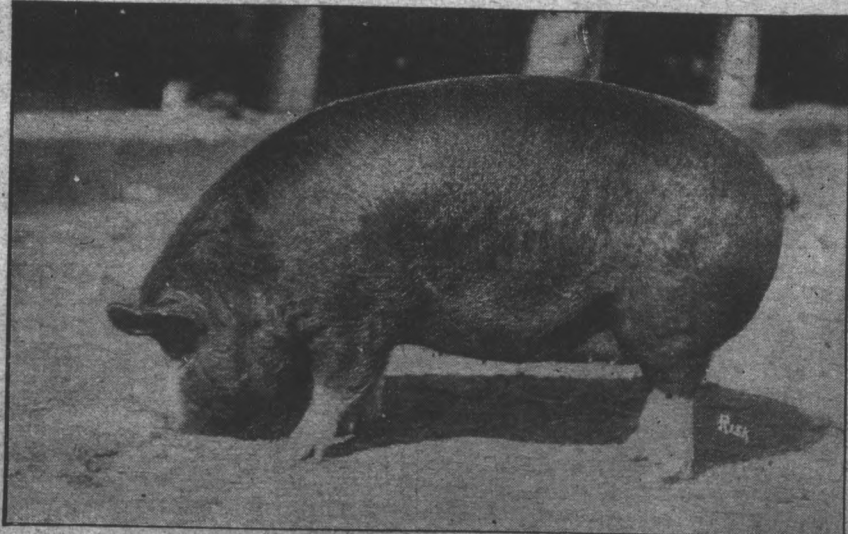
Today the oldest boy is farming one thousand four hundred acres of land, which he bought with the aid of his father who went into partnership with him. He milks fifty cows and has on his farm one hundred head of registered hogs. The second Edwards boy is completing his education but expects to get on a farm as soon as he has finished. All of the progress made by the three boys from the time they started with three small pigs is for the greater part, paid for with hog money. But what is of far more value to them, was the training and inspiration they have received in connection with their undertakings. The father early saw the possibilities of doing something worth while by aiding them in their ambitions to become substantial farmers. And in this day of reduced production, together with the great tendency to live in town, the satisfaction

of knowing how to make money on the farm and the contentment and the happiness derived from it is an institution which cannot be measured in terms of dollars and cents. Minor Sims lives near the Florida line. Some years ago he joined both the pig and corn clubs in his county. Minor's folks raised Berkshires and he entered with one registered Berkshire pig. He never missed a fair and for several years was a consistent and successful exhibitor of his favorite breed. Among other things he won a scholarship to the State College of Agriculture, as a pig club prize. He remained in the club until he reached the age limit.

When he became nineteen years old his father gave him the management of the home place. It was then and there that he demonstrated the value of what he had learned as a club member. He bought an extra span of large mules and cleared fifty additional acres free of stumps, the first year. With a hundred acres of clear land the farm produced far better returns than his father had ever been able to coax out of it. In the fall he had a fine lot of fat Berkshire hogs to sell. Clyde Sullivan lived in the same county and was a member of the girls' canning club. The same year that Minor Sims won his scholarship on Berkshire hogs at the big fair, she won the state championship and a scholarship for producing over one hundred dollars worth of perfectly good vegetables on a tenth of an acre of Coastal Plains soil. In fact, she produced a new high record, the total being \$132 to be exact.

Minor Sims and Clyde Sullivan first met at the State College of Agriculture on scholarships each had won as rewards of merit for good club work. They flirted and courted under the Chinaberry trees on the college campus and are now Mr. and Mrs. Minor Sims, successful farmers, living on a farm of their own. And they prospered ever after. Two brothers living in a small town not far from a large southern city, sat on a box all one night to keep their Berkshire sow from lying on any of her first litter. They built a fire to keep off the chill of the night and nudged each other occasionally to stay awake.

As the twig is bent-- Start the boy right. Get him interested in something of his own that he



Bald Boys Do Not Become Chummy with Good Pigs.

likes. Come to think of it, did you ever see a bad boy and a good pig, chummy? The sum of twenty-five dollars invested in a three-months-old Berkshire pig for a boy, may be the starting point to a successful and prosperous farm life.

RATS—AND THINGS.

ABOUT the time of the American Revolution, someone brought over to America some brown rats. Or more likely they came, without being brought, particularly. At any rate they got here. They immediately, like all successful settlers, made themselves right at home. And first, last and all the time they began to multiply. It is said on good authority that a pair of these rats will in five years' time have descendants up into the millions, if they were not restricted in any way. They destroy crops each year that would go a long way toward paying off the nation's debt. They are also responsible for a huge toll in human life, because they harbor a louse that causes the bubonic plague. The loss of twenty-five millions of people in one century in Europe, from the plague, is laid to the rat.

One day in 1869 an entomologist had a few eggs of the gypsy moth, in his laboratory. The wind blew them out of the window. The professor asked the public to help him find them, but the public was not interested in the bugs and eggs of a professor. Twenty-five years later, New England was under the curse of the gypsy moth. Tall elms that had shaded the streets of villages for generations had to be cut down. Vast sums have been spent by the state governments to get rid of the descendants of the eggs that blew out of the professor's window. It was somewhere about this time, also, that the boll weevil began annual visits to the cotton fields of the south. The boll weevil is different from the ordinary folks who go south for the winter. They have to pay winter resort prices for a place to stay. But the gentle little weevil makes the southern farmers pay him, for coming. He has cost the cotton growers and the government millions of money, in a single year.

It seems funny to us now, to learn that when the first English sparrows came over here in 1852, they were imported, with great care. They were brought to New York and Philadelphia and Maine. In the Quaker City they even paid a man to care for them, and see that they had plenty to eat. We would give a good deal now, if some benevolent caretaker would take care to get the sparrow back to England again. But we need not worry. He is here to stay.

It seems to people sometimes as though the bad things grew faster than the good things, doesn't it? Rats and sparrows multiply faster than Shorthorns and Shropshires. They feed themselves, while the live stock of the farm must be sheltered and fed. But while this looks so, it doesn't really come out that way, because when you have a rat you haven't much, but when you have a Shorthorn you have a good deal. The things worth while always have to be worked for. Sometimes a young fellow will think that the way to become known or to get money is to get it by crime. He commits the crime, and the papers are full of the crime and the criminal. But it is soon over. The money he got doesn't do him much good, and prison doors swing open to receive him. In three months people have forgotten all about him. He is known in the saddened life of his mother or his wife, and in the rogue's gallery. But every child has heard of Nathan Hale, and Paul Revere.

If anyone thinks that the bad grows so much faster than the good, look at slavery. At first only a few people in

(Continued on page 719).

Little Things Are Biggest

The biggest enemies of tire mileage are Little Things. A vulcanizing chamber that is a few degrees too hot or too cold—a few minutes under or over-cure—a pound or two difference in the pull on cord or fabric—these Little Things may cut your mileage off in its prime, for even automatic machinery cannot Think. Some person must decide.

BRAENDER TIRES are the product of an organization trained and inspired to Think, and decide right every time. The conscience of this Company will not permit the Little Things to slip by. That is the main reason why you can expect a little more from **BRAENDER TIRES**—and get it.

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CHICKS THAT BRING BIGGER CHECKS

Strong, sturdy—from Record Layers. Four big
hatches weekly. 100 50 25
White Leghorns \$20.00 \$10.00 \$6.00
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Safe delivery anywhere in U. S. A. guaranteed. Postpaid.
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HILLPOT QUALITY CHICKS

CHICKS AND EGGS
Rose and Single Comb B. I. Reds. Barred Plymouth
Rocks. Superior Color. Prolific Layers. Propagated by
parcel post and safe delivery guaranteed. Illustrated
catalog free.
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Saves Baby Chicks

Put Avicol in the drinking water.

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

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

Mrs. Wm. May, Rego, Ind., writes: "I was losing 10 or 15 chicks a day from diarrhoea before I received the Avicol. I haven't lost a one since." It costs nothing to try Avicol. If you don't find that it prevents and promptly cures white diarrhoea and all other bowel diseases of poultry, tell us and your money will be refunded by return mail. Avicol is sold by most druggists and poultry remedy dealers, or you can send 25c or 50c today for a package by mail postpaid. Burrell-Dugger Co., 495 Columbia Bldg., Indianapolis, Ind.

AVICOL

stops chicks dying

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

KENDAL'S SUPERIOR STRAINS Famous for high Standard, Utility, Quality 35 varieties. Leghorns, Rocks, Reds, Wyandottes, Anconas, Minorcas, Brahmas, Langshans, Orpingtons, Ducks. Circular free. A. C. Kendal, 210 Prospect Ave., Cleveland, Ohio.

Chicks Better Produced Day Old Chicks are the kind you want—17 leading breeds at reasonable prices. Our free cat. tells all about them. Send for it today.
Springfield Hatcheries & Poultry Farms, Box K Springfield O.

Barred Plymouth Rock eggs for hatching from fullblood prize-winning strain \$2.00 per 15 post paid.
J. A. BARNUM, Union City, Mich.

