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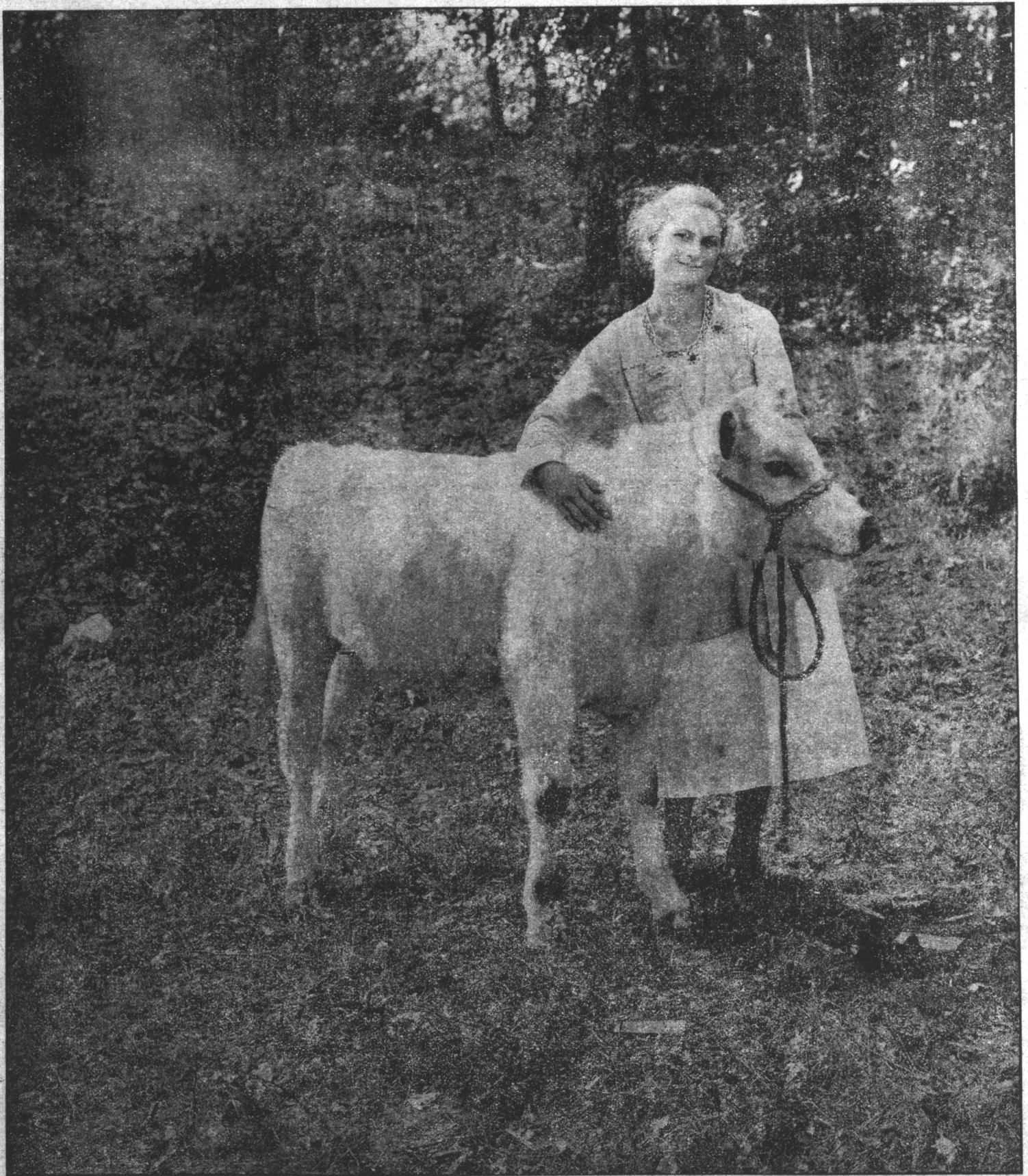
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DETROIT, DECEMBER 6, 1919

CURRENT COMMENT

Community Interest in Live Stock

THE results which can be accomplished through community interest in live stock breeding are revealed by the result of a live stock census recently taken in Livingston county, Michigan, which was published in our issue of last week. This census, taken by the county agricultural agent, showing as it does 361 herds of purebred cattle in the county, aggregating 3,668 animals, exclusive of bull calves, and that of 424 bulls maintained on the farms of the county only two per cent are scrubs, while seventy-six per cent are registered purebreds and twenty-two per cent grades, undoubtedly marks a record for Michigan and probably for the United States. This is a record of which the breeders of Livingston county may be justly proud. Incidentally, the farmers of other sections of the state will do well to take into consideration the fact that the breeders of Livingston county have "cashed in" on their community of interest in this work. For years this county has been noted as a Holstein center, and buyers who were seeking to purchase animals of this breed in quantity lots have naturally gone where they could have the largest selection and be most certain of filling their requirements.

But while the Holsteins lead in numbers with 275 registered herds, herds of other improved breeds are numerous. Shorthorns rank next in number to Holsteins, and seven other improved breeds are represented by two or more purebred bulls. An effort will be made in Livingston county to eliminate the ten remaining scrub sires during the coming year, thus making the bulls of the county one hundred per cent purebred.

The example of Livingston county is not only worthy of emulation, but it is being emulated in other Michigan counties, some of which are gaining enviable reputations as purebred centers in some line. Let the good work go on until it has covered the whole state. No single movement promises more for the future of Michigan agriculture.

Quality Products Pay

THE fact that attention given to the marketing of farm products of high quality is profitable, is well illustrated by the experience of the Adrian Community Market, whose activities have been frequently mentioned in these columns. For some time Manager Braden, of the

Adrian market, has been educating his farmer patrons to the advantage to be derived from the marketing of strictly fresh eggs. As a result his organization has gained an enviable reputation for marketing a quality product. The advantage derived from this fact is plainly illustrated by the fact that for the last ten days of November the Adrian Community Market was able to pay eighty cents per dozen for fresh gathered eggs of the best grade, and sixty-eight cents per dozen for the second grade. These eggs were sold to Detroit wholesale distributors at prices ranging up to eighty-four cents per dozen for the best grade and not less than seventy-two cents per dozen for the second grade at a time when current quotations ranged from sixty-six to seventy cents per dozen for these grades on the local market. And this difference in price was due to the fact that the purchasers knew that the eggs from the Community Market were freshly gathered, promptly delivered and of dependable quality, for which there is a strong demand at outside prices.

This example also well illustrates the fact that any community effort generally brings about a marked improvement in the methods practiced by the individual farmers of any community. Community interest is ever an important factor in stimulating personal interest in our own business, and is certain to yield profitable cash dividends as well as not less important returns in neighborly good will.

Farmers Oppose Paternalism

ANYONE who has taken the trouble to test rural sentiment on the question of paternalism, or the nationalization of important industries, during the past year, can hardly have failed to find that our progressive farmers as a class are strongly opposed to the general application of the principle in this country, and that they are likewise opposed to its application in special cases except as a temporary expedient to protect the public interest. This strong sentiment is reflected not only in the declarations of representative delegations of farmers, such as composed the recent convention at Chicago at which the American Federation of Farm Bureaus was organized, and the National Grange, which recently met in Grand Rapids, but as well in local discussions at farmers' meetings and in personal conversations by and between farmers which may be casually overheard almost anywhere and at any time.

This general sentiment is so clearly indicated by its many recent public expressions that we cannot well pass, unchallenged, its recent editorial characterization by a Michigan farm paper, which apparently aspires to direct, rather than reflect farm sentiment on this point, as a "Punch and Judy" roll, to "squawk out in public whenever rail corporations give them the sign." And the imputation that the resolution on this point adopted by the American Federation of Farm Bureaus at a meeting of some five hundred delegates from thirty-two states "might have been penned by a railroad corporation attorney," is scarcely less defensible than the misleading inference that the sentiment at the recent meeting of the National Grange was in favor of nationalization. The action of the delegates at the Farm Bureau Federation meeting will stand for itself as representing the majority sentiment of the farmers of the thirty-two states from which they came, and the Grange's position in the matter was made perfectly clear as follows: "In the government of a free democracy is lodged ample power to curb the evils of the power of swollen fortunes in the hands of the unscrupulous. We oppose government ownership and nationaliza-

tion of business and industry unless clearly required for public interest." The men who have voiced these sentiments are farmers, not merely men "who speak in public for farmers," and fortunately men of this class will continue to reflect crystallized farm sentiment on these important questions of public policy, notwithstanding the expressed opinion of the editorial writer whose expressions are herein mentioned that "they should leave the subject strictly alone."

It is possible that this radical difference of opinion on the question of the nationalization of industry may have been the deciding factor in the refusal of important national farmers' organizations to entertain proposals for a coalition of farmers' and labor organizations in the pursuance of a joint program. Be this as it may, such action has been recently taken by three such national farmers' organizations, which we believe augurs well for the future interests of agriculture and of the country as a whole for reasons given in a recent editorial comment. But nothing seems more certain than that the wise solution of these reconstruction problems depends not a little upon the constructive thought and action of the farmers of the country. Constructive individual thought and study of the problems involved is the first step toward united expression and action along constructive lines. The farmers of the country are to be congratulated in their progress along both lines. We have an abiding faith that they will measure up to the test in the present crisis and again prove the saving force in enabling the country to quiet the prevailing condition of industrial unrest and eliminate its underlying causes.

A Matter of Public Interest

THE report of the federal grand jury which has been engaged in the investigation of the Newberry senatorial campaign expenditures for several weeks, included the return of indictments against Mr. Newberry and one hundred and thirty-four other persons for violation of the federal and state election laws. It is alleged that the information secured by the grand jury indicated the expenditure of large sums not included in the official report of the campaign committee, and the indictments specify cases in which expenditures were made and specific amounts so expended in alleged violation of the law. While public judgment should and doubtless will be withheld in the matter until the indicted parties have their "day in court," this action, taken by a jury of plain farmers and business men, is properly a matter of keen interest to every citizen of Michigan. Michigan has been progressive in the matter of safeguarding the choice of her public officials, both at the primaries and at the polls. Our laws, both state and federal, not only protect the voters of the state in registering their choice of candidates, but limit the amount of money which any candidate may expend and the manner in which it may be expended. If those laws have been willfully violated, as the action of the grand jury would indicate, it is important in the interest of clean politics and good government that those who have violated them should be brought to justice. If they have not been thus violated, the accused are entitled to exoneration.

While it is a matter for regret that the fair name of our state should suffer from an election scandal, it is still a matter for congratulation that the alleged violation of the law is in the matter of campaign methods rather than of the official conduct of the election. It is also well for the public interest that the scandal is to be official-

ly and publicly sifted in court, not only that justice may be done in this case, but as well that future political activities in our state may be raised to a plane which will be above reproach.

News of the Week

Wednesday, November 26.

THE federal cabinet fails to reach a decision in the matter of the coal strike controversy which it is attempting to settle.—Governor Cox, of Ohio, ejects Mayor Poorman, of Canton, for failing to preserve order during the recent steel strike.—Federal quarantine order against the admission of unvaccinated persons from Canada where the small pox is raging, goes into effect.—The national committee in charge of the steel strike votes to continue the walkout.—The United States shipping board plans the construction of sixty liners for carrying passengers on all important ocean routes.—The printers' strike in New York City is considered at an end so far as tying up the general printing business is concerned.

Thursday, November 27.

MINERS turn down the offer made by the government and negotiations are temporarily broken off.—Representatives of the railroad brotherhoods vote to send delegation to wait upon Director General Hines for an explanation of plan for overtime pay.—Jugo Slavs threaten to take military steps to protect their interests in the Adriatic unless the general council can provide other means.—The new Belgium cabinet has but one change, the minister of interior.—A new modern dock is being built at Frankfort, Mich.

Friday, November 28.

MUCH military equipment has already been collected along the Mexican border, it is reported, to be ready in case there is trouble growing out of the present strained relations with the Carranza government.—Argentina is sending a financial commission to the United States to study industrial conditions here.—The Belgian coal output is about caught up with the pre-war tonnage.—French engineers are successfully operating trains by means of wireless.—There were 14,567 American soldiers tried before courts martial during the last fiscal year.

Saturday, November 29.

THE supreme council awards England seventy per cent of the total tonnage of the German war fleet, France ten per cent, Italy ten per cent, Japan eight per cent and the United States two per cent.—The antidynastic movement is reported to be spreading in northern Italy.—Governor Robertson, of Oklahoma, asks for federal troops to protect miners who wish to return to work.—Government serves notice upon both coal miners and operators that any interference with coal production will not be tolerated.—Germany refuses demands for compensation for ships sunk at Scapa Flow, but offers to refer the matter to the Hague tribunal.—Five bodies of the crew of the steamship Myron, which was recently lost in Lake Superior, are found.—Mexican affairs are being complicated by continued outrages against foreigners by rebel bands.

Sunday, November 30.

THE federal grand jury investigating charges of law violation in the last senatorial election in Michigan returns indictments against 135 persons, including Senator Newberry, on charges of corruption, fraud and conspiracy.—Wind attaining a velocity of eighty-four miles an hour sweeps over Detroit and vicinity, killing five persons, injuring scores and doing property damage running into the hundreds of thousands of dollars.—Brazil is looking to America for ships and men to develop her Amazon trade.—Police Commissioner Inghes of Detroit, forbids William Haywood, I. W. W. worker, permission to speak at a public meeting in this city.

Monday, December 1.

REPORTS from various sections of the country show that industrial concerns are being crippled generally by the coal famine.—Secretary Baker urges congress to provide for a citizen army to form the nucleus of an adequate emergency force.—Washington's reply to Mexico on the Jenkins case is understood to be couched in strong terms.—German troops quit Lithuania under terms agreed upon between the two countries.—Welsh coal miners vote to strike because the government plans to tax incomes of less than \$1,250 per year.—President Wilson calls a conference of men widely known in business to solve present la-

(Continued on page 742).

Organized Labor and the Farmer

The Insistence of Labor Leaders on Shorter Days and Higher Pay and the Inclination Toward Reduced Production has, According to Prof. C. T. Murchison in the Annalist, Made Coalition with Recognized Farmers Organizations Impossible—Farm Bureau Federation Becomes a New Force.

HAS organized labor created for itself a new foe? Has its program of shorter hours, higher wages, the closed shop, and enlarged managerial power awakened into counteractivity powerful agricultural interests?

To this question an affirmative answer is being given by many farmers' organizations and by far the larger part of the agricultural press. At the recent session of the International Farm Congress in Kansas City, where was represented a large proportion of the farmers of twenty states, there was bitter and outspoken denunciation of the present tactics of organized labor. The farmers in their "declaration of principles" said, in part: "We protest against the policy of organized labor in demanding of the farmers more production, while demanding of its own men less production," and "we deplore the calling of strikes in times like these for any other reason than a grave emergency."

The National Grange, in session in Grand Rapids, November 14, which is reputed to represent 600,000 farmers, reflected the same sentiments. By an overwhelming vote the convention refused the invitation of Samuel Gompers, President of the American Federation of Labor, to attend a joint conference with labor in Washington on December 13.

The American Federation of Farm Bureaus, at its recent session in Chicago, while taking no definite stand as opposed to organized labor policies, has strongly implied an unsympathetic attitude. Emphasis was put on the determination "to stand solely for the farmers' interest."

More Farm Owners Than Unionists.

The importance of this negative attitude toward the organized labor program is readily comprehended when one considers that there are more than 7,000,000 farm operators in the country. Sixty-two per cent of these own their own farms, which comprise sixty-eight per cent of the total farm acreage of the United States. These figures show that there are more farm operators who are also farm owners than there are members of the American Federation of Labor. More startling is the disproportion in other respects. As to nationality about ninety per cent of the farmers are native-born citizens. Only in Minnesota and North Dakota do the foreign-born constitute a large percentage. The aggregate wealth of the American farmers is amazing, a conservative estimate placing it at \$60,000,000,000—about one-fourth of the country's total wealth. Upon these 7,000,000 farmers the country depends not only for its food supply, but also for a large part of the basic raw materials essential in our manufacturing industries. A general strike of the farmers would involve consequences compared to which the most violent disturbances of organized labor would be but trivial. Fortunately this is not on their program and, what is additionally reassuring, the farmer has economic interests and sentiments wholly at variance with those of the more radical elements in the trade unions.