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

Barred Rock Eggs from Chicago and Indianapolis winners. Great layers. \$2 per 15, \$10 per 100 and up. Buff Duck Eggs, 25th year. Circular free.
G. EARL HOOVER, R. 3, MATTHEWS, IND.

BARRED ROCKS 15 eggs, \$1.75; by prepaid mail, 100 hens laid 10,421 eggs from January 1 to November 1, 1919. Lewis B. Avery, Clinton, Mich.

BUFF LEGHORNS Eggs for hatching \$2.00 per 15; \$12.00 per hundred. White Pekin Duck eggs 25 cents each. LAKE SIDE STOCK AND FRUIT FARM, Pinckney, Mich.

EGGS from trapnested S. O. White Leghorns, Barron strain, also White Wyandottes that lay, at \$10.00 per hundred or \$2.00 per setting of 15 eggs.
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For Sale 4 laying pullets and cock from 260 egg strain and blooded stock. S. O. White Leghorns. Mrs. Henderson, Leetsville, Mich.

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

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

Chicks Bred-to-Lay and Exhibition S. O. W. Leghorns, stock that produced the winners in the state demonstration farm week. Winners at Detroit, Toledo and Oil City, Pa. Shows, \$10.50 per 50, \$30 per 100, \$95 per 500. Safe delivery postage paid. Sunnybrook Poultry Farm, Hillsdale, Mich.

Chicks that Live \$15 per 100 S. O. W. Leghorns MY SPECIALTY
Send for catalog. SNOWLAKE POULTRY FARM, R. 1, Grand Rapids, Mich.

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

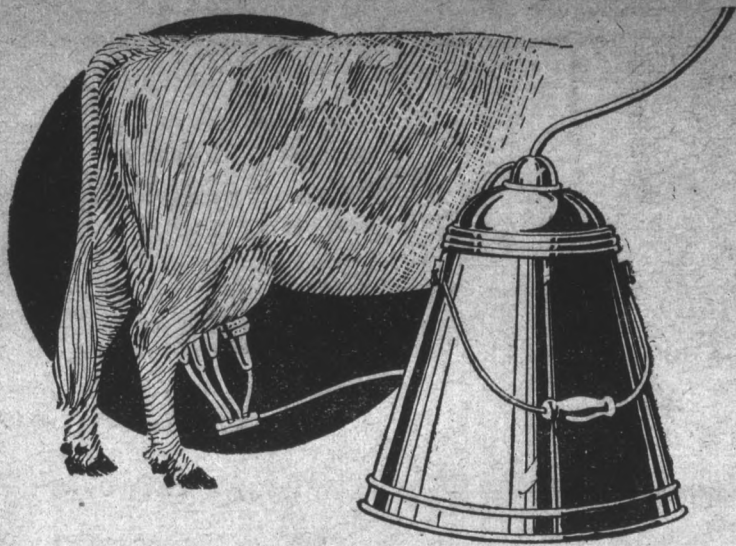
Barred Rocks egg contest winners, eggs from strain with records to 290 a year. \$2.00 per setting prepaid by P. P. Circular free.
FRED ASTLING, Constantine, Mich.

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

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

DAY OLD CHICKS S. O. W. Leghorns. Exclusively, Vigorous, sturdy chicks. From heavy laying strain. Seventh season. Send for price list to CITY LIMITS HATCHERY, R. No. 6, Box 11, Holland, Michigan

Additional Poultry Ads on Page 723



Make Greater Dairy Profits

If you want to know how thousands of dairy men are making their herds pay greater profits, write us for facts about the United System of milking. Here is a milking machine that is the Safest, Simplest, most Sanitary, most economical, practical, efficient machine made. It is a machine that exactly imitates the sucking calf—it gives that smooth, even, gentle action that draws the milk and massages the udder in the natural, comfortable way.



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UNITED MILKER

With the "See-Thru" Teat Cup

With the transparent "See-Thru" teat cup you can see when all teats are milking; a cup that is quickly washed, that has no metal to corrode or injure the cow. And there are dozens of other equally important features that will appeal to the dairyman who wants the best at lowest cost. Write us—a post card will do. No obligation.

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Wildwood Farms Angus

Home of Edgar of Dalmeny one of the world's greatest sires.

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

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

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

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

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

WILDWOOD FARMS

ORION, MICHIGAN

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

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Established in 1900

Trojan-Ericas and Blackbirds.

Write for 1920 Bull sale list.

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For Sale My herd bull and eight registered Aberdeen Angus Females. Six due to freshen this spring also two yearling bulls. Information cheerfully given. W. Bradley, Phone 90-5, Brighton, Mich.

For Sale At reasonable prices. Registered Aberdeen-Angus bulls from ten to twenty-two months of age. LANG BROS., Davison, Mich.

GUERNSEY BULL CALVES whose sire's dam made 19,460.20 milk, 909.05 fat. Their mother's sire's dam made 15,109.10 milk, 778.80 fat. T. V. HICKS, Battle Creek, Mich.

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

Guernseys Federal inspected herd. Bull 2 yrs old & son of Imp. Spotswood Sequel, dam's A. B. record 419 34 b. f. class G. Bull calf 8 mo's. old, 6 bull calves 2 to 5 mos. old. Satisfaction guaranteed. G. W. & H. G. Ray Albion, Mi

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

Registered Guernseys Just the nicest ready for Light Service. \$100 will start him your way. Don't wait on this fellow. J. M. WILLIAMS, No. Adams, Mich

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

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

REGISTERED GUERNSEY Bull Calves, A. R. Ancestry. Choice breeding. Farmers' prices. A. M. Smith, Lake City, Mich.

Winnwood Herd

—SENIOR HERD SIRE—

Flint Maplecrest Boy (166974)

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

—JUNIOR HERD SIRE—

Sir Ormsby Skylark Burke (249 66)

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

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

GENRIDA FARM

OFFERS

BULL CALF, BORN DEC. 26, 1919

Sire: King Flint, who combines the blood lines of 2 families of 3 generations of 30 lbs. cows and 2 generations of 1200 lb. yearly record cows. Dam: Has a 21.39 lb. 3 yr. record. Her dam is a 23.99 lb. daughter of Johan Hengerveld Lad.

Walter Hill, Davison, Mich.

Docking and Castrating The Lambs

ONE of the most important and as successful, and is used much more the most neglected job on farms quickly. having farm flocks of sheep, is the docking and castrating of the lambs and efficiently, it requires three men, at the proper time. one to catch the lambs, one to hold, and one to operate.

If this were a hard, tedious job, or one requiring the assistance of a skilled veterinarian, there might be some legitimate excuse for the extremely large percentage of native lambs that come into the stock yards every fall, with long tails and untrimmed, from farm flocks.

Thousands of dollars are lost to the farmers every year because of carelessness, more than for any other one reason. The majority of farmers know that it pays well for their time and that the lambs look better and are less trouble to handle, when properly docked and castrated.

With lambs that are forced for rapid advancement and put on to the market at less than three months of age, there is no appreciable advantage in castrating, but for the lambs that are kept five months or over, there is a great advantage in docking and castrating.

No sheep man in the west would have any possibility of going to a bank and hiring money on his sheep, if the banker knew that he did not have any business ability sufficient to realize the great advantage of docking and castrating or that he was too careless to attend to the same.

Some of the advantages of a docked and castrated lamb over an undocked and uncastrated lamb, are that the castrated lamb develops more rapidly, fattens more uniformly, and puts a larger percentage of flesh in the high-priced cuts, such as leg and loin, while the ram lambs develop stronger in the neck and shoulder. The castrated lambs run quietly with the ewe flock, without the possibility of having the ewes drop lambs during the winter time, when they are not wanted. The docked lamb is much cleaner, and is blockier in appearance, also is not subject to trouble from maggots in moist hot weather. When they go to market at the age of five to seven months, the castrated lamb will outweigh the uncastrated, by five to ten pounds, and is worth from two to five cents more per pound, depending on the age.

The operation of docking and castrating is very simple and can be done by almost anyone.

When a person has but eight or ten to handle, they can be caught and handled without any preparation whatever, excepting a sharp knife, and a little disinfectant. Where the farmer has a good-sized flock, he should run them through a cutting chute, or crowd them up in one part of the barn, so that he can catch the lambs without chasing the sheep around, putting the lambs in a pen by themselves. This should be done in the morning, and the lambs should be handled as quietly as possible, so as not to exercise them too much, causing their blood to rush too rapidly through the body, as they will bleed more freely if this is done.

The most suitable age is between one and two weeks old, as their tails have a tendency to become fleshy after this time, and consequently bleed more when the sharp knife is used.

There are two methods of docking, one by using a hot pincers, and the other by using a sharp knife. In using the pincers, it should be heated to a cherry red.

When using the hot iron, the tail is pulled through a hole in a board, to prevent the excessive heat reaching other parts of the body.

If lambs between one and two weeks old are to be docked, the knife is just

In handling a large bunch quickly and efficiently, it requires three men, one to catch the lambs, one to hold, and one to operate.

The equipment necessary is a fence panel, an operating bench, a good supply of disinfectant, a can of tar, and at least two good sharp knives, also a few strings, six or eight inches long.