In the first place, his economic interests are opposed to the arbitrary shortening of the working hours. The working day of the farmer is determined by forces over which he has

no control. Whimsical Dame Nature is the boss, and when she is pleased to arrange the proper conjunction of season, sun, and moisture for a given purpose the farmer must act and act quickly, or else the seed which is planted never sprouts, or the hay which is mown becomes a total loss, or the wheat that is ready to harvest falls to the ground and is wasted. There are times when not six hours a day, but sixteen hours, are necessary to do the work that is essential to prevent the loss of the fruits of an entire summer's labor. In consequence of these unavoidable conditions, the farmer, if he retains his hired help at all during the busy periods, does so with the greatest difficulty.

Conflict is again noted in the matter of wages. There was a time when the farmer favored increasing wages in industry, in the belief that thereby a greater demand was created for his own products. His change of thought on the subject is due to two considerations: First, the unprecedentedly high wages now prevailing in industry cannot be equaled by the farmer's wage scale, as he finds himself unable to transfer the increased cost to his selling prices. For some months there has been, with a few noticeable exceptions, a steady decline in the price of farm products. The occurrence of an upward wage trend in the face of a downward price brought home to the farmer the realization that he is powerless to maintain a proper ratio between cost and selling price. Secondly, the farmer, whether rightly or wrongly, believes that high wages in industry are responsible for the present unusually high price of manufactured goods, but that they in no way tend to stimulate the prices of farm products. From this difficulty no immediate relief seems probable, as the farmer has been working overtime to produce, and hence in many sections of the country has on hand large stocks, whereas the industrial workers, in his opinion, have calculatedly kept individual production at a low ebb.

Middlemen Not to be Forgotten.

In the matter of prices the farmer is at odds not only with organized labor but with the profiteering middlemen. He believes that responsibility for the high prices is equally divided between these two classes. This belief, rightly or wrongly, rests upon the assumption that the manufacturers (who are the employers of labor) and the produce middlemen who have so developed the

machinery of marketing in their respective fields as to be able to preserve their margin of profit whatever the conditions of supply and demand. Also it is assumed that the chief manufacturing industries may meet a rising market by enlarged output and check a falling one by reduced output. In the same way the produce middlemen exhibit a high degree of unity in the control of their offerings. Another advantage which both generally possess is adequate financial reserves against temporary adversity. Large storage facilities are at the disposal of both and used to the limit, if newspaper and official declarations are to be believed.

In all these points the farmer sees himself at a disadvantage. Generally he has no effective machinery either for price control or supply control. A rising market after the short planting time finds him unable to increase his output, and a falling market finds him helpless to make a reduction in output. Furthermore, the average farm is a comparatively small business unit and cannot maintain adequate financial reserves for the long

adverse periods.

Prior to the war the farmer prospered. It was the normal thing for the majority of the country's farmers to sell their money crop immediately after harvest, and thus take the lowest prices of the year for no other reason than inability to finance the holding of goods. The difficulty is of ten increased by the perishable nature of most farm commodities which necessitates special facilities which the average farmer cannot afford.

Such considerations have goaded the farmer into a much-alive class consciousness. And with some justification he fancies himself ground between the upper and nether millstones of high buying prices and low selling prices. He alone of the important economic interests has failed to provide adequate devices for self-protection. As a farmer-editor recently exclaimed, "The farmer who is the original producer, takes a less price in order that consumers may pay less, without in any way lessening the margin of profit of wholesalers, jobbers, and retailers. The innocent farmer is the victim."

Charges of profiteering the farmer resents bitterly and, in answer, calls attention to four things: First, is the total impossibility of profiteering because of lack either of organization or means; second, is the great increase in the supply of farm products where weather conditions have permitted, despite the great handicaps of labor and

fertilizer scarcity united with an almost prohibitive cost of farm materials and equipment; third, is the fall in price of farm products as received by the farmer which have, in general, declined far more readily than the prices received by manufacturers and dealers. These instances where the farmer has obtained an exceptional price increase are explained as being due to unprecedented demand and great scarcity of supply, things over which the farmer has had no control. Take, for instance, cotton. Unfavorable weather conditions produced a crop less than sixty per cent of normal from a normal acreage. The same is true of the apple crop in the east and south. In connection with this it must be noted that farmers' costs, unlike manufacturing costs, are not proportioned to output, but depend upon the acreage. Therefore the aggregate costs of a forty per cent crop are not greatly different from those of a one hundred per cent crop. Half a crop, generally speaking, should bring a double price in order to permit a merely normal profit.

As a fourth reply to the charge of profiteering, the farmer points to the great "spread" between the price received by him and the price received by the final middleman. The latter price may be from one hundred per cent to three hundred per cent higher than the former, wherefore, a substantial decrease of the farmer's price, even if transmitted to the consumer, becomes almost negligible. To illustrate, the year for no other reason than inability to finance the holding of goods. The difficulty is of ten increased by the perishable nature of most farm commodities which necessitates special facilities which the average farmer cannot afford.

Progress in Organization.

Unlike the most of us, the farmer is not satisfied with mere oral denunciation of the profiteering middlemen and avaricious labor elements, but plans effective action. It is to consist of nation-wide organization of the farmers into local groups, each composed of farmers producing like things. These units are to be coordinated into state and national organizations as illustrated by the California Fruit Growers' Exchange, and the well-known Dairy-men's League. Finally it is contemplated to bring all these organizations into unity of action and purpose by the formation of a national federation. This final consummation seemed to be the chief motif of the American Federation of Farm Bureaus which has just closed its session in Chicago.

The machinery constructed along these lines is to be used for a three-fold purpose: to provide education in the economics of farming; to negative as much as possible those nefarious influences operating to check production and price readjustments; and, lastly, to take positive and direct action toward the development of an efficient cooperative system of buying and selling, to the end that a



The recently organized American Federation of Farm Bureaus and our own rapidly growing State Farm Bureau under the constructive leadership of Secretary Bingham and his co-workers promise well to introduce a new leading role into the great drama of our industrial life.



smaller proportion of the national wealth will go to the middleman, that present food wastes may be diminished, and that the traditional helplessness of the farmer in his market operations may be removed.

Will the farmer be successful in this program? The history of his past cooperative attempts is contradictory in its evidence. The part of it dealing with the Granger movement and the Farmers' Alliance is discouraging. How-

ever, the farmers insist that these failures were due to improper organization and unsound policy. More recent history teems with successes. The California Fruit Growers' Exchange is a highly successful cooperative enterprise through which is marketed seventy per cent of the California crop. In conjunction with it is a cooperative buying corporation doing an annual business of about \$6,000,000 and saving the farmers at least fifteen per cent on

their purchases. The Farmers' Union elevators of the grain states, which have broken the power of the dealer combinations, are numerous and successful. The Dairymen's League, whose powers have been so forcibly exercised in all of the important dairying states, are a similar instance. Under pressure of the great drought recently experienced in some of the southern and southwestern states no less than 7,000 farmers' organizations did

cooperative buying and selling, saving on an average of sixteen per cent for a total aggregate of \$17,000,000.

The policy of these organizations and of those proposed is to keep strictly to the lines of economic interest and avoid all political and social entanglements. The farmer seems determined at last, through the Farm Bureau Federation movement, to become a principal instead of a mere agent in the economic life of the country.

Will Prices for Farm Products Decline?

By James N. McBride

WILL agricultural prices remain at or near the present standard, is the question uppermost in the farmer's mind.

At farm auctions the question is an ever-recurrent one and the quandary of many, to buy or not to buy, is best stated by one man inquiring of a neighbor as to whether purchases at the present time were wise legitimate transactions or whether we were all plunging madly? Was the man who was selling his farm and chattels the far-seeing one, who was unloading at the crest, and the purchasers who were to continue farming the guileless ones who were being "gold bricked?"

There is more of "curb" buying and selling at farm auctions than there is doing on the "curb" in New York, and probably as much anxiety, with the difference that the farm sales are not matters of a quick turn-over and represent a business in which they, the farmers, have some control over, and ultimately know comparative values of the articles they buy and sell.

In other words, the farmer distributes his holdings among live stock and his production is of varied products. He can stand a price drop in one or two articles and not materially suffer. The holder of stocks describes this condition as being "well distributed" or not having his "eggs all in one basket."

The question then is, will there be a general drop in prices? This is the haunting fear, and in turn of itself tends to price level maintenance by a reduction of products in volume. Every timid one who abandons the plow for a sure thing job transfers himself from the ranks of a producer of foods to that of a consumer. Every grant of wage increase in the cities means the bidding that much more for labor and with it the ability to consume more of farm products. The elder J. P. Morgan said that no man ever went broke who was a "bull" on his country's products and development.

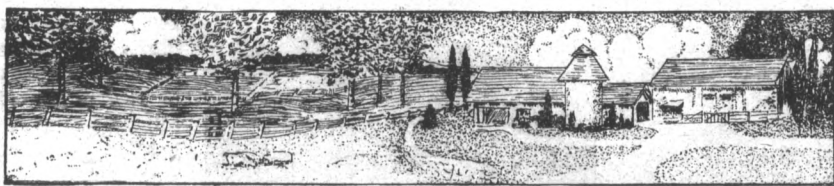
But will there not be a panic which will carry down with it farm prices? The Federal Reserve Bank system which stood all the strain of war financing and which has the special duty of supplying currency to prevent panics as a large reason for its existence, means the whole power of the United States arrayed against this old-time danger which was the belief of the financial fatalist. In past days a panic might start, for example, because the meat packer could not secure loans to continue purchases of live stock. The farmer feeder would be unable to sell and pay the local bank his cattle loan and then liquidation at disastrous prices would follow. Under the present system both the packer and feeder have an access to currency supply, to stand almost any shock or strain. The danger of a price drop by reason of a financial panic can be dismissed from serious consideration.

The reason for the present price lev-

el is that of decreased purchasing power of money when exchanged for goods. There has been a great increase of money and a positive decrease in the products of the world. The war has destroyed as well as prevented the nominally used peace materials from being produced. The return to this normal condition must be slow because of decreased man power and the prices of products must be based on the increased cost of land, machinery and labor.

This very doubt which lingers in the minds of the over-cautious as to engaging in production "until prices are lower," is of itself a large factor in price maintenance, and in turn is the opportunity of the man who dares to take a chance. The output of nearly all industries outside of agriculture is

based on an eight-hour day. In other words, a decrease in twenty per cent of time engaged in production by labor in the change from a ten-hour day has not been followed by a decrease in wage. While a somewhat disputed question, evidently a decrease of about that amount in production has resulted. In order to maintain this parity of labor's product in industry off the farm, in exchange for that from the farm, there must be added twenty per cent to the farm cost. To the ultimate consumer this is actually more, for it means the cost of delivery with the decreased hours added, of transportation, labor, etc. This, then, gets back to the farm in the increased cost of machinery supplies and whether it is the vicious circle or just a circle, it is a condition that cannot be changed, or



Getting Michigan Out of the Muck

IN a recent address the following observations on the farming of muck lands in this state were made by Ezra Levin, muck crop specialist of our Michigan Agricultural College:

There are five million acres of swamp land in Michigan, the greatest part of which is peat and muck. An exceedingly small amount of this swamp area, probably not more than one per cent is under cultivation. Upon this cultivated area, Michigan has developed the celery and onion industries. This area also produces large quantities of cabbage, beets and other truck crops.

But by far the greatest part of this cultivated area is used in connection with up-land for the production of extensive crops and for pasture, and yet the ninety-nine per cent of unused muck in Michigan is very slowly developed, due to a lack of knowledge rather than the lack of initiative.

It has been found that the management of these muck areas, from the viewpoint of general farming is a distinct problem, which is concerned with entirely different factors than those which we assume in planning for high lands.

First. Muck soils are frosty.

Second. They lack minerals.

Third. Special crops are required.

Fourth. A chemical analysis is no indication of the ability of a peat soil to produce crops. The physical analysis is of greater importance.

Fifth. Peat soils change very rapidly, instances of red peat being changed to muck within a few years is very common.

Before we can know very much about peat detailed botanical and bacteriological study is necessary. The botanist will determine the plants and the method of formation which produced these areas; the bacteriologist will determine how these plant remains are decomposed, and will become available for plant use.

This is enough to indicate the distinct conditions which are presented in peat soil. It means that we must find varieties adapted to this distinct type of soil. There is no reason to assume that our crops adapted to high lands will do well on our muck—experience has shown this. We have constantly in view a system of extensive agriculture on our muck lands, which will be just as safe as farming on good high land, and which will consider the limiting factors with which we have to contend. Gradually we are adding to our knowledge by the experiences of farmers who have given their attention to muck and its problems.

This office is the fore-runner of extensive work along these lines. It has for its aim the development and reclamation of the muck land of Michigan; it plans to bring the muck interests of the state together and to represent them; it plans to provide such information as the muck interests of the state request; it plans to bring to the Agricultural College, such problems and to cooperate with the agencies at the college toward their solution; it plans to make known the best procedure and best system of handling and best methods of working our muck areas. It aims to stimulate a healthy interest in our muck land areas.

at least has not been with all the administrative powers for the last ten years trying to accomplish it. If one were to examine current political history he finds the Taft administration proposing Canadian reciprocity to lower prices, and the first Wilson administration elected to reduce prices and the consequent Underwood tariff bill. All this time the trend was upward without the accelerations of the financial and labor facts just noted.

The adaptation of machinery to farming and scientific agriculture, offers very little hope of decreasing production costs. The great majority of successful farmers are and have been scientific, they simply got results without boasting. Probably ninety per cent of the instructors in scientific agriculture are more successful in teaching than they would be in practice—for, with no disrespect to science in agriculture it is far from being an exact science and the "know how" is more general than supposed among farmers. There is the constant tendency of decreasing yields by reason of the "skinning of land" made necessary by competition with virgin soils, and the consequent increased cost of production. Acre yields over ten-year periods have shown no increase in volume for the reasons noted. Increased skill, improved machinery, has not quite kept up with soil depletion. To the man with courage and determination, and especially if he has sons of working age, the approaching golden era of American agriculture is ahead rather than in the past.

BIG FARM GATHERING PLANNED AT M. A. C.

SPECIAL new exhibits on agricultural subjects and entertainment of a high order are among the things announced for the annual Farmers' Week at the Michigan Agricultural College, which is to be held this year from February 2 to 6. Speakers of national reputation, including Dr. E. V. McCollum, of Johns Hopkins University, H. C. Taylor, Chief of Farm Management, Washington, D. C., Dean Vivian, of Ohio State University, and many others will be heard by the assembled agriculturists during the week.

Annual meetings of a large number of Michigan's leading agricultural organizations will be held at East Lansing at the same time. These include The Michigan Crop Improvement Association, Michigan Maple Syrup Growers, Michigan School Commissioners, Michigan Horticultural Society, Michigan Muck Farmers, Michigan Potato Producers' Association, and others.

Farmers, housewives, rural workers, and others interested in the agriculture of the state are expected to attend the one-week gathering in great numbers. Indications are that the attendance record of more than five thousand for the annual meeting will be broken this year according to those in charge of arrangements.



Fire Fighting on the Farm

Arthur L. Dahl Gives Practical Suggestions on Protecting Farm Property Against this Grim Destroyer

EVERY year millions of dollars' worth of farm property is destroyed, and to offset this loss would require practically all of the value of an average potato crop in the United States. This loss is a total one too, for the material burned up cannot be compensated for by such insurance as is carried, and in practically every instance the fires are preventable.

One of the most efficient parts of every city government is its fire department. Men are trained in the art of fire-fighting and powerful engines and fighting equipment stand ready at all times to respond instantly to an alarm. In the country no such system is available. Farm dwellings are more or less remote; the water supply is often inadequate to cope with a serious blaze, and many inflammable materials are kept constantly on hand, such as hay and oils. It is the part of wisdom for every farmer, therefore, to give serious thought to all methods for the prevention of fires and means for overcoming them should one occur.

As a result of special studies made by the Department of Agriculture it has been determined that practically every fire, except those of incendiary origin, is preventable, and some carelessness or neglect is usually responsible.

Every farmer should study his buildings and their contents from the same point of view a fire inspector would in a city building, to see that all the things are done that can be done to improve conditions so that fire cannot easily start, and to determine the best ways of fighting any fires that may start. He should bear in mind that any preventive or protective measures he may take are for his own benefit, and that the cost of preventing a fire is cheap as compared to the loss entailed by the average farm fire. Every building has certain points which are more susceptible to fires than others, and these points should be doubly protected, as well as providing adequate protection for all the farm units.

Special care should be taken with matches. From the standpoint of "Safety First" only such matches should be allowed on the premises as will light only when struck on the box. The ordinary parlor match will take fire at a very low temperature and can be lighted in many ways. They sometimes fall on the floor and are lighted by being stepped upon, or when one is scratched a part of the flaming head may fly off into some inflammable material. Children like to play with matches, and often cause fires, and it is always a safe plan to put the match holders well out of reach of the younger members of the family. Never throw away a used match unless you are sure it is entirely extinguished, and the best plan is not to throw it away at all but save it to put in the stove. By having tin receptacles hung at such points where matches are struck, it is easy to place the used match therein. Matches should never be struck in the barn, or around loose hay, and matches should never be carried loose in the pocket for they might fall out and be stepped on. Smoking should be prohibited in barns or in the vicinity of oils and greases.

Kerosene is used on nearly every farm and carelessness in its use has resulted in many bad fires. An overturned lamp or lantern quickly sets

fire to surrounding objects, and from the standpoint of fire protection the installation of electric lights will be found cheap in the long run, even though the cost of installation may seem high at the start. Where oil lamps are used those with metal bodies should be preferred, as they are not as likely to break if overturned as glass ones. For lanterns the farmer should choose the type especially designed to avoid danger when handled carelessly, such as are used on railroads. The wick should always fit tightly. Enough vapor to produce an explosion may be generated if a lamp is refilled while hot, and this filling should never take place in the immediate vicinity of a hot stove. Keep lamps away from the edge of tables, or where they can be easily knocked off or overturned.

On the modern farm which is too far removed from city power lines, either

Many an explosion and fire has occurred by a farmer entering a closed room with a lantern in which an open gasoline tank is located. For this reason open flame lights should never be allowed in a garage or the building containing the farm tractor or gasoline engine, and such a building should never be heated with a stove. The automobile or tractor should be run outside while the tanks are being filled. The tank of a gasoline engine should be filled only by daylight and not when the engine is running. Gasoline fires are very difficult to control, for water has little effect upon them, and in most cases merely spreads the flames.

Many farm fires are caused by burning brush or rubbish getting beyond control. Where rubbish is burned near buildings, it should not be left until the last ember is dead, and no fire should be built so big that it could not be scattered and extinguished in a few

fireproof material. Chimneys should be examined frequently for cracks, and when these occur, they should be filled with plaster or cement. All chimneys should be cleaned regularly to remove the soot and other inflammable material that may gather there. Often the birds will build nests in chimneys not used, and a considerable quantity of straw thus accumulated. Stoves should never be allowed to become overheated, and spark arresters, made of wire netting, should be put over chimneys opening near wooden roofs. By seeing that the pitch of the roof on new buildings constructed is sufficient to prevent any sparks lodging on the shingles, or by painting them to provide a smooth surface over which cinders will roll easily, many fires may be prevented.

Often hay, especially clover and alfalfa, which has been stacked or placed in the barn when wet with dew or rain, will generate sufficient heat to start a fire. Spontaneous combustion has been known to take place in damp fodder and straw, and bins of moist grain and seeds are also dangerous in this respect. Fires can be avoided from these causes by frequent inspection of stored materials.

Smoke houses are frequent causes of farm fires, due to faulty construction or the use of wrong material. To guard against serious loss from this source the smoke house should be placed at a safe distance from other buildings, and should be watched carefully when in use.

Where poultry is raised, incubators, brooders, feed-cookers, and all other equipment requiring oil stoves or other heat, are used, and such equipment should be carefully watched. In purchasing these things, only the best and simplest should be bought, and their installation should be carried on with a view to the possible fire hazard.

Lightning is said to destroy property to the value of over eight million annually, most of which is in the country. Where thunderstorms are frequent the danger from lightning is the greatest, and practically the only protection which the farmer can provide against this danger is the lightning rod. From statistics gathered by the Department of Agriculture it is found that properly installed lightning rods reduce the probability of a barn being destroyed by fire by about ninety-nine per cent, and of a house by over eighty per cent.

While the easiest way to fight fire is to prevent it, and the foregoing suggestions are made with that object in view, yet fires do occur and every farmer should make some provision in advance for such a contingency. Practically every fire is a small one at the start, and the most effective first aid is to have some kind of a fire-extinguisher within easy reach. Most fires can be put out by a single person when first discovered if the means are at hand. The apparatus should be known to everybody and placed within easy access. A ladder long enough to reach to the roof of the tallest building should be kept on hand.

A pail of water is the oldest, simplest, and also the cheapest fire extinguisher. They are so effective in extinguishing small fires that no farm should be without them placed at strategic points. The usefulness of the fire bucket depends upon its being in-



Carelessness and Neglect Are Usually Responsible for Fires on the Farm.

an individual electric lighting plant or some one of the several good gas lighting plants should be installed. The cost is not excessive and besides the comfort and convenience they will give, the protection against fire will easily repay the investment within a short time.

In these days it is about as common to see a farm without an automobile as to find one without work stock. On many farms we likewise find gasoline engines to turn the cream separator, pump water, or a dozen other necessary duties. Gasoline must be kept to feed these mechanical workers, and usually it is kept in fairly large quantities, such as drums or barrels. Gasoline is a dangerous product to have around, for even under ordinary temperatures it gives off a very explosive vapor, and it burns very fiercely when ignited. The safest way to keep gasoline is to store it in a tank buried underground, and under no circumstances should it be kept inside any building where it is necessary to take an open light, or where a gasoline engine capable of producing a spark is operated. If the gasoline container permits vapor to escape a fire may be the result, for the vapor from a single pint will render the air of the ordinary sized room explosive. It is heavier than air, and it will accumulate near the floor where it is liable to be ignited by the flame of a lantern set on the ground near the gasoline container.

minutes if the wind should get too high. No such fire should be left unattended for even a few minutes, for a burning ember may be blown into some nook where it will cause damage. Where there is a good deal of rubbish to be burned in the farm yard, a good plan is to build a rough brick furnace or use a discarded metal container which will prevent the spread of any sparks. Where it is desired to burn stubble in the field, a few furrows should be plowed along the fence lines to act as a firebreak.

During the warm summer evenings when it is sometimes the custom to use Chinese lanterns to light the grounds during a children's party, care should be taken to see that the candles are put in straight and are blown out before entirely consumed. Care and thoughtful attention are the watchwords that should govern every act of the farmer in the handling of fire or inflammables in whatever form, for if not he may not only get his fingers burned but all his worldly wealth, too.

Stoves and chimneys are frequent causes of rural fires. Stoves should not be placed too close to papered walls or woodwork unless a sheet of zinc is placed between them. The floor near stoves or open fireplaces should be protected from hot coals which might drop out.

Wherever stove pipes pass through the wooden partitions or roofs they should be protected by tile insulators or other

(Continued on page 714).

News of the Agricultural World

FARM BUREAU NEWS.

Organization Urges Extending Farm Loan Service.

Urging the advisability of increasing the maximum of the federal farm loan from \$10,000 to \$25,000, C. A. Bingham, secretary of the Michigan State Farm Bureau, telegraphed to Congressman Frank D. Scott in Washington, D. C. Mr. Bingham pointed out how this increase is of vital importance to the thousands of Michigan farmers. Hearings will be begun on this subject this week before the sub-committee of the house banking and currency committee, of which Scott is chairman. It is possible Bingham will go to Washington to amplify the information in his telegram. The state farm bureau is opposed to repeal of the tax-exemption feature of the loan as is being agitated to a considerable extent.

Annual Meeting Place.

Lansing probably will be the place of the annual meeting of the Michigan State Farm Bureau, which is increasing its membership at the rate of more than five hundred a week, this year. Tentative arrangements are being made to have the meeting in the state capitol city during Farmers' Week at the Agricultural College the first week in February, when thousands of farmers from all over the state are expected to be assembled. Among the speakers expected are Governor Albert E. Sleeper, Governor Frank O. Lowden, of Illinois, and Dr. Kenyon Butterfield.

CANADIANS INDORSE LAKES-TO-OCEAN PLAN.

UNQUALIFIED indorsement of the "Great Lakes to the Atlantic" waterways project was voted by the Canadian Waterways Association, organized at Windsor, Ontario, by delegates from fifty Canadian cities.

C. P. Craig, of Duluth, who acted in an advisory capacity to the conference, declared the project to connect the lakes with the Atlantic through the Welland Canal-St. Lawrence river route "would place the world's greatest producing areas thousands of miles nearer the world's greatest markets."

BAN ON ENTRY OF GERMAN TRADERS LIFTED.

THE bars against the entry into the United States of German citizens who have bona fide business in this country have been let down by Secretary of State Lansing's announcement recently.

The department also announced that the arrival of an unofficial mission from Germany, composed of "reputable business men representing various manufacturing interests," is expected in the near future.

These men plan to purchase raw material in large quantities for their respective industries.

CONQUERING POTATO WART.

REPORTS given at a recent conference of officials from West Virginia, Pennsylvania and Maryland with the Federal Horticultural Board of the United States Department of Agriculture, called to consider the status of the potato wart disease, show that this recently discovered menace to the potato industry of America, and that by planting immune varieties further losses from the disease can be practically eliminated. The potato wart is one of the most destructive maladies attacking potato crops in Europe, and heretofore no means has been known for eradicating it from the soil, once

a garden or a field becomes infected. Not only have the investigators for the United States Department of Agriculture found varieties of potatoes which are immune but they have devised a method of thoroughly disinfecting the soil by the use of steam and formaldehyde.

As a result of the conference in Washington, it is announced that the state authorities of West Virginia and Pennsylvania will take steps to assist gardeners in the infected regions in the purchase of varieties of seed known to be immune. It may be found advisable, also, to undertake the disinfection of a limited number of garden plots. As the cost of this work is approximately one thousand dollars an acre, the efforts along this line will be limited until the most effective and economical methods have been discovered.

FIRST BETTER-SIRES EMBLEMS.

WIDELY scattered sections of the country are represented in the list of the first recipients of the official emblem bestowed upon live stock owners by the United States Department of Agriculture in connection with the "Better Sires—Better Stock" campaign now in progress. Possession of this emblem shows that the owner has agreed to keep and use only purebred sires of good quality, and will follow to the best of his ability breeding methods leading to live stock improvement.

FOOD OIL FROM GRAPE SEEDS.

FROM the grape is being derived a new food oil, the American Chemical Society announces. It is pressed from the seeds, which formerly were discarded. This recently discovered by-product has been tested by scientists, who say that it is edible and nutritious and may become a rival of olive and cottonseed oils for cooking and for salad dressing. The news has given comfort to growers of the vine, as the preparation of the oil on a large scale may increase the profits from grape juice. Even after the oil has been pressed out, the residue of the seeds is found to be of value as a feed for animals.

Dr. J. H. Shrader, who is connected with the Bureau of Plant Industry, U. S. Department of Agriculture has made extensive investigations in the commercial utilization of grape seed. In a paper read before the Division of Industrial Chemists and Chemical Engineers, of the American Chemical Society, he suggested that all waste of this character from the vineyards and canneries be assembled at a center, so that there will be enough tonnage to make its fabrication profitable.

"In the grape juice industry," he says, "the grapes are pressed in ordinary cider presses to obtain the juice. The skins, seeds and pulp remain behind in the cloths. The total tonnage of grapes pressed for juice in the grape belts of New York, Ohio and Michigan, was ascertained directly from the firms for each of the last five years, in order to strike a fair average. From these figures, a pomace yield of twenty per cent was calculated, which, in turn, yielded one-quarter seed, one-quarter skins and one-half water.

"A method has been worked out and operated in the laboratory on a semi-commercial scale whereby grape seed can be separated from wet grape pom-

ace without recourse to drying. The seed separation will enable the producer to take out his seed from the balance of the waste at each pulping and pressing station. This makes him independent of the necessity of shipping all his waste to the central plant when freight rates make such shipment prohibitive."

Because of the shortness of the grape juice pressing season, which lasts from September to November, this agricultural chemist has estimated on a plant only large enough to dry the maximum amount of seed and press it in winter months. He calculates that a charge of \$9 per ton of raw material is allowed for drying and handling from freight cars to storage bins, while \$15 to the ton of dry grape seed is allowed for expelling the oil and handling from the seed storage to the oil tanks. This would include all overhead and management charges, except rent of property or interest on real estate investment.

Dr. Shrader believes that the efficiency of these plants could be increased by also extracting the oil from the seeds of tomatoes, as many such seeds are rejected in making catsup and in canning. Seeds from pumpkins and those from other vegetables can also be utilized.

MICHIGAN STATE GRANGE MEETS AT SAGINAW.

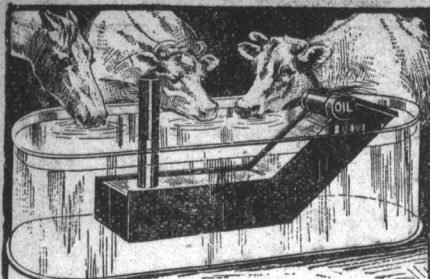
MICHIGAN State Grange will open in form at 10:00 a. m., Tuesday, December 9, in Masonic Temple, Saginaw.

Program.

The program of the week will be a full one. The sessions open at 10:00 a. m. Tuesday. Tuesday afternoon the Master reads his annual address, and announces committee appointments. That evening occurs the public meeting. Wednesday will see reports of officers and presentation of resolutions from the delegates; in the afternoon the lecturer's report and open program, when noted farm specialists will be heard. That evening occurs the social love feast at a real banquet; after which short talks will answer the burning question, "What do Michigan Farmers Want?" Thursday and Friday at 8:00 a. m. are lecturers' conferences; also at 8:00 a. m. on Thursday will occur the election of officers. Thursday and Friday will be filled with reports of committees, and regular order of business. Thursday evening will be conferring of the fifth and sixth degrees, and Friday evening installation of officers.

There will be addresses by men and women, who are prominent both in and out of the Order, upon far-reaching topics. Among the questions will doubtless be consideration of bills now before congress, like the Capper-Hersman to legalize collective bargaining, and the Kenyon-Anderson to regulate the packers; the Grange's part in bringing producers and consumers in closer touch; relation of the Grange to other farm organizations; how to publish more widely the actual cost of production of food products; the farmer's right to cost of production plus a reasonable profit; what sort of rural schools are needed today; the study of home sanitation and economics; and many others which the critical times suggest. In addition, there will be much time and discussion given to the best means of building the Grange stronger and wider.

Sugar beet growers, among our Grange people, will be interested to know that the annual mass meeting for growers of sugar beets is called to convene at Masonic Temple, Saginaw, Monday, at 1:00 p. m., December 8.



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Freezing Injury to Potatoes

By R. E. Vaughn and M. Miller of the Wisconsin Experiment Station.

FREEZING causes heavy losses annually to potato growers and dealers. Frost injuries may occur in the field before or during the harvest period, at any stage in transportation and marketing, or later in storage. In certain years of severe early frosts losses may, indeed, be heavier from freezing than from any of the common potato diseases.

Three distinct types of injury occur during "cold snaps," all of which are very common.

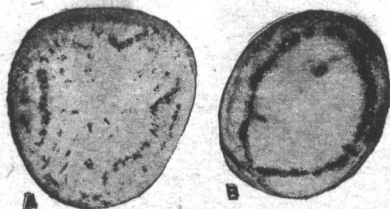
Freezing Solid.

If potatoes are actually frozen solid clear through or on one side they become soft and mushy when thawed and are easily detected and sorted out in storage lots.

Freezing is often limited to one side of the potato which may have projected above the soil or may have been in contact with a cold wall.

Turning Sweet.

Tubers stored at low temperatures, twenty-nine to thirty-four degrees F., for a month or more, "turn sweet."



Cross Sections of Tubers Damaged by Internal Freezing.

This turning sweet is popularly termed "chilling" and is supposed to be due to slight freezing injury. This is incorrect. It is due to prolonged low temperatures but not to ice formation in the tissues and hence is not a sign of freezing injury. Potatoes which have been slightly frozen do not necessarily turn sweet, and on the other hand, potatoes may be sweet because of prolonged cold storage without having been frozen or "frost-bitten" at all.

Internal Freezing Injury or Frost Necrosis.

If potato tubers are exposed to the severe frosts (temperatures below twenty-eight degrees F.) for a short time many of them will, upon cutting, show dark discolorations in the interior flesh. These internal symptoms of freezing injury vary considerably in appearance but they have certain characteristics in common. They are generally most marked at the stem end of the tuber and in cases of slight injury are limited to this. They cannot, as a rule, be detected by the external appearance of the tuber although upon storage such injured tubers wilt more than normal ones.

The discolorations most commonly appear as dark blotches scattered irregularly through the flesh, especially in the outer flesh. Very often, however, fine lines combine to make a netted or ring pattern. Sometimes these may be mistaken for certain tuber diseases unless the possibility of frost is understood.