The fence panel is used as a movable partition in the lamb pen, enabling crowding of the lambs to one end, which assists the man catching the lambs, and prevents undue exertion on the part of either the lambs or the man. The opposite side of the panel can be used as a pen for putting operated lambs into.

The operating bench is a twelve-inch plank about three and one-half feet from the ground.

The strings are to be used for tying the tails of any bleeding profusely.

A good operator can dock tails, castrate, disinfect both scrotum and the stub of the tail, and put a little tar on the wool around the tail, as rapidly as one man can catch the lambs and pass them to the man that holds.

When everything is ready for business, with the knives, tar and disinfectant handy, two lively men to assist the operator, and the operator not afraid of a little blood, he can strip to the waist, and call for lambs.

The holder places the lamb on the table on its back, gives a little pres-



sure backward, which tends to draw the skin of the tail up, and at the same time the operator grasps the tail, shoving the skin a little forward, slashes the tail off with one cut, at about one and a half inches from the body, then grasping the scrotum cuts the lower third off, then taking the other knife, which should have a very keen edge, cuts the lining of the testicles, and withdraws them, either with the thumb and finger, or with the teeth.

The majority of the operators who plan to do rapid work, prefer to use their teeth, because they never slip, and the work can be done much more rapidly. For one accustomed to this method, it is not at all disagreeable, and in the writer's opinion, is much better for the lamb, as it does away with occasional slipping, such as often occurs when using thumb and finger. When the lambs are older than three weeks, it is better to scrape the cord off rather than withdrawing it.

It takes but an instant to apply a little disinfectant to the wounds, and a little tar on the tail, then the lamb is dropped into a pen, and another one placed on the table.

Any operator with a little pep, and with twenty minutes' experience, can dock, castrate, disinfect and tar, from fifty to sixty lambs an hour, in a very efficient manner, without undue haste.

It adds a certain zest to the work when an operator can do his work rap-

idly enough to be able to pass out a bantering call of "come on with your lambs" when the catcher is a little behind.

Needless to say, the quicker the operation can be done in an efficient way, the better it is for the lambs.

If there is a fourth party in the crew, he can be used in pushing up the panel, thus crowding the lambs to the end of the panel, so that the catcher will have less difficulty, also in watching docked lambs, and if any are spurting blood, after a reasonable length of time, he can tie a string tightly around the stub of the tail.

The lambs should be left quietly in their pen a few hours, and observed occasionally by the caretaker, to see that none continue to bleed. When the strings have been left on for an hour or two, they should be removed, and extreme care taken that the same number of strings are cut, as were used, as it causes great agony to the lamb if a string is left to remain on, as the stub swells greatly and sloughs off, beyond the point where the string is attached.

The object of pressing the skin forward before cutting the tail, is so that the skin will cover the incision after the lamb is released, which enables quicker healing.

Some farmers have reported losses after castrating and docking, but it is the writer's judgment that these losses were due very largely to not disinfecting properly, as he has docked and castrated hundreds of lambs, without the loss of a single one from bleeding.

With this operation so simple, and the benefit so great, it is hard to understand why such a large percentage of lambs go to market as they do.

Considering the fact that with present prices, the castrated and docked lamb will sell for at least one dollar per head more on the market at six months of age, and three men can dock sixty lambs an hour, their time would be worth at the rate of twenty dollars an hour.

This represents but one phase of the profit received. The greatest gain possible, is in the additional pleasure and pride the owner will take in his flock.

Keeping the ewe lambs for breeding ewes with long tails, is even more inexcusable, as there are so many disadvantages with long-tailed ewes; besides it is difficult to see how a farmer can take sufficient pride in a bunch of long-tailed ewes, to give them proper care.

The farmer who does not take pride in his stock loses one of the greatest pleasures of farm life.

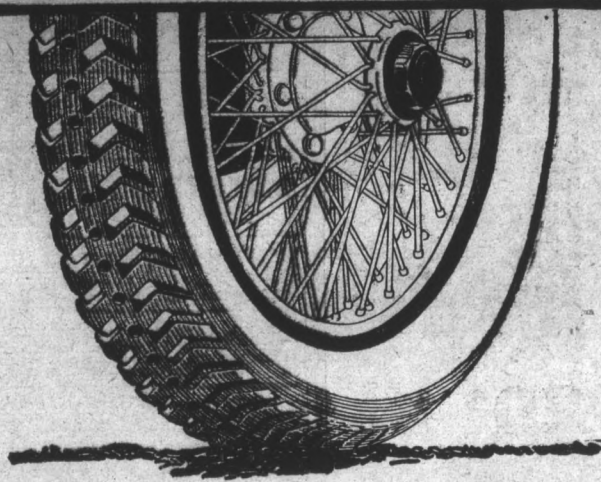
What prettier scene is there on a well-kept farm, than a flock of well-bred ewes, with blocky, trimmed lambs at their sides?

RATS AND THINGS.

(Continued from page 717).

the north were abolitionists. Mr. Garrison was dragged through the streets of Boston with a rope around his neck. But it was not so many years until four millions of slaves were liberated by President Lincoln, with a stroke of the pen. And there is prohibition. Only some women's clubs called the W. C. T. U. were against liquor, at first. Then the ministers joined them, and a little group of people in nearly every community. People said they were cranks. But one day the entire state of Maine voted dry. About fifteen years later Kansas followed. One state after another followed their example. Now the nation has adopted the principles of prohibition. The good is always bigger than the bad.

N. A. McCUNE.



15,000 miles per tire in constant tests

Men are everywhere telling remarkable tales about mileage on Miller Tires.

Some cite up to 25,000 miles. Many certified tales, even on trucks, exceed 22,000 miles.

But these are not average conditions. They are usually oversize tires, well cared for, under-loaded.

What to expect

Millers will increase your mileage. Records taken in Boston, on hundreds of cars, show an increase of 50 per cent to 75 per cent.

We have in late years nearly doubled our mileage by perfections in the Miller Tire.

In our factory, eight tires are run on geared-up machines 650

miles each per day. They are run under rear-tire conditions. And the average mileage on Miller Cords is 15,000 miles.

Other leading makes are constantly compared with them, but the Miller excels all.

New standards

Miller Tires will completely change your standards.

Three tires

Ray C. Carpenter tested three Miller Tires on a 22-passenger bus, carrying 3 tons per trip. The first ran 23,700 miles, the second 17,000 miles, and the third 22,000 miles without a blowout.

Miller Tires

Cords

Geared-to-the-Road

Fabrics

Now the Tire Sensation

They will give you new ideas on the mileage to expect.

They will bring you treads which outwear the tires.

They will bring you uniformity. Every Miller Tire is signed by maker and inspector. Both are penalized if a tire falls down.

Don't judge tires by old criterions. See what Miller Tires will do.

Make this test

Tests are bringing men to Millers. Ten times as many are now used as in 1914.

Big tire users, who make million-mile comparisons, are adopting Millers everywhere.

Put one on your car. Watch the mileage. Compare it with the tire that's opposite. Learn what modern tires can do.

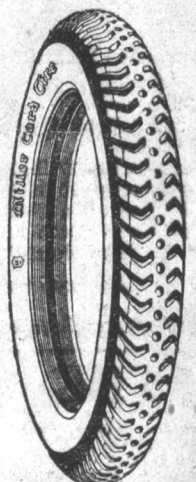
If you buy a new car, insist on Miller Tires. Twenty makers now supply them without extra cost.

THE MILLER RUBBER COMPANY
Akron, Ohio

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

Tread Patented

Center tread smooth, with suction cups to firmly grasp wet asphalt. Geared-to-the-Road side treads mesh like cogs in dirt.



Facts in BLACK & WHITE

Over \$17,000 in Prizes for Milk and Butter Production

Over seventeen thousand dollars in prize money for milk and butterfat production, was distributed among breeders of registered Holstein-Friesian cattle during the year ended April 30, 1919. The official supervision, by the Advanced Registry Office of the Holstein-Friesian Association, of all regularly conducted tests, and the award of liberal prize money have proven a mighty stimulus and an educational factor of great value, in the promotion of interest and progress in the breeding of Holstein cattle. Our booklet tells the whole story of Holstein progress.

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
Brattleboro Vermont.

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.

BUTTER BOY ROSINA PRINCE 25752. Herd sire Son of King Ona. His sire is from a 30 lb. cow that made 1345 lbs. in one year, and Dam Butter Boy Rosina 2nd 20649 made 29 lbs., and almost 90 lbs. in ten months, she has a 33 and 34 lb. sister. Have some fine Bulls and Heifers and some heifers bred to him, all from A. R. O. Cows, with records from 22 to 30 lbs. Hampshire Hogs—Fall Boars ready for service, and gilts. Also looking orders for Spring Pigs. Belgian, Percheron Stallions and Mares. Imported and American bred. Write or come and see us. SAGINAW VALLEY STOCK FARM, Saginaw, W. S., Michigan. **ELI SPRUNGER & SON, Proprietors.**

REGISTERED Holstein bulls sired by King Zerna R. Alcarra Pontiac, son of the \$50,000 bull; some from good A. R. O. cows. C. H. Giddings, Gobleville, Mich.
\$125 Buys Reg Holstein Bull 1 yr. old. Delivered and guaranteed O. K. High class breeding and a good individual. B. B. REAVEY, Akron, Mich.
\$125. gets bull calf born June 1, 19. Sire's six nearest dams av. 33.34 lbs. butter for 7 days. Dam a good producer. Oscar Wallin, Unionville, Mich.