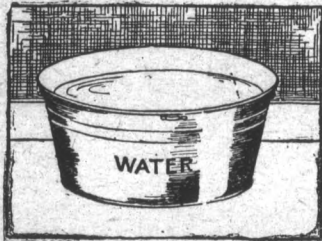
Generally during mild exposure certain tubers succumb while others nearby under like conditions are unharmed, an indication that certain tubers are

more susceptible to frost injury than others.

Influence of Freezing Injury on Seed. Do not plant potatoes which show freezing injuries. They may grow and because the sprouts are more resistant than the body of the tuber and therefore mild injury may not kill the eyes. Seed tubers which have been frosted usually sprout more slowly, however, and are liable to rot before the plants are well established on their own roots.

Can Control Freezing Injuries.

Watch the temperature of your storage room in winter. A simple way to do this is



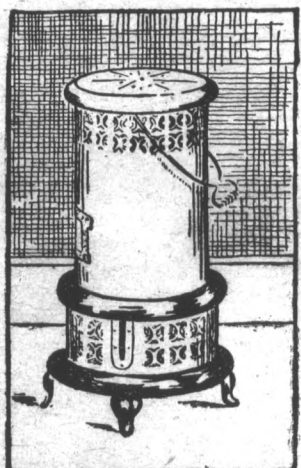
Water Modifies the Temperature of the Room.

to have a tub of water near the potatoes. Water begins to freeze at about thirty-two degrees F., and potatoes at about twenty-eight degrees F. Ice formation in the water, therefore, serves to give timely warning of impending danger to the potatoes and at the same time, if there is sufficient bulk of water, it will, in freezing, actually release heat, which retards the fall of air temperature. Actual freezing does not begin in potatoes until the temperature drops to some point below twenty-eight degrees F.

If potatoes are shipped during cold weather in a heated car, provide for circulation of air from the stove to all parts of the car. This will prevent black heart in potatoes near the stove and frost injury in those in the outer parts of the car.

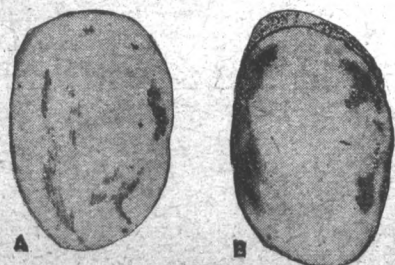
STRAW FOR THE WHEAT.

WE have always depended upon snow to protect the winter wheat crop from sudden weather changes. Snow is, of course, a very efficient covering for all winter growing crops, including rye, alfalfa, clovers, etc., but it frequently happens that when the covering is most needed the snow is not there. Progressive farmers have learned out of practical experience that a very light covering of strawy manure or straw is of the greatest value to these winter crops when the snow is off the ground. This straw stays after the spring opens and protects the plants against the excessive action of freezing and thawing on the root system. Neither is the



Often a Little Heat will Save the Tubers.

time required for the application of straw wasted since the fertilizing elements contained therein and the effect upon the physical condition of the soil are just as apparent as if the material had been applied to any other crop and at a time of the year when labor may be more urgently required at seasonable work.

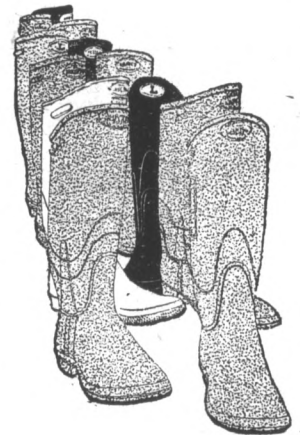


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What Grangers Did at Grand Rapids

(Continued from last week).

Production and Distribution.

These two factors afforded some of the most interesting debates of the sessions, some division hinging on whether the farmer has any responsibility in distribution. The debate was precipitated by this wording in one of the first drafts of the declaration of principles: "Production and distribution are distinct functions. In large part, distribution is not the farmer's problem, and efforts of farmers toward reducing final selling prices of their produce are misdirected." There was so much opposition to this wording that the proposition was sent back to committee for redrafting so as not to be contrary to claim for the right of farmers to cooperate for better marketing and distribution of their products. To protect and develop this right, the Grange urges passage of the Capper-Herman bill, now pending in congress, which would specifically establish the legality of collective bargaining by farmers in marketing their products. And government control of corporations must be maintained to prevent extortion and discrimination. However, government price-fixing in peace time is indefensible, in Grange opinion.

Taxation and Land Bank Accommodation.

Reaffirming its stand for uniform tax rates on actual values, the Grange opposed taxing land bank bonds for fear that this will increase interest rates to borrowers. Better accommodation by land banks through direct dealing where there are no local farm loan organizations was urged. Adequate and fair income and inheritance taxes were urged.

Foreigners.

The Grange would admit to the United States only immigrants who declare their intention of becoming citizens, and would deport all foreigners not naturalized by a stated period, and all, whether naturalized or not, who will not obey our laws or respect our institutions.

Mail Service and Roads.

Restoration of rural routes abandoned during the war, a practicable mileage for each route and extension of the service are demanded. Postal zone rates were condemned as detrimental to the service. Special local rates for library books are wanted by Grangers. The Grange wants an aggressive permanent road construction policy.

Military Policy.

The Grange reaffirmed its opposition to a large standing army and to universal military training, but conceded something to the benefits of military discipline by favoring adequate methods of physical training in our schools.

Rural Schools.

The Grange home economics committee proposed, and the Grange approved, that a fair percentage of the several million dollars proposed to be appropriated for rural schools under the Smith bill pending in congress be used for trained special teachers in home economics for one-room rural schools. And extension of adequate training in agriculture is also urged.

Woman Suffrage, Prohibition and Cigarettes.

The Grange will urge all states that have not ratified the federal woman suffrage amendment to do so as soon as possible. It will also help to secure and make effective adequate prohibition enforcement laws, and urges the creation of sentiment against the cigarette habit.

Agricultural Representation.

Arguing that about one-third of the population and over one-fourth of the wealth of the country is agricultural, the Grange insists that agriculture must have far greater representation

than heretofore in councils for shaping government policies. It demands that the secretary of agriculture be a practical actual farmer, thoroughly identified with farm interests, a man whom farmers know as one of them.

Oleo, Feed, Packers.

Prohibition of coloring oleo in imitation of butter will be the persistent aim of Grangers; also more explicit labeling of feeds, fertilizers and insecticides. Government registration and control of the meat packing business in the interest of the public will be urged by the Grange.

Farm Organization Federation.

One of the most interesting debates was on the invitation of the National Board of Farm Organizations to the National Grange to make its headquarters in the Farm Organization building in Washington and to take membership in the board. Grangers did not object so much to having National Grange headquarters in the board building, but there was lively opposition to taking membership in the board for fear of subordinating the Grange to this board. As the original and foster organization of various farm organizations, the Grange prefers to remain free to cooperate, rather than federate, and thus perhaps endanger its identity and independence by tying up with other organizations in any way that renders the future status of the Grange uncertain.

Increase Grange Dues.

To provide for the more aggressive program that the Grange must develop to properly safeguard agriculture and develop farmers' organization, the minimum of annual dues to the National Grange from state Granges per member was raised from five cents to eight cents.

New Officers.

Oliver Wilson, of Peoria, Ill., who had been re-elected thrice, making eight years' service, declined to serve again, as did Mrs. Eva McDowell, who has served twenty-six years as treasurer, succeeding her husband, F. M. McDowell, whose term covered twenty-one years. The new slate is: Master, J. S. Lowell, Fredonia, N. Y., member of Fredonia Grange No. 1, probably the largest Grange in the state, having over 800 members, and the first Grange organized, (April, 1868), in the world. Overseer, B. Needham, Land, Kansas; lecturer, John C. Ketcham, Hastings, Mich.; steward, Clark Bumgarner, Montana; assistant steward, O. L. Martin, Plainfield, Vt.; chaplain, Rev. W. W. Deal, Nampa, Idaho; treasurer, L. H. Wright, 5603 Lowell avenue, Indianapolis, Ind.; secretary, C. M. Freeman, Tippecanoe City, Ohio; gatekeeper, F. A. Rogers, Meriden, N. H.; lady assistant steward, Mrs. L. J. Taber, Barnesville, Ohio; Ceres, Mrs. C. L. Hunt, Napa, Calif.; Flora, Mrs. C. O. Raine, Hayti, Mo.; Pomona, Mrs. John A. McSparran, Furniss, Pa. Members of executive committee: For three years, T. C. Atkeson, in charge of the National Grange headquarters, Washington, D. C.; for two years, W. J. Thompson, South China, Me.

Grange Condition.

Secretary Freeman reported 269 new Granges organized during the year, and nineteen reorganized, and the total resources as \$107,608.36, which is \$4,242.12 more than last year.

A pleasing feature of the session was the entertainment for an evening dinner of the delegates and visitors by the Kent County Pomona Grange at the farm home of former senator Huntley Russell, two miles out from Grand Rapids.

Grange Representatives Visit Climax

PLANS were made Saturday afternoon to make a pilgrimage to Climax, Kalamazoo county, on Sunday morning to hold a brief service around the noted R. F. D. memorial monument. National Master Wilson himself headed the pilgrims. Representative members of the village, the two churches, and several farmers on the rural routes, gathered with us around the monument. We introduced State Master Ketcham and he presided over the ceremony. Master Ketcham gave a short talk, and Kathryn Brown raised the monument flag, just as she did two years ago when the memorial was dedicated. Then National Master Oliver Wilson gave a short and eloquent address that was very timely and appropriate for the day and occasion.

Sunday afternoon at three o'clock the big ball room of the Pantlind Hotel had been transformed into a Grange lodge room and beautifully decorated with flowers and foliage plants. And therein was held the memorial service for those noted ex-masters and their wives who have died during the past year. And as the clock struck three that afternoon the president of Climax lowered the R. F. D. monument flag to half staff in honor of these noted masters and their wives.

Rev. W. W. Deal, chaplain of the National Grange and pastor of the M. E. Church, of Nampa, Idaho, took charge of the memorial service. In part, he said:

"This is a time when the patrons of husbandry can gather together, and, in the spirit of a memorial service, think of the finer ideals which bind our great organization together in the righteous task which it has. Our nation has been facing trying times but as we gather here we cannot help but think these ideals are the solution of those problems."

During the past the Grange has done many good things for the farmer, and here are some secured from congress lately: Largely instrumental in the repeal of the daylight saving law. Obtained increased duties on many farm products. Killed the potash-licensing measure and later effected removal of its import restrictions; opposed other licensing schemes. Successfully protested against eliminating soil survey from agricultural appropriation bill. Assisted in fight against soldier settlement bill. Identified with Wadsworth bill to consider lands and homes for returned soldiers. Worked for bill providing for cooperative marketing. Drafted bill outlining control of packer business, termed "Grange bill." Stood for private ownership of property in proposed railroad legislation. Lent material aid in fixing the wheat price. Approved proposed pure food, fertilizer and insecticide laws.

Such is a brief synopsis of the work of the legislative committee in Washington during the past year. Master T. C. Atkeson, of West Virginia, has

been and is the Washington representative of the National Grange. His name has been before the public almost constantly during the last few weeks and he is a good man for the job assigned him. In congressional activity he represents six hundred thousand active Grangers of the United States.

The Grangers are enthusiastic over the fact that the saloon is gone, and probably forever; and condemn politicians who support that iniquity. Master L. J. Taber, of Ohio, presented a resolution which was unanimously adopted. In brief, it was that we are living in a time when conditions make it a hard job to live decently and enjoy a few good things. The greatest evil of many lives has been knocked out by the official proclamation of the secretary of state on January 16, 1919, that the adoption of the eighteenth amendment banishes forever the legalized saloon.

The Grange has been behind the temperance movement for over fifty years, and now it must labor constantly for law enforcement. Remember that "eternal vigilance is the price of liberty." Each subordinate Grange is asked to commemorate the sixteenth day of January, for the reason given above. Members are urged to vote for and support only those men who announce their adherence to the principles of sobriety and decency and who will fearlessly maintain the majesty of the law.

For eight years Master Oliver Wilson has been the National Master, and his re-election at the end of each second year has never been questioned. Now he quits because he wishes to get a rest from his Grange labors for a while. It was decided that the 1920 national convention should be held in Massachusetts.

Vice-president S. L. Strivings, of the newly organized American Farm Bureau Federation, was sent as a fraternal delegate to the National Grange to deliver the following resolution:

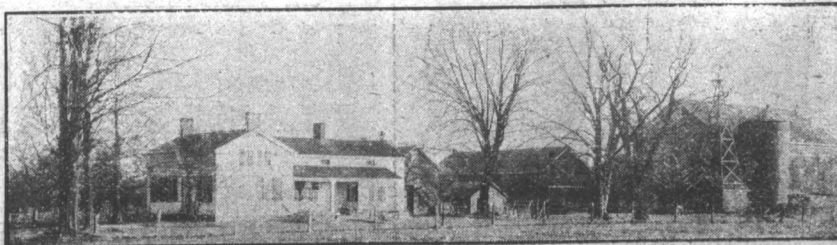
"Resolved, that we, by fraternal delegate, extend to the National Grange, now in session in Grand Rapids, our appreciation of its splendid work for agricultural betterment, extending over half a century, and express to it our desire for hearty cooperation in the future in all mutual endeavors."

Prof. Edgar J. Rich, of Harvard University, spoke on the subject of "Railroad Transportation," Tuesday morning. He agreed with the National Grange in its historical stand for private ownership of public utilities, and especially in regard to government ownership of railroads. Government manipulation of railroads in Massachusetts has been inefficient. The service has been poor and the funds have been handled in a wasteful manner.

Mr. Rich condemned the Plumb plan for operating railroads and intimated that the proposed plan as outlined in the Cummings bill should appeal to Grangers, as its main features coincide with the ideals as set forth by the Grange. A system whereby rich railroads should contribute to the making up of the deficits of the poor roads was recommended by Mr. Rich.

Aaron Jones, Past Master of the National Grange for a period of eight years, which terminated fourteen years ago, addressed the Grange on the great work it has done. He has attended thirty-six of the fifty-three annual conventions of the National Grange. He is eighty-one years old and, with the exception of ex-Governor N. J. Bachelor, of New Jersey, is the only past-master living. Master Wilson will now make two on the list.

Aaron Jones said: "The National Grange has accomplished a great deal (Continued on page 720).





N. Y. Dairymen Meet

Many Important Matters Considered

THE problems which New York state dairy farmers have to solve are not unlike those confronting the farmers of Michigan and other states in which are large cities to be supplied with milk and other dairy products. At the forty-third annual meeting of the New York State Dairymen's Association held at the Geneva Experiment Station, November 18-29, 1919, improving the quality of dairy products, cost of production and the accredited herd plan, were outstanding features of the discussions.

In responding to the address of welcome by Dr. H. W. Jordan, Professor H. C. Troy, president of the association, pleaded for a saner and more sympathetic attitude on the part of the consumer, which will make the dairy industry safe for the future.

Emphasizing the importance of milk production in the agriculture of New York, President William E. Dana, of the State Council of Farms and Markets, in an address on "Production and Distribution of Market Milk," said there are \$231,843,400 invested in the dairy farms and cattle of the state. Fair and just treatment must be given to the men who have developed this industry and invested millions of dollars in the manufacture, processing and distribution of milk.

Speaking of the agitation in the cities for lower milk prices, Mr. Dana said that "every investigation, including the recent trial of the officers of the Milk Producers' Association in the Chicago territory, has established the fact that the price of milk to the farmer is as reasonable as it can be obtained for and that a lower farm price cannot be expected. However, it is well for the farmer to remember that if he is to obtain a profit on his business, he must conduct it along economic lines. In a bulletin issued by a firm which uses 125,000,000 pounds of milk annually in its manufactured products, the average price paid to the producer is \$125.38 per cow, but there is a marked difference in the amount per cow received by the highest producing dairy, \$225.14, and the amount per cow received by the lowest producing dairy, \$54.43. It is evident that some of these farmers are receiving a very handsome profit and others doing business at a loss."

The impracticable demands of the city sanitarians have added considerably to the cost of milk. Dr. Dana told

of one large distributor in New York City who, in building a plant wished to comply with all the requirements of the health bureau. He consulted them in the erection of his plant and when it was completed was required to make changes involving the expenditure of upwards of \$50,000.