Holsteins of Quality

Fifteen High Grade Holstein Cows For Sale
E. A. HARDY, Rochester, Mich.

HOLSTEINS FOR SALE

Ten head of yearling and two year old heifer A. R. O. dams 29 to 32 lb. sires some bred to 32 lb. sire with 745 lb. milk, price is right. Come and see them, herd under Federal supervision.
CARL HITCHCOCK, Charlotte, Mich.

OUR HERD SIRE

Model King Segis Glista

By a 30 lb. son of Lakeside King Segis Alban De Kol. His dam Glista Fenelle 32.57 lbs. Her dam Glista Ernestine 35.98 lbs. His three nearest dams average over 38 lbs and his forty-six nearest tested relatives average over 30 lbs. of butter in seven days. Write for prices on his sons.

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

FOR SALE a number of pure bred Holstein heifers, grand cows and very well bred Holstein bull calves.
JOSEPH H. BREWER, Grand Rapids, Mich.

REG. Holstein Bull has been my Senior Herd sire, 20 dams average 31 lbs. must sell to avoid inbreeding as I have 16 daughters of his. J. H. Hicks, St. Johns, Mich.

HOLSTEIN BULL CALVES FOR SALE

From dams with good records.
BULL CALVES Sired B. V. 45 lb. BULL.
BULL CALVES Sired BY 34 lb. BULL.
BULL CALVES Sired BY 33 lb. BULL.
PRICES VERY REASONABLE.
Privilege of return if not satisfied.

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

A BULLY GOOD BULL CALF.

Born July 1919. His six nearest dams have good yearly records. Amongst them are three world's records Good individual, nicely marked, and worth in any good herd all he will cost. You can't pay too much for this kind. I have a fine four months bull, not quite so well bred but a nice one.
L. E. CONNELL, Fayette, Ohio.

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, G. O. D. OLARKE, Vassar, Mich.

Bazley Stock Farm YPSILANTI, MICH.

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

JOHN BAZLEY
319 ATKINSON AVE.
DETROIT, MICHIGAN.

REGISTERED HOLSTEIN bulls calves from herd for sale. All ages. Apply **MICHIGAN SCHOOL FOR THE DEAF**, Flint, Michigan

Combination Dispersal Sale of Holsteins AT ROCHESTER, MICH. MAY 12, 1920

Among the animals to be sold are 14 daughters of 33 lb. bulls. A daughter of a 33 lb. cow that gave 721 lbs. milk in 7 days. A daughter of a 27.83 lb. cow and a 34.75 lb. sire. A fine son of K. K. Sadie Vale from a 26 lb. 3 yr. old daughter of Sir Veeman Hengerveld 2 daughters of a 38 lb. sire about 35 large fine cows, a good many recently fresh and to freshen, and breed to this great son of K. K. S. V. and to a son of Avon Pontiac Echo, who is a son of May Echo Sylvia world's greatest dairy cow. Herds are both under federal inspection, 90 day guarantee for Tuberculosis. Not a blemished animal in the sale. Sale to be held 1 mi. south of Rochester on D. U. R. line. Catalogue on request.

C. G. Hine & E. A. Hardy, Props.

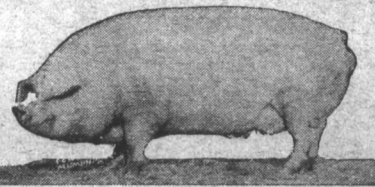
McPherson Farms Co. and Cluny Stock Farm FIRST ANNUAL SALE at Howell, Mich., June 8, 1920

McPherson Farms Co. consigns
1 30 lb. bull
1 29 lb. bull
1 bull whose 4 nearest dams average 32.46 lbs.
1 daughter of 27 lb. 3 1/2 yr. old
1 daughter of 26 lb. 3 1/2 year old
2 daughters of a 25 lb. cow
1 daughter of a 24 lb. cow and several other "Top Notch" Holsteins.
All bred to 30 lb. Bulls.

Cluny Stock Farm consigns
A 3 generation group consisting of
1 A 26.8 lb. cow (100.8 lbs. milk in 1 d., 106.9 lbs. butter 30 d.)
2 Her 20,000 lb. Sr. 3 yr. old Semi-official record daughter, and
3 3 yr. old daughter of No. 2, by a 31 lb. bull.
Also a 21.49 lb. 3 yr. old 1st calf daughter of Maplecrest Application Pontiac, and several other daughters and 2 sons of same sire, both from high record dams.

McPherson Farms Co. Howell, Mich. R. Bruce McPherson, Howell, Mich.

THE FAMOUS O. I. C. SWINE



We have the undefeated Herd of the World. Winning premier breeder and exhibitor at every fair shown in 1919-1918-1917, including the following state fairs--Ohio, Michigan, Indiana, Illinois, Missouri, Kentucky, Tennessee, Oklahoma, New York, Alabama, Tri-state fair Memphis, and the National O. I. C. twice. Stock of all ages for sale. Registered free in the O. I. C. association. Order now. We will ship any of our stock on approval allow you to keep three days before you have to pay for it. You will be your own judge on your own farm.

CRANDELL'S PRIZE HOGS, Cass City, Mich.

O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan
Spring gilts and fall yearlings bred for March, April and May litters. I ship C. O. D., pay express and register in buyer's name. If you want a BIG TYPE sow, guaranteed right in every way, write me.
J. CARL JEWETT, R. 5, Mason, Michigan.

Hatch Herd (State and Federal Tested) Ypsilanti, Michigan

Offers young sires, yearlings and younger, out of choice advanced registry dams and King Korndyke Artis Vale: Own dam 34.16 lbs. butter in 7 days; average 2 nearest dams 37.61, 6 nearest 33.93, 20 nearest 27.83

LONG DISTANCE

HOLSTEIN BULL SALE
Born Dec. 24, 1919. Seven close up dams average above 1200 lbs. butter and 24,000 lbs. milk in 1 yr. His dam untested \$100. A. Fleming, Lake, Mich.

HARWOOD HEREFORDS

A few young bulls from 10 to 18 months, well bred, in fine condition. Special price for the next thirty days. No females for sale at present. Visitors welcome.

Jay Harwood & Son, Ionia, Mich.
Farm Six Miles South of Ionia

HEREFORDS

3 Prince Donald, 3 Farmer and one Polled bulls from 7 to 13 months old, for sale.

ALLEN BROS. PAW PAW, MICHIGAN

Herefords. Just purchased 3 new herds, now have 150 head; we offer you anything desired either sex, horned or polled, any age. Priced reasonable.
THE McCARTY, Bad Axe, Mich.

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

The Wildwood Farm
Jersey Cattle, Majesty strain, Herd on State accredited list, R. of M. testing constantly done. Bulls for sale. **ALVIN BALDEN, Phone 143-5, Capac, Mich.**

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

FOR SALE Jersey Bulls ready for service R. of M. ancestors. Raleigh-St. Lambert breeding. Jerseys stand for economy. **Waterman & Waterman, Packard Rd. Ann Arbor, Mich.**

For Sale Jersey bull calves of Majesty breeding from good producing stock. Herd on Government "Accredited List." Write for price and pedigree to **C. A. TAGGETT, R. 2, Fairgrove, Mich.**

LILLIE Farmstead Jerseys--A few heifers bred to freshen soon, heifers bred to freshen next fall, 3 cows, R. of M. bull calves. **C. C. Lillie, Coopersville, Mich.**

Bulls ready for service from our herd bull Marguerite Premier, grandson of Pegasus of Hood Farm, and cows now on test for R. of M. **Smith & Parker, Howell, Mich.**

For Sale Registered Jersey Bulls from tested dams. **Grass Lake, Mich.**
NOTTEN FARM,

Choice Jersey bull calf, from high producing prize winning stock. Born January 4th 1920. Priced very low, quality considered. **C. S. BASSETT, Kalamazoo, Mich.**

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Max Walton Sulton and White Hall Sulton. Model Type, by the Oscola Co. Shorthorn Breeders Ass. John Schmidt, Sec. Reed City, Mich.

BIDWELL SHORTHORNS
You Can Buy

a bull that will put weights on your dairy calves--the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. A roan, senior yearling, a Missie of Villager breeding, a herd bull prospect. **Federal Test,**

BIDWELL STOCK FARM;
Box D, **Tecumseh, Michigan**

MEADOW Hills Shorthorns. Herd headed by Silver King, full brother of Lavender Sultan. Purdue University's great sire. For sale females of all ages, a few young bulls. **Geo. D. Doster, Doster, Mich.**

Royal Bruce 795521 heads our herd. Three half brothers sold for \$55,000.00 one Cluny Proud Augusta going to head Wm. Dutches of Collyne's herd at \$21,000.00. One bull and a number of females for sale.
CARR BROS. & CO. Bad Axe, Mich.
Norman Carr, Secretary.

Shorthorn Crickshank Orangeblossom. Herd bull and 2 bull calves 6 and 7 months old for sale. **W. C. OSIUS, Hillsdale, Mich.**

Richland Stock Farms
Home of the Michigan Champions.

Shorthorn Sires in Service:
IMP. Lorne, IMP. Newton Champion, Sterling Supreme. Why not buy a young bull to head your herd that carries the blood that is making Shorthorn History. Only a few real headers left. Write your wants.
C. H. PRESCOTT & SONS, Tawas City, Mich.

Central Mich. Shorthorn Breeders Assn. offer 40 bulls, 38 females, write for new list. **OSCAR SKINNER, Sec. Gowen, Mich.**

The Kent Co. Shorthorn Assn. have males and females of quality for sale. **L. H. LEONARD, Sec. Caledonia, Mich.**

CHAS. WARNER Jr. Breeder of Registered Shorthorns. No stock for sale at present.
Chas. Warner Jr., Imlay City, Michigan

Milking SHORTHORNS Clay bred bull calves Herds under Federal Supervision.
Davidson & Hall, Beand & Beland, Tecumseh, Mich.

Shorthorns Good Scotch bred bulls, cows and heifers priced right.
W. B. MCQUILLAN, R. 7, Howell, Mich.

Shorthorns Scotch and Scotch Topped, only a few left at old prices.
W. J. BELL, Rose City, Mich.

Red Polled Cattle For Sale

Bulls from 1 to 16 months, also cows and heifers.

G. A. CALHOON, BRONSON, MICH.

POLLED Darhams or Polled Shorthorns. Stock for sale young heifers. Young cows a few with calves by their side. **Frank Bartlett, Dryden, Mich.**

HOGS

Berkshires size with quality, our special. Write your wants to
M. G. MOSHER & SONS, Osseo, Mich.

Registered Berkshires, Gilts, and Sows bred for April May and June farrow. A yearling Boar and a few younger. Spring pigs. **Chase Stock Farm, Marlette, Mich.**

Duroc sows and gilts bred to Waite King 92940, who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat and price list.
NEWTON BARNHART, St. Johns, Mich.

DUROC-JERSEYS
A few extra good bred sows and gilts for sale.
CAREY U. EDMONDS, Hastings, Mich.

DUROC JERSEYS
Bred Gilts for March and April farrow. Write at once for description or come and see them. Satisfaction guaranteed with every order.
RUSH BROS. OAKWOOD FARM, Romeo, Mich.

Michigana Farm Durocs

We breed and sell good hogs.
O. F. FOSTER, Mgr. Pavilion, Michigan

ROYAL BRED DUROC GILTS
Dams sired by Michigan Cherry Col. Bred to Jacks Cherry Orion King No. 189259. Son of the \$10,000 champion, Jacks Orion King 2nd, all high class stock, write for prices. **The Jennings Farms, R. 1, Bailey, Mich.**

DUROC JERSEYS

Bred gilts all sold. Get in your orders early for March and April pigs. Either sex or pairs not akin.
F. J. DROTT, Monroe, Mich. R. 1.

DUROC JERSEYS. Spring pigs ready for delivery, \$10.00 each. **LAKE SIDE STOCK FRUIT FARM, Pinckney, Michigan.**

DUROC JERSEYS
E. D. HEYDENBERG, Wayland, Mich.

Duroc bred sows and gilts sired by Orion Cherry D King Col. 2nd., bred to All Col. of Sangamo 2nd. First class lot, reasonable. **W. C. Taylor, Milan, Mich.**

DUROCS for Sale Bred sows and fall pigs of both sex and a car of grade draft colts.
CHAS BRAY, Okemos, Michigan.

CHESTERS, spring pigs in pairs or mature stock. A few gilts bred for May farrow.
F. W. ALEXANDER, Vassar, Mich.

Raise Chester Whites
Like This
the original big producers

I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developers--ready for market at six months old. Write for my plan--"More Money from Hogs."
G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

O. I. C. and Chester White Swine
Strictly Big Type with quality. Spring pigs of March and April farrow. A choice lot of boars. Will only spare a few more gilts at present. Will ship C. O. D. and record them free.
Newman's Stock Farm, Marlette, Mich. R. No. 1.

O. I. C. and Chester White Swine booking orders. Fall pigs with size and quality. I ship C. O. D. and register in buyer's name. **John C. Will, Alma, Mich.**

O. I. C.'s 2 extra choice last spring gilts. 11 last fall boars wt. 175 to 250 also fall gilts the best I ever had. Farm 1/2 mile west of Depot. Citizens Phone 124. **OTTO B. SCHULZE, Nashville, Mich.**

O. I. C's Am offering a few September pigs that combine size and quality.
C. J. THOMPSON, Rockford, Mich.

O. I. C's A few choice late fall and winter boars, also a fine two year old boar.
WEBER BROS., R. No. 2, Royal Oak, Mich.

O. I. C's. Big type serviceable boars. Gilts bred for May and June farrow.
G. P. ANDREWS, DANVILLE, MICHIGAN

O. I. C. Gilts bred for March and April farrow, guaranteed safe with pigs. Fall pigs and a few service boars. Herd managed by D. T. F. C. Burgess, R. 3, Mason, Mich.

O. I. C's Eight young boars and spring pigs for June shipment.
OLIVER LEAF STOCK FARM, Monroe, Mich.

O. I. C's choice gilts bred for May and June farrow. good fall boars. Booking orders for spring pigs.
A. J. Barker & Son, Belmont, Mich.

L. S. P. C.
2 choice spring boars and 2 nice fall boars left, a few extra nice gilts left bred for April farrow.
H. O. SWARTZ, Schoolcraft, Mich.

LOOK B. T. P. C. We are selling at a great sacrifice for the next 10 days extra good gilts to farrow in Apr. choice fall pigs to make room for our herd sows.
W. BREWBAKER & SONS, Elsie, Mich.

MILLER Meadow's L. T. P. C. boars all sold. Gilts sired by General Jones and bred to our young boar Alaska, address **CLYDE WEAVER, Oresco, Mich.**

For Sale
Two Bred Poland China Gilts
Litter mates, farrowed Apr. 3, 1919. Choice individuals and choice Big Type breeding. Weighed March 10, better than 300 lbs., not fat. Bred for Apr. 7 and Apr. 28 respectively.
WESLEY HILE, R. 6, Ionia, Mich.

BOARS! Oh Boys!
Sons and grandsons of the Mighty Giant Buster. The big boned useful kind. Priced for a quick sale.
JNO. C. BUTLER, Bell Phone, Portland, Mich.

Big Bob Mastodon pigs takes the cake, book your order now. Fall boars and gilts sired by a grandson of Disher Giant, open or bred to Big Bob for Sept. 23 yearling sons. **C. E. GARNANT, Eaton Rapids, Mich.**

Big Type Poland Chinas with quality, at reasonable prices. Pigs of both sex, and bred sows and gilts.
G. A. BAUMGARDNER, R. 2, Middleville, Mich.

For Sale Big Type Poland China Gilts bred for July, August and September farrow, weighing 225 lbs. for \$30, also spring pigs \$20 each, guarantee satisfaction. **DORUS ROVER, Akron, Mich.**

Big Type P. C. Bred gilts. Fall yearlings, prize winners, out 1100 lb. sire and mammoth sows from Iowa's greatest herds **E. J. Mathewson, Burr Oak, Mich.**

Big Type Polands all sold out. Watch this ad for further announcements. Breeding stock for sale in season. **L. L. CHAMBERLAIN, Marcellus, Mich.**

LEONARD'S B. T. P. C. bred sows all sold. Order booked for boar pigs at weaning time from Mich. Champion Herd. **E. R. Leonard, R. 3, St. Louis, Mich.**

I am offering Large Type Poland China Sows, bred to F's Orange, at reasonable prices; also fall pigs. Write or call Clyde Fisher. **St. Louis, Mich. R.R. 3.**

6th ANNUAL P. C. Bred Sow Sale March 13, 1920. For particulars write **W. J. HAGELSHAW, Augusta, Mich.**

Large Type Poland China gilts and Bred gilts
E. H. EISELE, R. 2, Manchester, Mich.

B. T. P. C. All sold out except some Fall Gilts, Thanking my customers.
JOHN D. WILEY, Schoolcraft, Mich.

LARGE TYPE P. C. SWINE. One yearling boar, one fall yearling boar, fall pigs, a few more bred sows. **R. W. Mills, Saline, Mich.**

FOR SALE A few L. T. P. C. gilts being bred for August and September farrow.
A. A. Feldkamp, Manchester, Mich., R. F. D. 2

DAIRY INTERESTS JEOPARDIZED.

(Continued from page 697).
of the great adjuncts to a successful dairy farm. The high protein content of alfalfa makes it particularly valuable in these days of high-priced protein feeds. Corn should also be grown wherever it is possible to obtain a good crop. With an abundant supply of alfalfa and corn laid by each year, the food problem for the dairy herd is largely solved—and solved in the most economical manner possible.