"Everywhere in the distribution of milk we find duplication and waste of effort which result in a largely increased cost of the service to the consumer. In a recent study of the distribution of milk, two firms handling practically the same amount of milk were found, one employing nine bookkeepers and the other twenty-eight. We found in a study of the up-state cities of the same size the price varied from twelve to sixteen cents a quart, the original cost of milk being the same in each city. If the other New York state cities could receive milk at the same price that Rochester pays there would be a saving of \$4,000,000 a year. If the cities of New York received milk at the same spread that prevails in Ottawa, Canada, they would save \$25,000,000 a year. In our study of the methods of distribution in the various cities we could find no reason based on economic facts to justify the difference in spread in these cities. In our study we found that the farmer was not the only man in the milk business who kept an inadequate system of books. We found no individual or corporate distributor of milk who could furnish us with a clear statement of the cost of any operation in their business. The Federal Milk Commission found the same state of facts existing throughout the country.

"Curtailement of service is urged as a possible way to reduce distributive costs; but the consumer insists on service. In Rochester the university is supervising a milk station in one of the poorer sections of the city with a dense child population where anyone can get bottled milk at ten cents per quart. Although there is a saving of four and a half cents per quart by going to the station for milk, the tendency is toward smaller sales, though the wagon trade is increasing in that locality, the housewives preferring delivery service to a reduction in price.

Mr. Dana regretted that the present antiquated wasteful methods of milk distribution prevail. He said the enabling legislation to secure more econom-

(Continued on page 736).



Measure the Land & Weigh the Crop

An accurate knowledge of yields is the best guide to improved farm practice. High prices furnish the incentive to produce more;—high wages make it necessary to keep down the cost per bushel. Increased production and lower cost per bushel can be accomplished by selecting fertilizer on the basis of accurately measured results.

A difference in yield too small to be noticed in the field, often is found large enough when measured to pay the whole fertilizer bill. And frequently gains big enough to pay the bill several times over, result from the use of more and better fertilizer. You can grow bigger crops, and you can cut the cost of production by using the kind of fertilizer that your crops need and that suits your own soil conditions. If you measure the land and weigh the crop,—if you make your selection on the basis of accurate tests,—you will choose an

A·A·C· Fertilizer

Our Agricultural Service Bureau has been carrying on such tests for many years, on farms in many states. These tests were made on all kinds of soils and under a great variety of conditions of rainfall and climate. This Bureau is therefore well equipped to point out a practical solution of your fertilizer problem. It has helped many farmers to determine the best fertilizer for their purposes—and it can help you. Dr. H. J. Wheeler, for many years Director of the Rhode Island Agricultural Experiment Station, is in personal charge of the Bureau. This service is free to you.



"How to Make Money with Fertilizers"

is a valuable book of 56 pages—full of practical information on fertilizers, crops and soils. There are 46 illustrations. It tells you how to select fertilizer for most profitable results—what errors to avoid in buying and using fertilizer. It is a complete fertilizer manual. Every farmer needs it. Our nearest office will be glad to send it free, if you will mention this paper when writing for it.

If there is an agent near you ask him for our crop books. If there is no agent in your town, write us for the name of our nearest agent, or ask for an agency yourself.

The American Agricultural Chemical Co.

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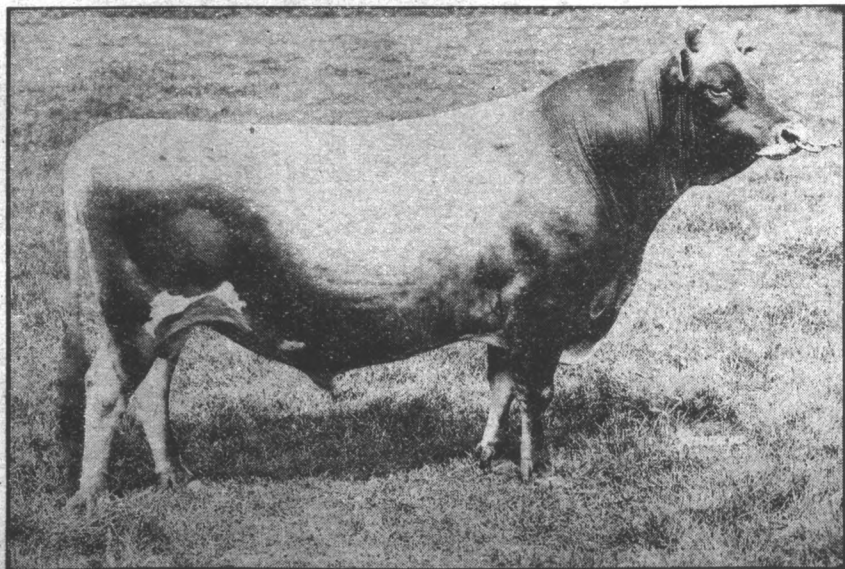
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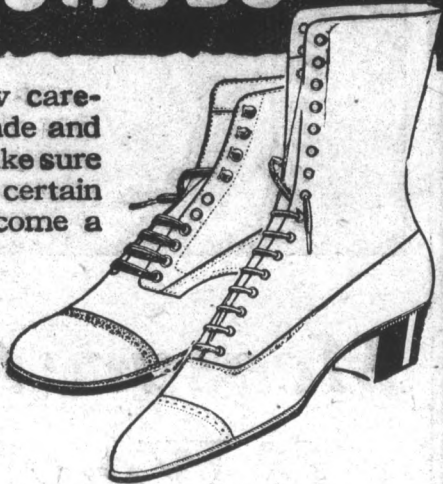
Economic Production Means Careful Breeding.

Mayer

MILWAUKEE
HONORBILT
CUSTOM MADE

HONORBILT SHOES

IF you only knew how carefully every shoe is made and what steps we take to make sure of unvarying quality, it is certain you would promptly become a wearer and booster for Mayer Honorbilt Shoes. Right now it is essential that your shoe dollars should buy the utmost in value. You can always depend on Honorbilt values.



Men's and Women's Fine Shoes

Honorbilt Fine Shoes for men and women can be had in all the very latest styles. Neat and graceful, correct in detail, perfect fitting and comfortable. And the wearing quality never fails. Honorbilt Shoes are built to last.



Work Shoes

Honorbilt Work Shoe leather is double tanned to resist the alkali in the soil, as well as barnyard juices. They are soft and easy on the feet, yet long wearing and will not get hard when wet. Honorbilt Work Shoes will give double the wear of ordinary shoes.

Children's Shoes

You can't blame the children if they scuff out some shoes in a hurry. But that doesn't happen to shoes that bear the Mayer Honorbilt trade-mark. They are made of honest leathers and are sound and solid—School Shoes and Fine Shoes—built for comfort for growing feet. They wear like iron.

Buy Honorbilt Shoes for your whole family. Leading dealers sell them. Look for the trade-mark on the soles.



F. Mayer Boot & Shoe Co.

Milwaukee, Wis.



The Farm Labor Situation and Returned Service Men

By One of Them

JUST as soon as the armistice was signed the majority of American boys in foreign territory began to plan individually and collectively as to what they were going to do when they returned to the "States." Many of the boys felt that they were not going to be satisfied with the jobs they had left and it was common talk, and talk which gained wide publicity in the newspapers and magazines that a large number of these returning fighters were going onto the land when they returned. It is probable that the army and navy "grub" had the effect of turning the thoughts of a large percentage of our 4,800,000 service men toward the farm, with its cream, chicken, fresh eggs, and fruit. However that may be, the fact remains that the most of these service men returned to the farm in talk only. If these were ordinary times this fact might not cause us any great apprehension, but since these are not normal times the fact that only a small proportion of the boys who left the farm for service are returning, is an alarm signal for rural people.

Half of Europe is homeless and starving. All eyes are turned toward the United States for food, clothing, and the means for shelter. To produce this surplus food and the raw materials for clothing and shelter, the farmer must go into the labor market and compete with the highest wage scale ever known in the history of this country. He must compete not only with actual wages that are high beyond belief, but he must compete with a forty-four or a forty-eight hour week. The cost of such farm labor when obtainable is bound to increase the cost of foodstuffs materially. Nor is this all. In many cases this year thousands of dollars worth of all kinds of farm produce was a failure or total loss due to lack of help at the proper season.

The situation that confronts the returned fighter when he contemplates going onto the land is this: He finds that in his absence every article that he has to buy has doubled in price. Where formerly he might have worked a year or so and accumulated enough capital to equip himself as a renter, he now can see that even after so equipping himself it will be a long hard row to hoe before he can own a farm of his own. He naturally turns, then, to the town or city, with its high wages. This situation must be faced. Year by year that part of our population that is in the non-producing class so far as raw materials are concerned, has been increasing and the part of our population that produces raw materials has been having a hard time to hold its own. One thing is evident. More foodstuffs must be produced and they must be produced more economically and they must then be distributed more economically. If some plan can be worked out whereby the returning service man, or any other man of small means, can be helped in their desire to get onto the farm, it will do much to remedy the matter. If the large tracts of swamp land, the irrigable land and others should be reclaimed by the government and sold at cost, or less than cost to these men, giving ample credit for equipment and buildings, and ample time to pay, our producing class would increase in proportion. Our foodstuffs would then increase and the prices would decrease,

for if John Smith and I and four million more of us work at something which does not in any way assist in the production of raw materials, we must compete in the market for food, clothing, and other products of raw materials and prices are forced up. Take the question of rent in almost any town in the United States. A desirable place to rent is hard to find and the rental is exorbitant. Now, if John Smith and I and four million more of us, or as many of us as wanted to, could be placed on the land and there produce the most of our own necessities and the raw material for millions more we would naturally relieve somewhat the congestion of our towns and cities and we would lower the cost of food by increasing the supply. In the meantime while such a scheme is being worked out it is all important that there be an available supply of farm labor so that the present farm acreage can be made to produce its maximum. Just as long as the present circle of high-priced labor and high rents, high-priced food, etc., exists, this will be impossible. We must in some way increase the desirability of the farm labor situation. We must produce the maximum quantity at the minimum cost by applying the demonstrated principles of scientific farming. We must market more economically if we are to do all this and pay farm laborers the wages they can wage elsewhere.

Our present situation would be severe enough even if it were not complicated by our responsibility to the starving humanity across the ocean, but facing this double responsibility, we must have immediate action.

FIRE FIGHTING ON THE FARM.

(Continued from page 709.)

stantly available, and to insure this the water should never be used for any other purpose. The buckets should be refilled at frequent intervals to keep the water fresh. Where there is danger of freezing in winter, the water can be kept from freezing by adding two pounds of common salt to each bucketful, or calcium chloride may be used if metal buckets are in service. Fire buckets should be painted a distinctive color to prevent their being used for ordinary purposes.

In buildings which are located considerable distances from the water supply, it is a good precaution to install a cask or barrel which can be kept filled with water for fire use. The presence of this water may save the entire structure. A small quantity of water, efficiently used, will often be more effective in putting out a fire than a larger quantity thrown carelessly. The water should always be applied to the base of a fire and not up in the flames and smoke.

The chemical extinguisher has come into general use in recent years and it has many advantages over water buckets. Since it can be used for nothing else, it is always sure to be in its place and ready when needed. Furthermore, muck types of chemical extinguishers are effective in subduing fires among oils, where water is of no value. There are many varieties of these extinguishers. Their construction is simple and they are easy to operate. The extinguishers can be refilled many times.

One Man Saws 25 Cords a Day

At Cost of Only 1½¢ a Cord



Geo. E. Long
President

The Ottawa Log Saw takes all the back aches and work out of wood cutting. One man and the Ottawa can do as much as ten, with cross cut saws, could do the old way. Mounted on truck wheels to make it easy to move to logs and from cut to cut, without stopping engine. Thousands in use—every owner perfectly satisfied. Pays for itself in short time. When not sawing can be used to run pumps, mills, feed cutters and other machines.

OTTAWA LOG SAW

Saws Down
Trees—Saws
Up Logs By
Power.

4 Cycle Engine; Automatic Governor; Oscillating Magneto; Hopper Cooled.
Cash or Easy Payments
You have your choice of Cash or Easy Payments. Let the OTTAWA pay for itself while you use it.

Dependable friction clutch on saw drive. Saves more time in doing the work than any other power drag-saw. Built to do hardest work and give lasting satisfaction. Nothing complicated. Engine starts without cranking.

Free Book Write at once for full description of this great work saver and low direct-to-you price. A post card brings this big book.

Geo. E. Long,
President.

Ottawa Mfg. Co.
1502 Wood Street,
OTTAWA, KANSAS.



Strictly One Man Outfit

Mention The Michigan Farmer When Writing to Advertisers

MOTORIZE THE FARM



AFTER doing much of the market hauling of thirty-two farmers around Eden Prairie, Minnesota, with a motor truck on Goodyear Cord Pneumatic Truck Tires, Mr. C. P. Page states: "I would not use solid tires again under any consideration. Hills, mud and storms don't stop the big, tractive Goodyear Cords. Their cushioning is saving truck repairs and depreciation. They also are saving gasoline and oil. I now haul more milk and other loads in less time, find the work far easier, and note that the pneumatics save our roads. Several people have adopted them as a result of my experience with Goodyear Cords."

THE experience described above affords an excellent example of what pneumatic truck tires are accomplishing for farmers. Every limitation hitherto placed on the farm use of motor trucks by solid tires has been removed with the perfected pneumatic tire. For this reason, Goodyear's pioneer work in developing cord pneumatic truck tires has been extremely opportune; it has led to the more

extensive use of farm trucks during a serious scarcity of farm labor. Now, farmers are finding it extremely advantageous to employ Goodyear-Cord-equipped trucks with other time-saving motor units and, thus, to motorize their work quite completely. Special information concerning the use of pneumatic-tired trucks on farms may be obtained from The Goodyear Tire & Rubber Company, at Akron, Ohio.



GOODYEAR
MADE IN U.S.A.

SAVAGE

THE MONEY THEY THINK YOU'VE GOT

All the newspapers say all the farmers have all the money. And all the yeggs and all the gangsters and all the other thugs believe them.

They think you've got it, whether you have or not. And good roads and gasoline—and flivvers waiting to be stolen at every curb—have put the farm in easy striking distance of every city slum.

Have you learned the war's great lesson—preparedness? For you—and your family—that means the ten-shot Savage Automatic Pistol. Ten shots—ten. Its length of barrel and locking of breech give greater penetration and accuracy than other pistols of the caliber. And the original Savage grip makes you point it and shoot it straight as instinctively as you point your finger—makes you shoot it straight in the dark.

Get a Savage at your dealer's today. You've no idea of the comfort and confidence it will give. For full description write us.

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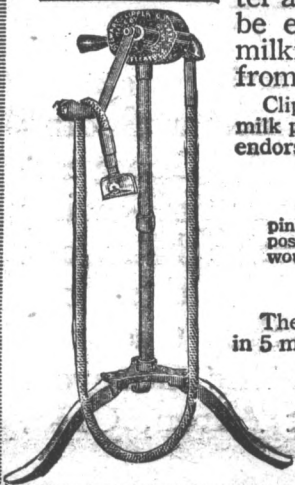
.32 calibre, 3 3/4" barrel, 19 ounces, 11 shots, \$22.50.

.380 calibre, 4 1/4" barrel, 21 ounces, 10 shots, \$23.50.

Keep Milk Free From Dirt and Filth

Long, thick hair on your cows forms a lodging place for dirt and filth. However careful the milker, this dirt cannot be prevented from dropping into the milk.

Stewart No. 1
Cow Clipping Machine



Cows should be clipped on udders, flanks and underline every month during the winter and early spring. These parts may then be easily and thoroughly cleaned before milking, preventing milk contamination from dropping filth.

Clipping is strongly urged by dairy farmers, certified milk producers and federal bureaus. Here is a strong endorsement:

WALKER-GORDON LABORATORY CO.

Plainsboro, N. J., Nov. 12, 1919.

We clip our cows at least once each month. By clipping the flanks, udders and rear portion of the cow, it is possible to groom and wash the dirt from the cow, which would be very difficult to do if the hair is allowed to grow.

WALKER-GORDON LABORATORY CO.
By H. W. Jeffers.

The Stewart No. 1 Clipping Machine will clip a cow in 5 minutes. Hand operated—runs easily—well built—lasts a lifetime. Buy from your dealer at \$12.75 or send us \$2.00, paying the balance on arrival. Electric clipping machine, direct current, \$60; alternating current, \$80.

CHICAGO FLEXIBLE SHAFT COMPANY
Roosevelt Road and Central Ave., Dept. 8127 Chicago

HUDSON TANK HEATER

(Formerly Called Nelson)

Just put a few cobs into the fuel box when you do your chores and have drinking water at 70° for your stock all winter. No ice to chop. No chilled stomachs. No bother or fire danger with a Hudson Tank Heater. Stock gain faster—keep healthier. Milk checks increase \$2 to \$3 monthly per cow. Heater soon pays for itself.