There are other fundamental problems which should receive careful consideration by all dairy farmers and manufacturers. Foremost among these are, first, increased production per cow; second, increased consumption of milk and dairy products; third, a close study of the world markets for dairy products and the purchasing power of the people; fourth, the formation of cooperative selling and buying organizations among the dairymen.

Recent history of the market milk industry proves the necessity for selling organizations among the farmers. The purpose of such organizations, however, should not be to raise the price of milk, but rather to improve the milk supply, to educate the farmers so that they can cut down on the cost of milk production, and to educate the consumers in the food value of milk.

Labor charges and the cost of transportation are matters over which the farmer has no control, and must be faced and overcome with as much equanimity as possible.

Taken as a whole, the dairying of the country today confronts a crisis, and the next few years will decide whether this great industry is to continue to flourish or whether all the impetus given to it by the war is to be lost. Should this crisis prove disastrous, its demoralizing effects will extend not only to the dairy business, but to every other industry, for agriculture is the basis of all industries. The dairymen must be encouraged, and every aid should be given them in facing the situation.

Most certainly now is not the time for this great industry, so highly important throughout the country, to be hamstrung, pampered, and throttled by selfish politicians and persons with unsound economic theories.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Dehorning Herd Bull and its Effect.—Following dehorning is a stock bull likely to lose his desire to serve cows? The reason I ask is this: I had a registered bull that was all that could be desired for breeding purposes until he was dehorned. Since then he will not go near the cows. What can I do with him? C. M., Avoca, Mich.—You ask a very interesting question and one that should attract the attention of owners of valuable bulls. The writer has known similar results to follow dehorning, the animal seemed to lose his masculine qualities and courage, but after allowing him to associate with the cows he regained courage. Give him one dram of ground nux vomica at a dose in feed three times a day. I will thank any of our readers to report their experience after dehorning bull used for service. Candidly, I do not approve of it being done and very often persuade my client not to do it.

Colic—Indigestion—Azoturia.—Our eight-year-old mare recently had an attack of colic, and some two days later had another sick spell. Our local veterinary treated her. Her urine was very dark colored. Since she had these sick spells she eats well, but is dull. M. B. D., Grand Rapids, Mich.—You are feeding her too much grain when idle; besides, she should have daily exercise and her food supply should be changed. Feed some roots and more well-salted bran mash.

Fairbanks-Morse "Z" Farm Engines



Why Over 250,000 Farmers Endorse "Z" Engines

"Z" Engine perfection—nothing else—sold over a quarter of a million American farmers.

Greater power and lower operating expense have established the supremacy of this master engine.

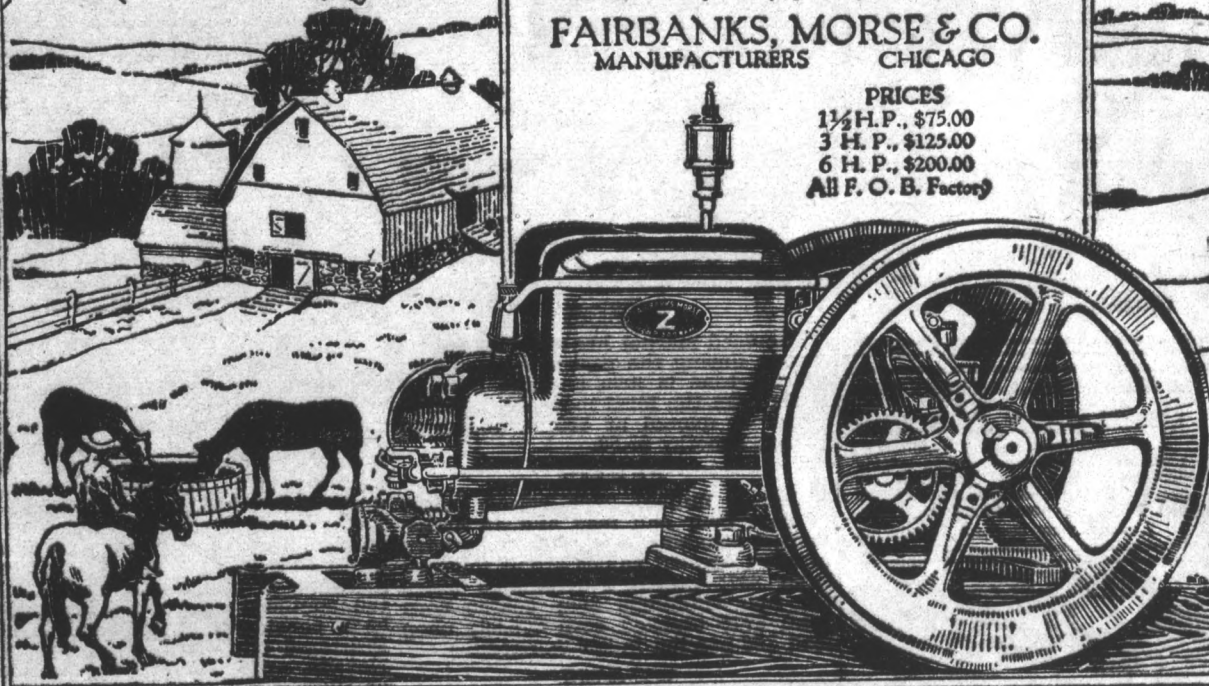
This rare combination of scientific design and construction—efficient operation—right price—successfully answers every farm engine need.

The "Z" is serviced by 400 Bosch Service Stations all over the country, in addition to the efficient Fairbanks-Morse dealer service.

Go to your dealer—see the "Z"—find out why it should be a part of your farm equipment.

FAIRBANKS, MORSE & CO.
MANUFACTURERS CHICAGO

PRICES
1½ H.P., \$75.00
3 H.P., \$125.00
6 H.P., \$200.00
All F. O. B. Factory



HOGS

HAMPSHIRE

Spring boar pigs, sired by Steuben's Perfection and Cherokee Jim, 1st prize Ind. State Fair. Other winners at other fairs. Tried sows bred. Satisfaction guaranteed. Will ship C. O. D. Address,

STEBEN'S HAMPSHIRE FARM

R. R. 3. Angola, Ind.

Edgewood Hampshires

All bred gilts sold. Now booking orders for gilts bred for fall farrow, and pigs for pig club work only. Depew Head, Edgewood Farm, Marion, Ohio.

FOUR FINE FALL Hampshire boar pigs, price reasonable. REFUS LEE, R. D. No. 2, ALTO, MICHIGAN

Bred Gilts all sold at present and more later. Spring pigs in season. JOHN W. SNYDER, St. Johns, Michigan.

SHEEP.

KIDS

I cannot sell you any more ewes until next fall. To some grown up, I can offer 10 very good young Shropshire ewes that will lamb in April for \$400.00. Their lambs contracted to me should not more than purchase price next fall. Also 10 mighty nice ewe lambs for \$350.00. Come and see them. S. L. WING, KOPE-KON FARMS, Coldwater, Mich.

Idle Wild Stock Farms Shropshire yearling rams from prize winning stock. Make your selection early. Cliff Middleton, proprietor, Clayton, Mich. R. 3.

250 Reg. Shropshires offered past season all sold. After Aug. 1st can supply any thing needed. Registered Shropshire ewes and rams of same high quality. C. LEMEN, Dexter, Mich.

Want a Sheep? Let American Hampshire Sheep Association send you dandy booklet with list of breeders. Write COMFORT A. TYLER, 22 Woodland Ave., Detroit, Mich.

Additional Stock Ads on Page 723

Fertilize Your Swamp Land with GERMAN POTASH

**KAINIT, 20% POTASH MANURE SALT
and MURIATE OF POTASH. Also with
NITRATE OF SODA.**

While there is not a full supply of either, there is enough to do a lot of good to those who apply in time to get it. For prices write

NITRATE AGENCIES COMPANY

Columbus Ohio

STANDARD GRADE 2-INCH TANK SUCTION HOSE



With good smooth bore to reduce friction. Good quality rubber and duck with inserted spring steel wire to prevent collapsing and enlarged ends to fit over pump connections. Sold in 25-foot pieces only. Price, including two galvanized steel clamps \$10 per section.

HOFFMAN COMPANY,

SANDUSKY, OHIO

--are you carrying dependable auto insurance --?

Statement, April 15, 1920

Number of Claims Paid To Date 3,192
Amount Disbursed for Claims \$417,192.45
Cash Surplus 81,640.50
Total Assets 119,172.32
Net Membership 44,133
Rates Based on Cost Consistent with Safety

CITIZENS MUTUAL AUTO INS. CO.
W. E. Robb, Sec'y, Howell, Mich.

"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 nine years without a failure. Send for Catalog D
Brazil Hollow Brick and Tile Company
BRAZIL, INDIANA

A GUARANTEED REMEDY FOR Contagious Abortion
Easily administered by hypodermic syringe. Kills abortion germs quickly without injuring cow. Write for free booklet with letters from users and full details of moneyback guarantee. Aborno Laboratory Section 9 Lancaster, Wis.

MINERAL HEAVE COMPOUND
In use over 50 years
CURES HEAVES
Booklet Free
\$3.25 Box guaranteed to give satisfaction or money back. \$1.10 Box sufficient for ordinary cases. (Includes War Tax.)
MINERAL HEAVE REMEDY CO., 463 Fourth Ave., Pittsburgh Pa.

SPECIAL NOTICE

Ship your Eggs, Live and Dressed Poultry, Dressed Calves, Pork, Lambs, & etc. to

DENNIS & HERRING
NEW YORK CITY, N. Y.

Bonded Commission Merchants. This old reliable firm has two of the best located houses in N. Y. City for securing Highest Prices and their salesmen are

EXPERIENCED EXPERTS
TRY THEM, RESULTS WILL PLEASE YOU

For Best Net Results

Ship to
CULOTTA & JULL
Detroit, Mich.

"Enough Said!"

Use
Swift-HAY Service
AT CHICAGO
You can BUY all types of FEEDING HAY from and SHIP your surplus to
Swift-HAYnes Co.,
BOARD OF TRADE, CHICAGO

Holmes, Stowe Co., 445 Riopelle St.
Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Poultry, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank, Bradstreet, Detroit, Mich. Cad. 2878

FIRST EDITION.

The markets in this edition were revised and corrected on Tuesday forenoon, April 27.

WHEAT

Grains of all kinds have been in active demand since the opening of business Monday. Light receipts and transportation conditions, together with unfavorable weather conditions, have caused a sharp advance in prices. Wheat is particularly strong in all markets. It is said that pressure is being brought to bear on Washington to furnish cars to move grain so that loans might be reduced. Present values on the local market are as follows:

No. 1 red	2.90
No. 1 mixed	2.88
No. 1 white	2.88
No. 2 red	2.87
No. 3 red	2.84

CORN

The corn market has not gained in activity as no shipments are arriving and the trade is at a standstill. The Argentine corn market is firm, although prices suffered a slight slump at the close of the week. At Detroit corn is quoted at the following prices:

No. 3 corn	1.73
No. 3 yellow	1.78
No. 4 yellow	1.73
No. 5 yellow	1.69

OATS

Oats made a slight advance. The demand is active and considerable grain is coming out of storage. Present values on the local market are as follows:

No. 2 white	1.13
No. 3 white	1.12
No. 4 white	1.11

RYE

The rye market has been running wild and prices have advanced eight cents, but there is nothing for sale and prices do not seem to bring out any offerings. On the local market Cash No. 2 rye is quoted at \$2.20 per bushel.

SEEDS

The seed market has experienced no change during the past few days. The general tone is firm and the demand lively. On the local market prime red clover is quoted at \$28.50; alsike at \$29.50; timothy \$5.50.

FEEDS

Detroit millers have raised prices of both flour and feed and an active market is taking everything they have to offer. Present values are as follows: Bran \$57; standard middlings \$58@59; fine middlings \$60; coarse corn meal \$71; cracked corn \$75.50; chop feed \$66 per ton in 100-lb. sacks.

BEANS

While a little local buying last week revived hopes of general improvement in the trade, the bean market is now about as lifeless as ever with a very slight improvement in only a few lines. White beans are quiet with the price in Detroit placed at \$7.50 per cwt. for immediate and prompt shipment. In New York choice pea beans are quoted at \$7.50; common to fair at \$6.75@7 and choice medium \$7.50, and red kidney, choice, at \$15. The prospective acreage for 1920 will be greatly reduced in the heavy producing states, particularly Michigan and New York.

POTATOES

The potato market has been somewhat unsettled, largely because of the transportation difficulties and boycotting in some consuming centers. Round whites were selling mostly at \$10.50@11 per 150-lb. sack in Detroit, and around \$10.50 per 150-lb. sack in Pittsburgh where the movement is slow and prices slightly lower. A weaker tone also prevails in Chicago with the

Mr. POULTRY FARMER:

We make a specialty of White Henner Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henner Whites—We remit same day shipments arrive. Ship Often—Ship by Express

GEO. R. ELDRIDGE CO.
494-18th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment

HAY Ship to The Old Reliable House
Danie! McCaffey's Sons,
623-625 Wabash Bldg., Pittsburg, Pa.

SHIP Carlons Hay and Potatoes to the old reliable firm E. L. Richmond Co. Detroit, Michigan.

round whites U. S. grade No. 1 at \$7.25@7.50 per cwt. In Indianapolis the same grade brings around \$7.50 and in Columbus \$11 per 150-lb sack.

HAY

This market is higher with supplies scarce and demand steady. Detroit prices are: No. 1 timothy \$37.50@38; standard and light mixed \$36.50@37; No. 2 timothy \$35.50@36; No. 3 timothy \$33@34; No. 1 mixed \$35.50@36; No. 1 clover \$35.50@36; rye, wheat and oat straw \$12.50@13 in car lots. In the Pittsburgh district absolutely every dealer and consumer is without hay, on account of the railway strike.

BUTTER

At western points butter values held about steady the past week while eastern prices show considerable gain on account of lack of transportation facilities. Chicago quotations gained one cent last week and fancy creamery is now quoted at 65½c. In New York a new high level of values has been established and there is prospect that unless the railway situation clears promptly a butter famine will result. Creameries scoring 92 and above were at 77@78c, but are now down to 72½@74c. Had it not been for the importation of Danish butter, values would have gone considerably higher. At Detroit trading is moderate and the relation of supply and demand shows little alteration.

EGGS

There is active buying of eggs on the local market. In Chicago the trade rules steady with firsts at 41½@42½c and ordinary firsts at 38@39c. Trading is somewhat irregular in New York with nearby western henner at 48@54c. Western extra firsts bring \$13.05 per case in Philadelphia.

CHEESE

Production in Wisconsin and other western sections is lagging for this period of the year and is also light in the east. Inability to ship has given the trade a firm tone with full milks jobbing in New York at 27½@28c, and in Philadelphia at 31@32c.

WOOL

The interest farmers are taking in the Michigan Wool Pool has resulted in advances of several cents per pound by many local buyers. It is rumored that one Boston house has secured about 300,000 pounds of wool in Utah, at full prices. Whether the deal was a direct purchase or consignment business is not disclosed. Some of the better fine wools of Utah have fetched up to 60 cents a pound in the grease. Shearing is under way over much of the southern part of that state, as well as a considerable portion of Nevada. Scattered clips have been secured in Nevada, principally by Boston houses, at 50@57c a pound. Utah prices are said to be about 10 to 15 cents above the opening level for 1919. However, part of this increase may be discounted by the condition of the 1920 clip,

compared with that of last year. The new clip probably is lighter than the average product of recent years.

GRAND RAPIDS

Wheat market is higher this week on an advance to \$2.65 per bushel for No. 1 Red and \$2.63 for No. 1 white. This is a raise in the paying price of 25c the present month. The secondary grades are higher, oats advancing to \$1.05 per bushel. Price of other cereals are: Rye \$1.75; corn No. 3 yellow \$1.75; barley \$1.60; buckwheat \$2.75 per cwt. Farmers have relieved the potato market somewhat and they sold on the city market this week at \$4.50 per bushel, ungraded. Seed potatoes are quoted at \$6 per bushel. The egg market is higher, due to the influx of outside buyers for storage. Dealers now bid 38@39c per dozen. Receipts have been only fair. In order to stimulate backyard gardening the growers association is giving away packages of seeds to everyone who will make a garden this season. Thus far it has distributed 4,000 packages. There is a decline in some varieties for farm seeds this week. Clovers are now \$35@36 per bushel and timothy \$6.75. Alsike is quoted at \$36. Market for calfskins is dull and five to seven cents per pound lower, green being quoted at 38½@40c. Cattle hides unchanged, but market dull and weaker. Cooperative farm products associations were organized this week at Trufant, Lowell and Sparta.

NEWS OF THE WEEK.

(Continued from page 694).

citizens and interests.—Switchmen in Cleveland and St. Louis vote to continue the strike, while in Chicago no action is taken.—An inventory of the fuel situation shows that there are only about five days' fuel remaining in Michigan coal yards.

Sunday, April 25.

THE work day in Soviet Russia is reported to have been increased from eight to twelve hours.—President Gompers of the American Federation of Labor declares that the American Congress has completely failed the nation.—The French commercial mission plans mail service by aeroplane between Paris, Vienna, the Balkan states and Constantinople.—The congress of French railway workers votes to call an immediate general strike unless railroads are nationalized, prosecutions of union men abandoned and strikers removed in February are re-employed.

Monday, April 26.

THE supreme council is sending a formal request to President Wilson to arbitrate the differences over the boundaries of the new republic of Armenia.—Texas refuses permission for Mexican war officials to cross Texas soil on their way from Sonora to Mexico City, notwithstanding the State Department at Washington saw no objection to granting permission.

Live Stock Market Service

DETROIT

There was practically nothing on sale here Monday on account of embargoes. The Michigan Central, however, announce that they will accept live stock for these yards as follows: Tuesday from the Saginaw and Grand Rapids divisions and main line Jackson to Wayne; Wednesday from points on the main and air line west of Jackson; Thursday from the Bay City and Mackinaw divisions and Detroit and Mackinaw railway stations.