Burns Straw, Cobs, Wood or Coal

Heats water twice as fast as any other heater and with less fuel. Made of 20 gauge galvanized metal with cast flanged joints bolted and packed with one piece asbestos. No welded seams to leak or rust. End of tank and pipe cast in one piece to above water line. Won't rust out. More than one inch of clearance for water to circulate under heater. Asbes easily removed. Get one for your stock NOW. WRITE FOR FREE CIRCULAR.

HUDSON MFG. COMPANY

Dept. 54

MINNEAPOLIS, MINN.



When You Write to Advertisers Please Mention This Paper.



Troubles of a Strawberry Grower

IN former years I had grown a small field of strawberries for a nearby market. The berries were picked mostly by a few women who had helped me for many years, and were good, dependable pickers. The berries were sold in my own village as soon as harvested. I have enlarged my strawberry fields, until last year I was obliged to market the larger part of the crop in other villages, and in nearby cities, and found myself up against new difficulties.

First, I had trouble in getting sufficient reliable help to keep the berries picked before they were over-ripe. I engaged enough to handle the crop, but for various reasons could seldom get them when I most needed them. For the local market I had left the berries on the plants until they had the true strawberry flavor. I tried this plan with my larger acreage. I could not get them all picked and shipped the same day. Sunday followed when we did no picking, the weather was extremely hot, and when we could get to work, after the plants were dry on Monday, a portion of the berries were over-ripe, and were not picked. As a result I lost several bushels of berries worth at that time ten dollars a bushel.

This is not all of the story of my loss. It is usually necessary to hold berries over night after picking, and ship the next morning. When the weather was hot, and the berries ripened rapidly I could not, with what pickers I could get, keep them picked up close, and a good many soft berries went into the crates. The result was I failed to get them to the dealers in good condition. If a dealer sees one soft or decayed berry on the top of a crate when he opens it, he may take what he considers the safe way, and refuse to accept the whole crate. I lost several sales in this way.

Another trouble I had was in agreeing with the dealer on the price. I billed the berries to him at the prevailing wholesale price, and especially if he had competition, he would cut the price, and return me whatever he wished to. Again, if he was overstocked with berries, instead of making an effort to sell canning berries, he would stop shipment, and leave me with berries ready to pick, and no market for them. The dealers in villages do not have a uniform trade for fruit, and seldom can give a standing order for a certain number of crates of berries. For this reason, it is more advantageous to ship to the city dealers. I think the best market is usually in a nearby city, if one must ship fruit.

I am fully satisfied that the only right way for me to market berries is to deliver them each day with an auto or wagon to dealers or customers. With a load of berries that have been rightly picked, I start early in the morning, and deliver to dealers only what they can sell during the day. The dealer sees the berries and pays the general market price for the quality of berries I have. Having paid for them he will make an effort to sell them. When the load is disposed of, I have the cash, and the crates in which the berries were delivered the previous day. This saves a large expense for crates, as only two or three sets are needed. At the end of the season, there are no accounts to collect, and troubles about settling for berries that

were not received in good, marketable condition. This plan enables the dealer to take orders for berries to be filled the next day, and he takes enough to fill the orders, but not many baskets more, so there is little chance of losing money on them. The grower pleases the dealer when he delivers berries to him in such condition that they stand up firm until sold and the dealer gets his profit.

My profits had been much reduced in the strawberry business in former years by the cost of hoeing and weeding. I have only old rich soil on which to grow berries. To grow them in wide rows that require much hand work, has not been a good proposition. I now practice either the strict hill, or the hedge row system. The latter gets nearly as good results, and is not quite so exacting. The strict hill system is ideal if one can give the plants the highest culture. But they need constant attention that only a few will make the best success with the system. Only the varieties that make long tap roots are well adapted to growing in hills. White grubs will do far more damage to hills than to rows. And if the plants are not well mulched in the winter there is danger of their being displaced by the action of the frost.

I have finally settled on the following method of culture after many years of experience: Very early in the spring when the leaf first starts, I set the plants in check rows, two feet or less each way and cultivate both ways. I have a cultivator that will narrow to about one foot. This cultivation is kept up until mid-summer, when I bed the runner plants so as to make rows one way, with plants about one foot apart in the row. The plants are then kept clean until the ground freezes, when they are mulched with straw litter from my large poultry plant. My plan is to spread acid phosphate, a fertilizer containing potash in some form and coal ashes under the perches on the droppings boards, and afterward mix it with the manure and litter.

The varieties of strawberries I find most satisfactory for my method of culture are William Belt, Brandywine and Chesapeake. These are grown in separate propagating beds.—JENKINS.

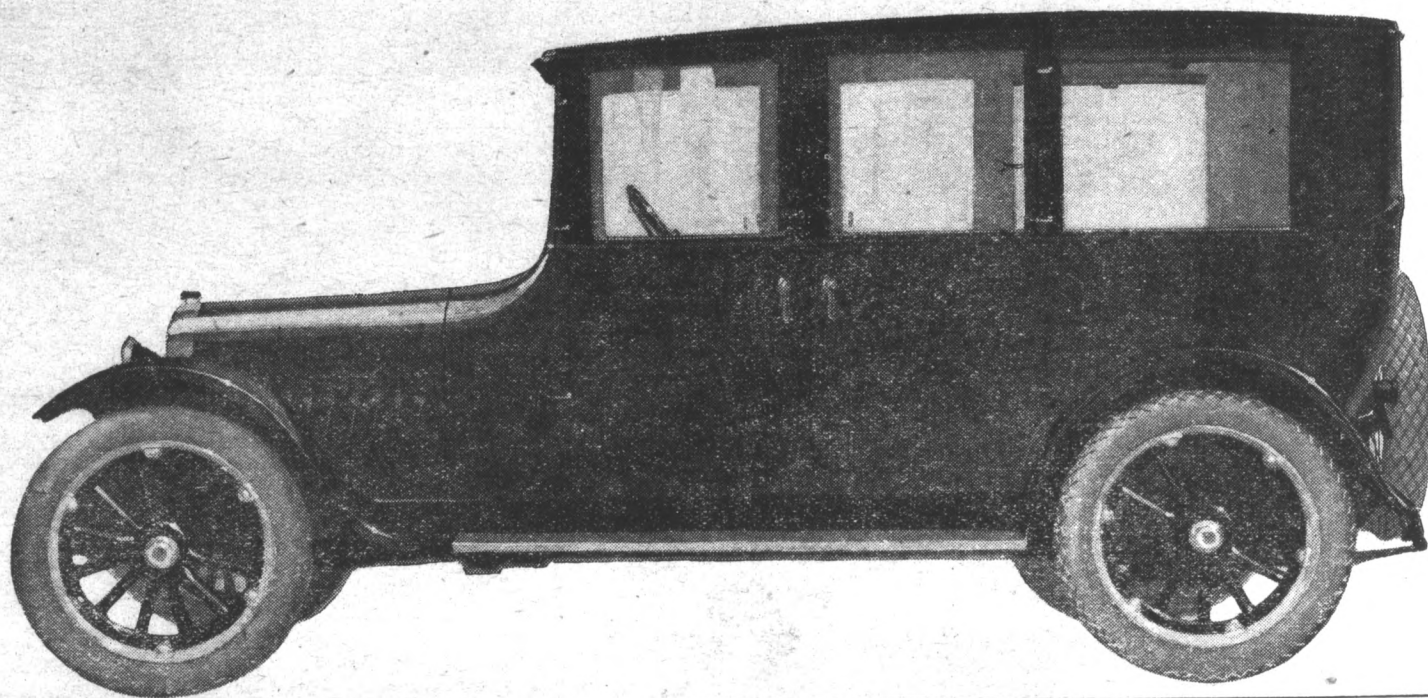
LAND CONTRACT.

I bought eighty acres in 1915, paid \$400 down and was promised a warranty deed on payment of the balance, \$1,400. It appears that forty acres of the land is part of the state forest reserve. It has been worked for twenty years and sold by five parties with warranty deed. When the vendor found it was forest reserve he made a new deed, saying that I am to pay him \$100 per year, but no taxes until he can get a warranty deed. Can he move me off if I do not pay the "rent," as he calls it? What is the best thing to do?
C. R.

The statement is not very clear. If the buyer agreed to and signed the substituted arrangement he is bound by it, and if he does not pay the agreed amount annually he can be ousted by summary proceedings. On the old contract, if he has not agreed to the new one, he can insist on his rights, recover back his consideration for the part as to which title has failed, and retain the rest, for which purpose it would be necessary for him to employ a lawyer and prosecute a suit in chancery.—R.



OAKLAND OWNERS REPORT RETURNS OF FROM
18 TO 25 MILES PER GALLON OF GASOLINE
AND FROM 8 000 TO 12,000 MILES ON TIRES



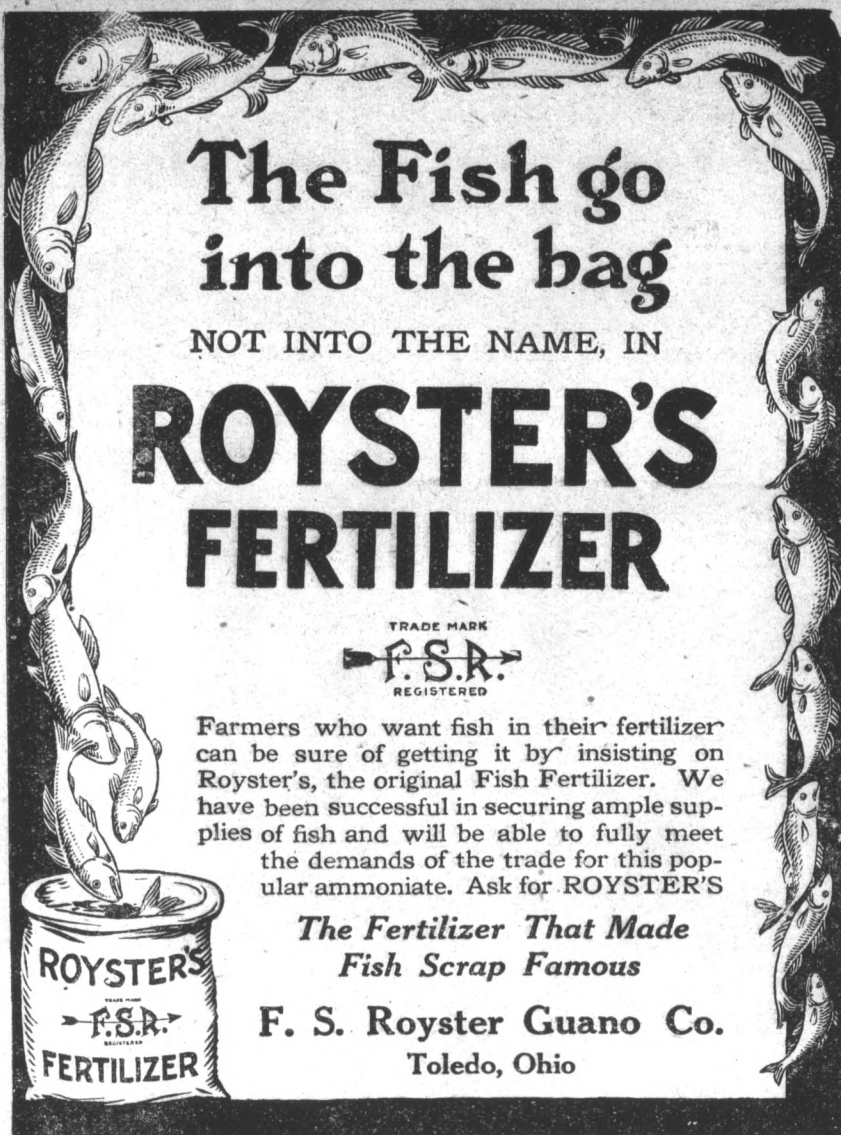
THIS NEW OAKLAND SENSIBLE SIX FOUR DOOR SEDAN IS POWERED WITH THE FAMOUS 44-HORSEPOWER, OVERHEAD-VALVE OAKLAND ENGINE

OAKLAND SENSIBLE SIX

MORE to the farmer, perhaps, than to any other class of Americans, should the comfort, the utility and the value of this new Oakland Sensible Six four door Sedan appeal. It is a car affording him secure and sheltered travel in every season, a constant return in usefulness from his investment, and a reliability of mechanical action especially welcome in districts where garage facilities are few and far between. Every essential convenience, from mechanical lifts for the windows in its double-latch doors to an inconspicuous heater for use on cold days, has place in the equipment of this commodious and attractive Sedan. Of solid body construction, and built upon the standard Oakland chassis, its range of activity is fully as great as that of the open car.

TOURING CAR, \$1075; ROADSTER, \$1075; COUPE, \$1825; FOUR DOOR SEDAN, \$1825
F. O. B. PONTIAC, MICH. ADDITIONAL FOR WIRE WHEEL EQUIPMENT, \$75

OAKLAND MOTOR CAR COMPANY
Pontiac, Michigan



The Fish go into the bag

NOT INTO THE NAME, IN

ROYSTER'S FERTILIZER

TRADE MARK
F. S. R.
REGISTERED

Farmers who want fish in their fertilizer can be sure of getting it by insisting on Royster's, the original Fish Fertilizer. We have been successful in securing ample supplies of fish and will be able to fully meet the demands of the trade for this popular ammoniate. Ask for ROYSTER'S

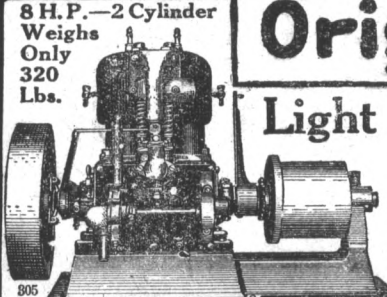
The Fertilizer That Made Fish Scrap Famous

F. S. Royster Guano Co.
Toledo, Ohio

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Original 4 to 20 H. P.

Light Weight, All Purpose Farm Engines



8 H. P.—2 Cylinder Weighs Only 320 Lbs.

Lead the world in superiority of design, material, construction and equipment—no other line of engines built for farm work comparing with them.

They weigh only 40 to 60 pounds per horsepower—only about one-third as much as ordinary farm engines—yet run even more steadily, quietly and economically.

They do every job that any other engine can do, and many jobs other engines cannot do. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump without extra charge.

Write for Book on Light Weight Engines.
Cushman Motor Works, 826 N. 21st St., Lincoln, Neb.

Cushman "Does More" Electric Light and Power Plant

It does more for the farmer than any other outfit—combining both an Electric Light Plant and a Portable 4 H. P. Power Plant in one outfit, at practically the cost of an electric light plant. Equipped with the famous Cushman Engine and Cushman Self Starter. Ask for Book on Light Plants.

Only \$2 DOWN ONE YEAR TO PAY

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

Light running, easy cleaning, close fitting, durable.

NEW BUTTERFLY

Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on 30 Days' FREE TRIAL and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money.

(Lbaugh-Dover Co., 2155 Marshall St., Chicago)

RHODES DOUBLE CUT PRUNING SHEAR

Cuts from both sides of limb and does not bruise the bark.

Made in all Styles and Sizes. All shears delivered free to your door. Send for circular and prices.

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615 S. Division Ave. GRAND RAPIDS, MICH.

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38 Years Experience

With special features all their own. They claim your kind attention. In every size . . . for every zone. They furnish sure protection.

FIELD FORCE PUMP CO., Dept. L, Elmira, New York

Tenant wanted on 210 acre farm in southern Ohio. Tenant to take 1/2 interest in cattle, hogs, and sheep now on the farm.

STEEN, FREEMAN, Wamsley, Ohio.

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MILWAUKEE MOTOR SCHOOL
Dept. 299 555 Downer Ave., Milwaukee, Wis.

Our Service Department

HENS WITH COLDS.

Will you please tell me what ails my chickens and what to do for them? The first symptom is a shaking, jerky movement of the head, as though to dislodge something from the bill. Later the comb becomes slightly dark, the bird sneezes as it shakes its head, then it dies. For a few days before death the birds are not as active as formerly, although they do not dump around in one place. I bought my flock last spring and knew before we got them home that the birds were diseased, from hearing them sneeze. I have lost several hens and quite a lot of young chickens this fall.