The Pere Marquette has arranged to load from all points on their road on Saturday, May 1. Nothing could be learned from the Grand Trunk as to when it would allow shipments to be made. Prospects for all kinds of live stock look lower.

CHICAGO

Cattle.

Receipts 11,000; beef steers steady to 25c higher, \$13.35 bid; bulk at \$11@12.50; she-stock mostly 25c higher; bulk at \$8@10.50; good canners mostly \$5; bulls strong; veal calves 50@75c under Friday, mostly \$13@13.50; feeders quiet.

Hogs.

Receipts 34,000; opened 25@50c

higher, closed weak and steady to 25c higher than Saturday's average; bulk, \$13.75@15.40; early top at \$15.70; few late above \$15.25.

Sheep and Lambs.

Receipts 16,000; unevenly steady to 50c lower; best woolled lambs \$20.50; bulk \$20@20.50; best shorn lambs at \$18.25; bulk \$18@18.25; culls and common \$11@17; prime woolled one to three-year-old wethers \$17.15.

BUFFALO

Cattle.

Receipts 4,500; slow; generally 50c lower; shipping steers \$12@13.25; butchers \$9@11.50; yearlings at \$12@12.50; heifers \$6@10; cows \$4@10.50; fresh cows and springers slow at \$65@150.

Calves.

Receipts 4,200; 50c lower at \$6@17 per cwt.

Hogs.

Receipts 20,800; 75c lower; heavy \$14.75@15; mixed yorkers, light yorkers and pigs \$15.25; a few at \$15.35; roughs \$12; stags \$7@9.

Sheep and Lambs.

Receipts 9,400; lambs 50c lower; wool lambs \$13@21; clipped lambs at \$12@19; others unchanged.

NEW YORK PRODUCE MARKET.

Butter.—This has been another trying week in the butter market, and unless freight and express movements are better during the coming week there will surely be a butter famine in this city. Last week, considerable butter was received via parcel post and express. Some large creameries in the west have managed to charter an express car and ship a full car of butter by express to this city. On Monday, the price of butter advanced 1½¢. Since that day there has been an advance of one cent each day including Friday. It seems that a further advance would be very unwise in spite of the scarcity of butter. Established quotations on Friday were: Extras 77½¢; higher scoring than extras 77½¢; firsts (90-91 score) 74¢; firsts (88-89 score) 70¢; second 63¢.

Cheese.—There has been a considerable cleaning up of reserve stocks because of the strike situation and England has purchased about 12,000 boxes of the cheaper grades that were in storage. The make of cheese seems to be somewhat below normal for this season of the year. Quotations on current make cheese are as follows: Common to good 26¢; average run 27¢; specials 28¢.

Eggs.—At this season a considerable quantity of eggs are usually stored as a reserve. Without doubt, as soon as freight movement again becomes normal receipts will be high enough to allow for a considerable storage. The egg market has been strong and active during the week and the price tendency has been slightly upward. Quotations are: Firsts 42½¢; extras 43½¢; extra firsts 46¢; extras 48½¢; extra firsts 46¢; extras 48½¢.

Poultry.—Increased receipts have caused a marked downward tendency to prices. Ruling quotations on Friday were: Fowls 43¢; broilers 65¢; old roosters 28¢; turkeys 30¢; ducks 30¢; geese 25¢.

THE CONDENSED MILK MARKET.

It is said that one of the largest manufacturers of condensed milk in this country is taking advantage of its opportunity at this time to combat dairymen's organizations. Although the company denies that it has a quarrel with farmers' organizations, yet it is generally known among those who are in close touch with the dairy industry that the large concern has never looked with favor on the movement on the part of farmers to join hands and demand fair prices for their dairy product. It is reported that the concern has under consideration a plan to finance a project whereby it will produce the milk which will supply its factories. It certainly will be interesting, to say the least, to watch any development along that line.

The sugar shortage is materially handicapping manufacturers of condensed milk of the sweetened variety. Many factories throughout the country have been compelled to cease operating for the time being because of their inability to purchase sugar. Others have found it possible to secure the promise of a supply of sugar but the strike on the railroads has prevented delivery of the sugar. Undoubtedly, the sugar shortage has served, in many instances, as a good excuse for manufacturers to materially curtail their milk receipts.

The export market for condensed milk has not improved to any extent. Reports from England, the greatest foreign user of American manufactured condensed milk, state that there are large supplies of condensed milk on hand and that it will be some time before it will become necessary to purchase any more.

During the last three or four weeks, the demand for condensed milk has varied considerably. At one time there was a marked demand for bulk skim condensed but that has abated and less is moving. However, the price remains very high as compared to that of some time ago. The prices on all grades of sweetened condensed have materially increased and those of evaporated have also advanced but to a lesser degree. Present quotations on condensed and evaporated milk as compared to those of one month ago are from 10 to 25 per cent higher.

COMING LIVE STOCK SALES.

Holstein, May 4, Oscar J. Ashe, Frankenmuth, Mich.
Holstein, May 12, C. G. Hine and E. A. Hardy, Rochester, Mich.
Holstein, June 5, McPherson Farms Company, and Olney Stock Farm, Howell, Mich.

Dispersal Sale

ON ACCOUNT OF ILL HEALTH I WILL SELL AT AUCTION MY ENTIRE HERD OF

Holstein Cattle

20 Heads Pure Bred and 6 Grades

AT MY FARM 3 MILES SOUTHWEST ON GRAVEL ROAD BETWEEN FRANKENMUTH AND VASSAR, ON

TUESDAY, MAY 4th

COMMENCING AT ONE O'CLOCK--MEALS FOR DISTANT PARTIES

Myrtle Mercedes Hengerveld 358216, born Apr. 19, 1916
Tuscola Butter Boy May - 257683, born Nov. 3, 1913
Tuscola Butter Boy Katy - 215734, born Nov. 27, 1912
Tuscola Rag Apple De Kol - 236135, born Jan. 26, 1916
Tuscola Butter Boy Mary - 231595, born Mar. 21, 1913
Beauty Conway Mercedes 6th 342134, born Nov. 28, 1915
Belle Korndyke Conway 4th 342133, born Oct. 28, 1915
Nellie Rag Apple Hengerveld 483655, born Mar. 4, 1918
Fannie Rag Apple Hengerveld 483656, born Nov. 26, 1917
Nettie DeKol Lad - 478540, born Feb. 3, 1918

Four Yearling Heifers sired by Tuscola Korndyke Hengerveld 164728, a son of Maple Crest Korndyke Hengerveld 84478, and out of the above cows.

One Heifer Calf born October 25, 1919, sired by Allamuchy Sadie Vale Pontiac, a grandson of King Korndyke Sadie Vale, the sire of 45 daughters, one above 40 lbs. and out of Tuscola Butter Boy May.

One Heifer Calf born January 6, 1920, sired by Tuscola Korndyke Hengerveld and out of Tuscola Butter Boy Mary.

One young bull born March 17, 1919, sired by Allamuchy Sadie Vale Pontiac, the royally bred young bull purchased in New Jersey by F. & T. Holstein Co. for \$2,000 and out of Tuscola Rag Apple De Kol 236135.

Bull Calf born April 5, sired by Governor Walker Lyons 196616, whose 9 nearest dams have 7-day records averaging 31.59 lbs. of butter and out of Tuscola Rag Apple De Kol 236135.

Two Heifer Calves born March 22, 1920, and March 23, sired by Governor Walker Lyons and out of Nellie Rag Apple Hengerveld 483655 and Belle Korndyke Conway 4th 342133.

Six Grades. One 5 years old, fresh; 4 Heifers, one year old, sired by Tuscola Korndyke Hengerveld; 1 Heifer Calf born January 1, 1920.

Seven are bred to Governor Walker Lyons, to freshen in fall of 1920.

We can say without fear of contradiction that for size, type and production, this herd is the equal of any herd in Michigan.

Amount of milk produced each month for year 1919 will be given day of sale. Every animal offered is guaranteed as represented and to be a breeder.

Time given on approved, endorsed, bankable notes bearing 7 per cent, interest payable December 1, 1920.

Oscar J. Ashe, Prop.

SALE HELD UNDER COVER IF STORMY.

WM. E. ATKINS, Auctioneer

J. F. GLADY, Clerk

GEO. A. PROCTOR In Charge of Pedigrees.

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

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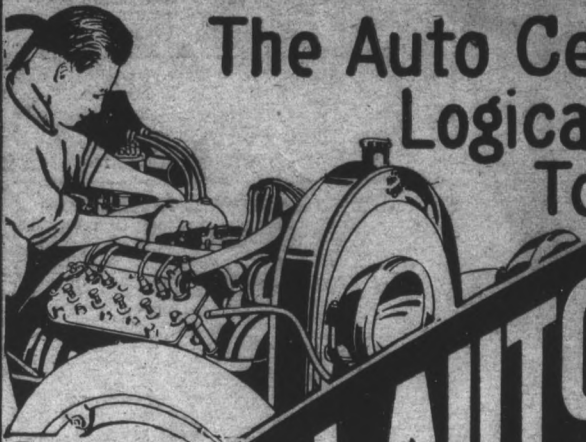
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