The sneezing of the birds and efforts to expel mucus denote that the birds have colds, probably due to exposure. Colds of this type may develop into bronchitis, pneumonia or roup and in many cases cause the death of the bird. In buying breeding stock it never pays to accept birds that have colds. There is a great danger that the infection will be carried to the birds in the home flock and cause much trouble and possible losses. We would advise the careful culling of all the birds with colds. Isolate infected birds, give them potassium permanganate in the drinking water and rub their heads with camphorated vaseline. Keep them in a house where they will be protected from exposure and do not allow them to range on cold windy days. If the young stock have colds be sure that they are all roosting at night and not huddling in the corners of colony houses or brood coops. That causes them to become overheated at night and in the morning they come out on the frosty ground and catch colds.

Use permanganate of potash in the drinking water of the healthy birds until it seems that no more colds will appear. Do not breed from the birds that have been suffering from colds, but obtain healthy breeders or buy hatching eggs next spring from vigorous stock. The success in fighting colds is largely a matter of prevention. Clean, open-front houses, well balanced rations and vigorous breeding stock keep down colds in well managed poultry flocks.

IMPROVING A HERD.

I have three cows and three heifers. They are culls and I would like to get some good stock. Would you advise me to sell these cows as they come fresh or sell them now? I have plenty of feed. What kind of stock would you advise me to get for dairying?

Macomb Co. W. F.

The safest way for one to get better cows is to raise them. Of course, if you are willing to pay a big price and get tested cows you can get a good producing herd, but if you buy heifers you run some risks in their developing into good cows. The quickest way is to buy young cows that have demonstrated their ability to be good producers, but it takes quite an investment.

The most economical way probably is to purchase a good dairy-bred bull to breed to the cows which you now have, and then raise your own cows. Of course, in this way you would never get a purebred herd, but you will get one just as good for all practical purposes. I don't think you ought to call your cows and heifers you have now, culls, until you have tried them out thoroughly. Many common grade cows are condemned because they are not given the proper chance. When properly fed and properly cared for the most of them make a profit. The great mistake the average man makes in feeding is that he does not feed enough. He is afraid to give a cow all

she wants to eat. Unless one gets out of this habit it would be a poor business to buy purebred cattle, because they must be liberally fed or they will perform no better than grades.

It is hardly proper for me to advise what breed of cows you should purchase. It is more a matter of personal choice than anything else. There are several good dairy breeds of cattle that one can make no mistake in purchasing. There is more difference between individuals of the same breed on the average than there is between the breeds themselves.—C. C. L.

VALUE OF FEEDING MOLASSES.

Can you tell me how far one hundred pounds of molasses will go as compared with a good feeding grain ration, pound for pound? Molasses will cost me about two cents a pound, and feed about three and three-quarters of a cent per pound. I think the molasses is the cheapest by quite a little, but can one feed enough to get the results one ought to expect? Also, how much molasses could one feed on ensilage with alfalfa?

Lenawee Co.

H. E. B.

Molasses is a very good feed to use in connection with other feeds. Beet molasses contains 9.1 per cent digestible proteins and 59.5 per cent carbohydrates and no fat. Chemically it is more like corn than it is like oil meal as a food, that is, it is a carbonaceous food. Molasses cannot be fed in large quantities because that gives bowel trouble, but it can be worked in nicely by feeding a small amount in connection with other feed. The way to do is to begin by feeding a small amount and gradually increasing it. If you find that it is too laxative then cut down on the ration of molasses by feeding as much as seems to agree with animals. It is very digestible and pound for pound, is cheaper than many feeds on the market today.—C.

RAILROAD FENCES.

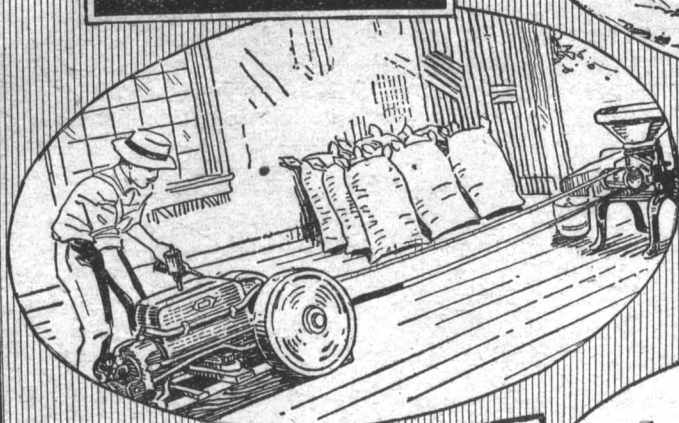
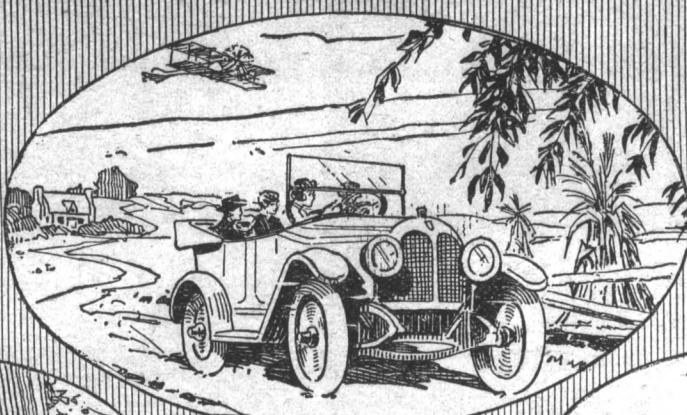
A branch railroad used for hauling logs runs through my farm. There are no fences either side of the track. Town cattle cross the guards and get on my fields. The owner of my land at the time the road was laid signed away all his rights. The railroad company will put up no fences. Can the company hold me to that agreement?

R. O.

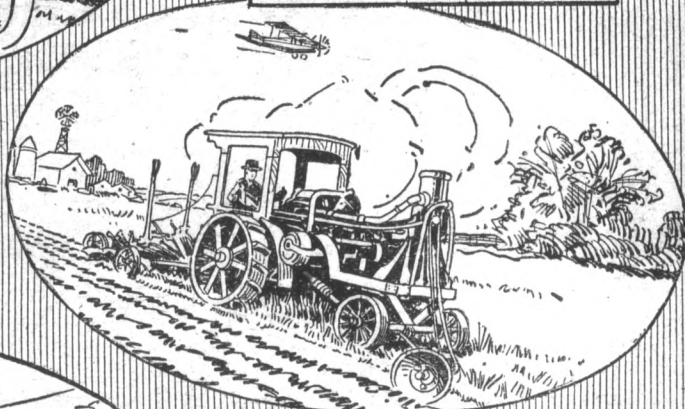
Our statutes positively require every corporation owning or operating any railroad in this state to erect and maintain a fence on both sides of the track. This requirement is not alone for the protection of the owners of land along the railroad, but for the protection of the employees and passengers on the road, and no agreement made by any person owning land along the road with the railroad company can dispense with the duty of the railroad to maintain fences. The Michigan Railroad Commission has power to require the fence to be built and probably would act if requested. Whether the agreement of the inquirer's grantor would operate as against him in demanding a fence is a question of interpretation on the words of the agreement, which are not included in the letter sent us. The covenant is of such a nature as would naturally run with the land if the terms of the agreement were broad enough to include it; but no agreement the owner of the land could make would relieve the railroad company from its duty to the state to maintain fences.

JOHN R. ROOD.

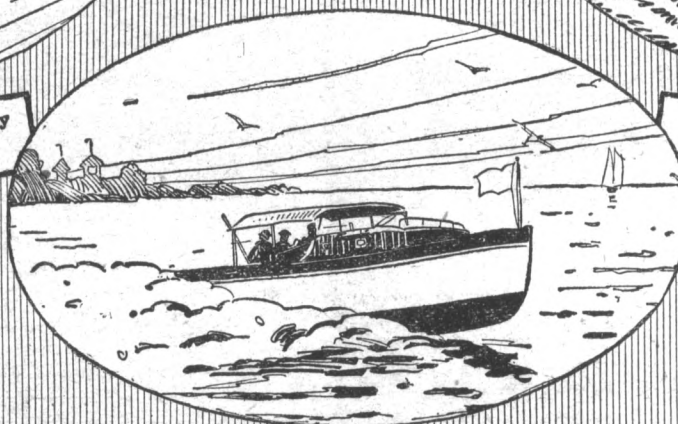
It is a grand thing to see a strong colony of bees come crowding forth in thousands to greet the lengthening days of another summer.



Lubricate your automobile and aeroplane with En-ar-co National Motor Oil.



Lubricate your stationary engine with En-ar-co National Motor Oil.



Lubricate your tractor and other motor power farm machines with En-ar-co National Motor Oil.

Lubricate your motorboat and other motor power craft with En-ar-co National Motor Oil.

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Get More Power and Longer Wear From Your Motor

In any climate, at any temperature, at any speed, up grades, or over any roads En-ar-co insures full power and longer wear from your motor.

This scientifically refined oil forms a soft velvety cushion or film that protects all moving parts against friction. And it does this with the least possible carbonization.

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Try En-ar-co National Motor Oil, and other En-ar-co products. Then you will be convinced. If your dealer cannot supply you, write us.

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Send me your En-ar-co Auto Game free. Enclosed find two-cent stamp to partially cover postage and packing.

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I use.....gals. Gasoline per year
I use.....gals. Motor Oil per year
I use.....gals. Kerosene per year
I use.....gals. Tractor Oil per year
I use.....lbs. Motor Grease per year
I use.....lbs. Axle Grease per year

My Name is.....

Street or R. F. D. No.....

City..... County.....

State.....

I own.....
(Make of Automobile or Tractor)
(Be sure to give make of auto or tractor or game will not be sent)

Automobile, am at present using.....
Motor Oil. I will be in the market for more oil again about..... and you may quote me on..... gallons En-ar-co National Motor Oil.

No One Else Would Pay So Much For Furs



Silberman and Sons
THE HOUSE WITH A MILLION FRIENDS

That's what W. F. Kumm, Shawano, Wis., wrote us when he got his Silberman check. R. E. DeVries, Nutley, New Jersey, wrote he was very much pleased with his check. W. C. James, Florence, Colo., says his check was larger than from any other fur house. Herbert Henshall, Bitter Creek, Wyo., wishes he had started shipping to us earlier, as he was very much pleased with his returns. And thousands of others say it is safe, wise and profitable to ship your furs to S. Silberman & Son.

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We are proud of our long business record—our liberal grading, large checks and prompt returns—which have won for us "The Trapper's Seal of Approval." You, too, can share in these extra profits—if you join the big family of Satisfied Silberman Shippers—in full, immediately. Over \$2,000,000 Capital behind every check. Good at any bank or general store in the country.

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SHIP FURS TO

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GET THESE HIGH PRICES

BE WISE—don't wait—bundle up every fur you have on hand and ship to Hill Bros., the old reliable fur house where you are sure of correct grading, highest prices and a square deal every time. WE CHARGE NO COMMISSION. Read there EXTRA HIGH PRICES we are paying if you ship your furs AT ONCE. Use the shipping tag—cut it out—paste on heavy cardboard—and attach it to your shipment.

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	Extra Large	Large	Medium	Small	Unprime or Otherwise Inferior
MINK DARK ORDINARY	20.00 to 16.00	15.00 to 14.00	11.00 to 10.00	8.00 to 7.00	8.50 to .50
MUSKRAT	15.00 to 13.00	11.00 to 10.00	9.00 to 7.25	6.00 to 5.00	7.00 to .40
SKUNK BLACK SHORT NARROW BROAD	4.75 to 3.85	3.60 to 3.25	2.90 to 2.50	2.10 to 1.85	2.25 to .15
WHITE WEASEL	12.00 to 9.50	9.00 to 8.25	5.00 to 7.25	6.75 to 6.00	5.50 to 1.00
RACCOON DARK OR HEAVY ORDINARY	9.00 to 8.00	7.50 to 6.50	6.25 to 5.50	5.25 to 4.75	4.25 to .75
RED FOX	7.50 to 6.00	5.75 to 5.00	4.75 to 4.00	4.00 to 3.25	3.25 to .50
	4.25 to 3.25	3.25 to 2.40	2.40 to 1.90	1.90 to 1.40	1.50 to .20
	3.25 to 2.50	2.30 to 2.00	1.65 to 1.35	.90 to .75	1.00 to .10
	13.00 to 11.00	10.00 to 8.75	7.75 to 6.75	5.75 to 4.75	5.50 to .70
	10.25 to 5.75	8.25 to 7.25	6.25 to 5.25	5.00 to 4.00	4.50 to .50
	30.00 to 24.00	22.00 to 20.00	17.00 to 15.00	11.00 to 9.00	13.00 to 1.00

If you live in any other section, ship us your furs and we will pay you highest market prices.

FOR HILL BROS. MAIN & OLIVE ST. FUR CO. ST-LOUIS MO.

FROM _____

POST OFFICE _____

R-F-D _____

BOX _____

STATE _____

Read what a trapper writes:

Mr. Warenoff, Dear Sir:—I am shipping you today 1 bag of furs; it is no use for me to grade them as you have been giving me very good grades. Jacob Yost, Dillsburg, Pa.

RAW FURS

We do not claim to pay the highest price in the world—but we do claim and absolutely guarantee to give you every dollar your pelts are worth—often more than you yourself expect.

Send us a shipment today or write for our price list. It's free. We know our grading will please you, so hurry up and connect with us. It's up to you.

Sol Warenoff & Co., Inc., 156 West 25th Street, New York City

CORN Good Yellow Ear Corn in carload lots. Write for prices. THEO. BURT & SONS, Melrose, Ohio.

10 thoroughly broken American fox hounds, good hunters and trailers, a few partly broken. Stamp for reply. Ambrose S. Taylor, West Chester, Pa.

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

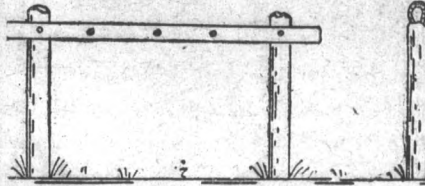
SKUNK

We pay highest cash prices for all staple furs—Skunk, Mink, Muskrat, Raccoon, Red Fox. Fancy furs a specialty, including Silver and Cross Fox, Fisher, Marten, etc. Est. 1870. Our continued prompt returns and liberal policy are now bringing us shipment from all North American, Alaska to Mexico. Send for free Price List. Address M. J. JEWETT & SON, REDWOOD, N. Y. Dept. 11

Mechanical Helps

HITCHING POSTS.

HERE are two tried and true forms of hitching posts, which we find worthy of passing on. The first is made by erecting two posts and bolting on a plank with several holes bor-



ed through to permit a hitching strap or tie-rope to be passed through. The second is simply a post erected with an old horseshoe nailed over the top.

W. E. F.

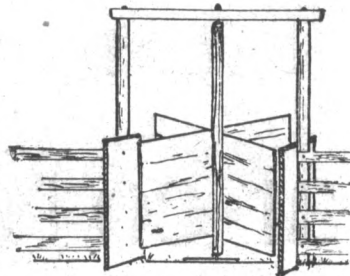
PROTECTING STRAW SHED WINDOWS.

SEVEN years ago when father built his straw shed he wanted to protect the windows from being broken out by the weight of the straw against them. This is what he did. He took short pieces of rods and fastened them crosswise over the windows. In the seven years use not a pane has been broken. Not much of a job, yet it means much to the life of the window.

—F. W.

A TIME-SAVER.

TO open and close gates that stock may be kept within bounds the year round is one thing which uses up a great deal of time, and makes no return. Every gate should be so made

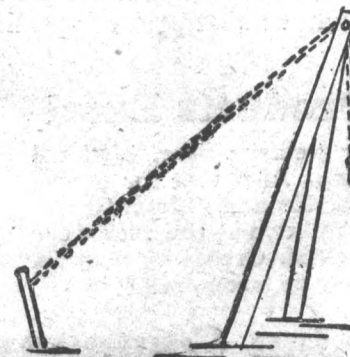


that it will fall into place of its own weight and stay closed and open without hitch or bother. The cut illustrates a convenient thing that should be in larger use on farms. It is always open and always closed against stock. Put up and well painted it will last for many years.

S. V. A.

EASILY MADE DERRICK.

HERE is a derrick, or rigging that comes in quite handy when lifting engines from automobiles, and many other things on the farm where heavy lifting is at hand, with no means of attaching to some stationary object. Take two pieces of timber, 2x4, or

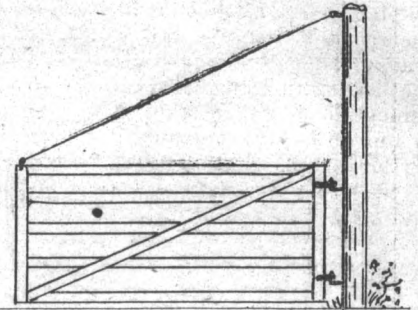


2x5 will do, and bolt them together at the top. Nailing would answer but bolting is better. This forms an inverted V. Next drive a stake, preferably a piece of gas pipe, into the ground, a few feet back of the point where the timbers stand. To the stake, driven in at an angle, leaning away from the timbers, attach a light chain, passing it over top of pieces. Fast-

ening a tackle to the chain, you are ready to lift your object. While this stands on only two legs it is better than a tripod for it can be made to lean over an object to be lifted. F.

PREVENT GATE FROM SAGGING.

TO prevent a hinge gate from sagging we use a higher post than usual and run a few strands of twisted wire from a ring in top of post to the

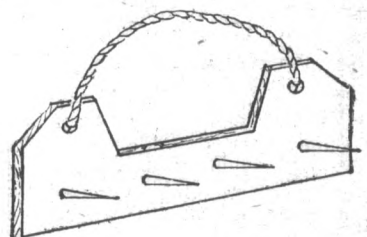


end of gate, as shown in accompanying illustration.

E. F.

STEER YOKE.

UPON several occasions we have subdued unruly steers by using a yoke made of about three pieces of



inch boards, two upright pieces and one piece crosswise to hold the upright pieces together. In the crosspiece are bored three or four holes for pegs driven in about five or six inches long, pointed at one end. The pointed ends stand toward body and as the steer pushes against the fence, the pointed pegs jab into his breast and he gives up the job. The yoke is fastened over the neck by rope or strap. The illustration shows the idea plainly.—W. E.

GRANGE MEETING AT GRAND RAPIDS.

(Continued from page 712).

In the years that I have been able to view its activity. And at the present time I think it has greater influence with congress than any other organization, because of its conservative demands, which when granted have devolved no hardships upon others, and because it is without a partisan bias." At 5:30 Tuesday afternoon Grange adjourned and proceeded in a body to the country home of Mr. and Mrs. Huntley Russell. Over one hundred were in attendance. The dinner was given under the auspices of the Kent Pomona Grange, whose members have acted as host to the National Grange, and whose pictures appeared in our last issue. Senator T. H. McNaughton, Pomona Master, was chairman of this committee which did strenuous and noble work in preparing for and entertaining the members of the National range.

This was the first time in the history of the National range that farmers and their wives from thirty-two states ever gathered in a farm house to enjoy a typical farm dinner.

FEDERAL CROP ESTIMATES.

Buckwheat, 20,120,000; tobacco, 1,316,558,000 pounds; flaxseed, 9,450,000 bushels; pears 13,638,000 bushels; apples (total) 144,429,000; apples (commercial) 24,416,000; sugar beets 7,298,000 tons; onions (14 states) 10,784,000 bushels; cabbage (nine states) 388,000 tons; cloverseed 967,000 bu.

FEEDING BEANS COOKED OR RAW.

Are uncooked ground beans and oats and plenty of good silage as good as cooked beans for milch cows and fat cattle? What proportions should I feed? We have cornstalks and clover hay for rough feed.

Tuscola Co.

A. F.

It increases the digestibility of the beans to cook them, and also the palatability, after cattle once begin to eat them, but it requires considerable attention to feed the cooked beans. When the beans are cooked it is not so convenient to mix them with other grain in the ration and probably, taking everything into consideration, it would be well to grind beans, making them into a meal, mix them with the ground oats. Of course, you can feed the beans separately when cooked, but it is quite a task to keep the mangers clean, when they are fed in this condition.

It is not advisable to feed over one-third of the grain ration in the form of bean meal to milch cows, otherwise it makes a hard, crumbly butter. Ground oats and bean meal fed in proportion as suggested will make a very good ration with cornstalks and clover hay for roughage. If the cattle tire of the oat and bean meal add bran to the ration. Mix the bran and beans and oats in equal parts.

C. C. L.

TEMPERATURE OF CREAM FOR CHURNING.

Please tell me the right temperature of cream so the butter will come quick.

Saginaw Co.

I. W.

Sixty to sixty-five degrees F. is about the right temperature for churning, to have the quickest separation of the fat globules from the milk.

There is another important fact that must be taken into consideration to have the butter come quickly, and that is that the cream should be properly ripened (or soured) and that this ripening be uniform, in other words, the cream, after it is separated from the milk should be kept in a cool place until a sufficient amount has accumulated for churning, then it should be gradually warmed to a temperature of about eighty degrees. This should be stirred once in a while so that the temperature will be uniform. Let the cream stand twenty-four hours at this temperature and it will acquire the proper acidity. Now cool it to sixty or sixty-two degrees before churning.

C. C. L.

FARM LEASE ON SHARE.

I live on a farm that I rented on halves, moving here February 28, 1917. I have no written contract with the landlord, and nothing said as to when I should move. As I have bought a farm it is very much to my interest to move this fall. Can I make division of stock and feed and move this fall without trouble?

B. O. K.

This is a case of verbal contract which always leaves wide latitude for dispute on the facts; and to move without a positive agreement with the owner of the land as to what the rights are in that regard, is to invite a lawsuit, if the land owner is so inclined, with pretty good assurance that both parties will lose regardless of the result; and the owner of the land will probably contend that the lease from year to year, gives him a right to have his stock fed through the winter, to have the feed fed out on the place, etc.—R.

Sheepmen are protesting against the dipping of sheep shipped out of the Chicago stock yards during cold weather. Many sheep die from the result of exposure following dipping.

Rot-proof, non-swelling creosote oil-filled staves planted into a solid concrete foundation four feet deep; an anchoring system of cables that holds the entire silo as solid as the earth itself and prevents creeping, twisting or blowing over—that's the **Champion Oil-filled Stave Silo**—the one silo of all makes and kinds that is 100% permanent and efficient.

Cresote oil-filled staves---admittedly the best for silo construction---a rot-proof material that will not warp or swell and which will be in perfect condition when your children's children are grown up: these are the staves that make Champion Silos practically time-proof.

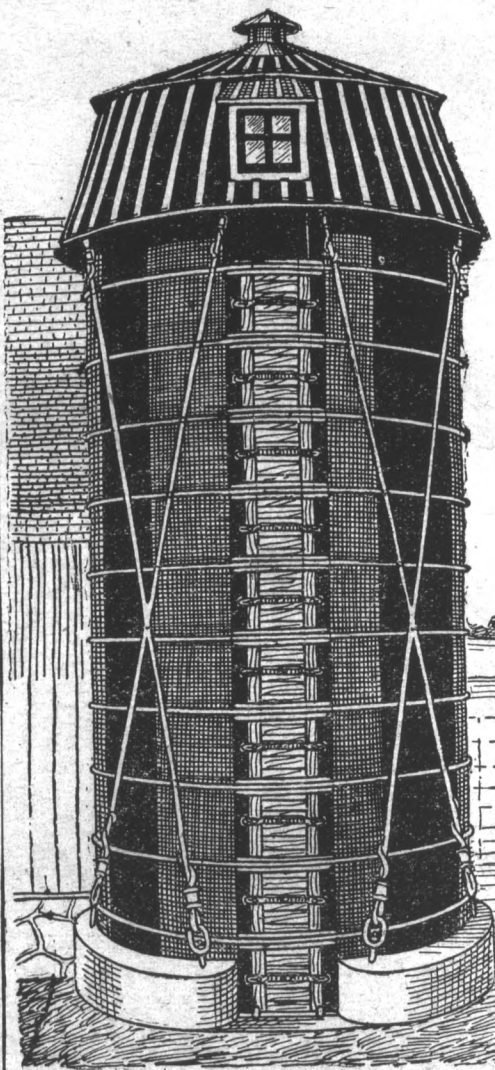
Oil Impregnated Staves

Refined creosote oil forced into the staves by the heat and pressure method; that's the secret of the long life of Champion Silo Staves and Roofs. They are made of selected lumber which is impregnated with creosote oil, guaranteed to contain less than 3% moisture. This oil---heated to a temperature of over 150 degrees---is forced into the staves under pressure of 200 pounds per square inch, driving the oil into every perishable part of the wood and excluding every trace of moisture. Champion staves are not merely dipped in oil---every perishable part is thoroughly impregnated.

This method of preserving wood has been used by the big railway systems for years---because it is the one sure method of preventing rot. The United States Government confiscated all high grade creosote oils during the war for water tanks, Government railroad ties, cantonment buildings, etc.

No Painting---No Doping

Champion oil-filled staves require no painting on the outside or no doping on the inside. The oil is a perfect protection from the elements. You could not paint them if you wanted to. And they will not absorb moisture because water and oil will not mix.



Planted in Solid Concrete

Champion oil-filled Staves are not merely set on a concrete foundation but planted right into solid concrete four feet deep. A ring of solid concrete is first built from two to four feet below the ground level. The staves are set upon this concrete ring and concrete is then poured around them up to two feet above the ground level making one solid imperishable unit of base, staves and concrete wall. And because there is no moisture in Champion Oil-filled staves, swelling and consequent buckling of staves is impossible.

Wind-proof Anchoring System

The famous Champion interlocking anchoring system is the greatest improvement that has yet been made in anchoring silos. From 8 to 14 steel cables (depending on the size of the silo) imbedded in the concrete and running crosswise from top to bottom securely tie the top of the silo to the immovable base.

Send for this Convincing Evidence

Send for a piece of Champion oil-filled stave. Put it in a vise, turn the vise up tight and notice the quantity of oil you can squeeze out of it. Then you will fully appreciate why Champion Silos cannot rot! And get our big new book---just off the press---which is packed full of valuable silage information and all the facts regarding the absolute superiority of Champion construction. Write today. No obligation.

AGENTS WANTED--We are looking for representatives--both dealers and salesmen--who fully appreciate the value of silage and who are looking for the opportunity to sell the best silo built. (Write immediately.)

The E. W. Ross Company
Box 214
Springfield, Ohio

BUY A SILO
And Reap ANY KIND
You need a silo. It will begin to make money for you the minute you fill it! It is a splendid investment, because with a silo you can store a greater amount of palatable, succulent food, because it is the cheapest means of storing that food; because it will double the value of your corn crop by giving it greater feeding value; because it will enable you to produce more beef, mutton and milk; because it will permit greater rotation of crops and aid in the preservation of soil fertility. So get a silo now. Any kind will be profitable---but get a Champion because no other is so low in cost and all-round efficiency, and with fifty-year guarantee that goes with every Champion.

THE E. W. ROSS COMPANY
Box 214 Springfield, Ohio

Gentlemen:

Send me today, without obligation, your book on silage and silo construction.

Name _____

Address _____

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

BUFFALO CORN GLUTEN FEED

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

BUFFALO GLUTEN,
1/2 HER GRAIN RATION
WAS ONLY HIGH-PRO-
TEIN FEED SHE WAS FED

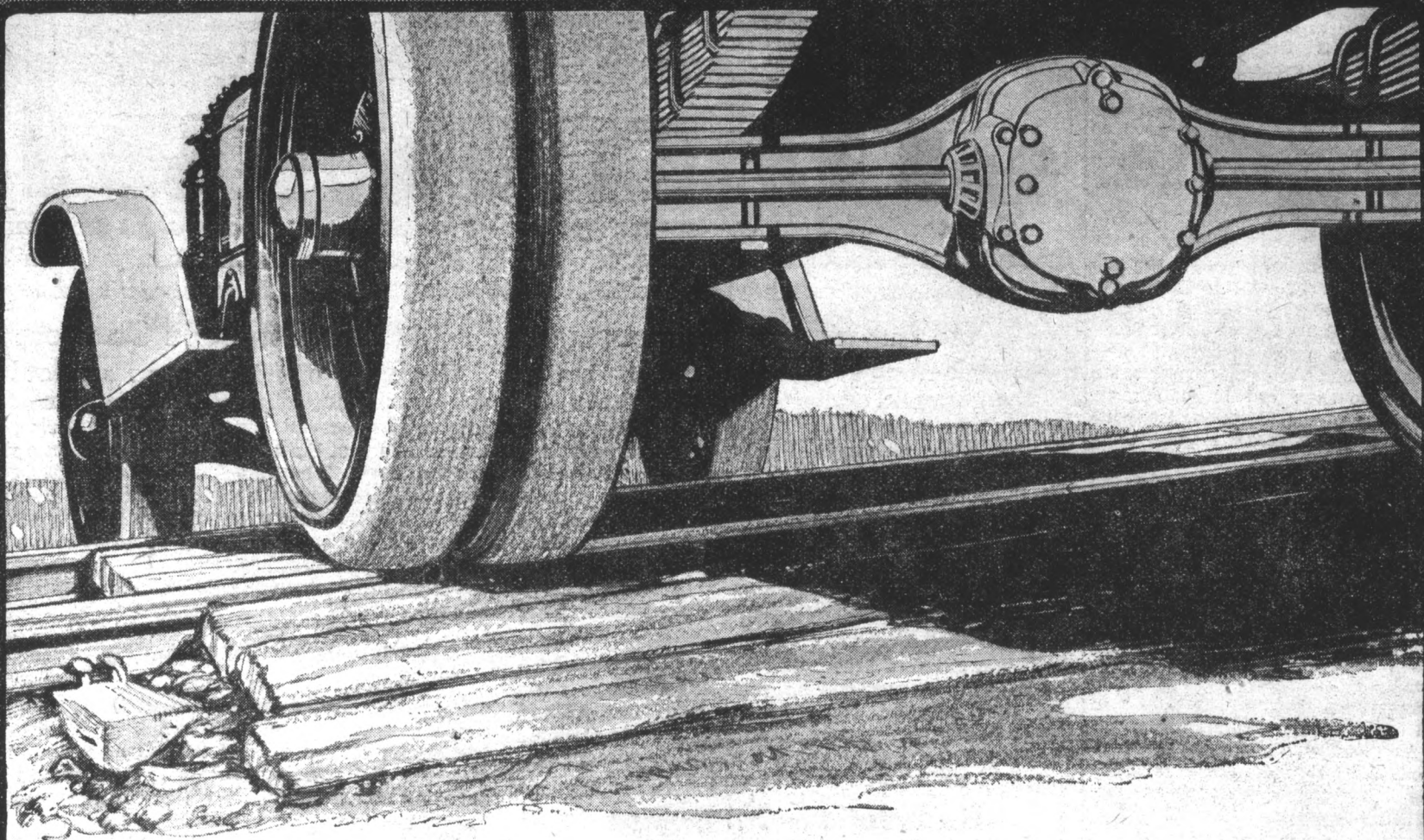
DO DITCHING THIS FALL

Prevent winter rains smothering the soil. Put land in shape for early spring work. Get your ditching and terracing done now with **The Martin Terracer and Grader**. Works in any soil. Makes "V" shaped ditch or cleans ditches down 4 ft. deep. All steel. Reversible. Adjustable. Write for Free Book. **OWENSBORO DITCHER & GRADER CO., Inc.** Box 815, Owensboro, Ky.

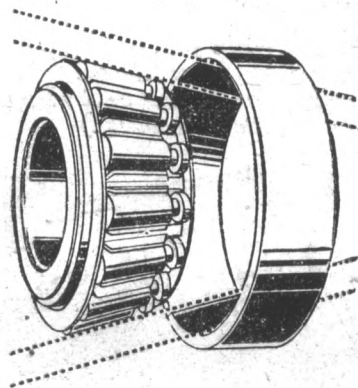


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Mention The Michigan Farmer When Writing Advertisers



If It's Mounted on Timkens



Remember the tapered shape of the Timken Bearing. That tapered design has brought about the superiority of performance, which in turn has led to the adoption of Timken Bearings by the best motor car, tractor and truck builders of America.

The rear wheel of your farm truck hasn't quite as hard a job as a front one, but it needs Timken Taper just the same.

A little skid, a graze of the curb or sidewise blow from a rut or a stone gives a tremendous end thrust to the bearing. Measured in pounds the end thrust that comes from a two-inch drop of a loaded truck would startle you.

And a trifling looseness—which is bound to come with a bearing that has no take-up for wear—the take-up that Timken Bearings do have—means a considerable play at the circumference of the wheel and rapid wear on tires.

Every year adds to the list of truck builders and truck owners who appreciate the advantages of Timken Taper.

It doesn't pay to overlook the things that don't cause trouble.



THE TIMKEN ROLLER BEARING COMPANY
Canton, Ohio

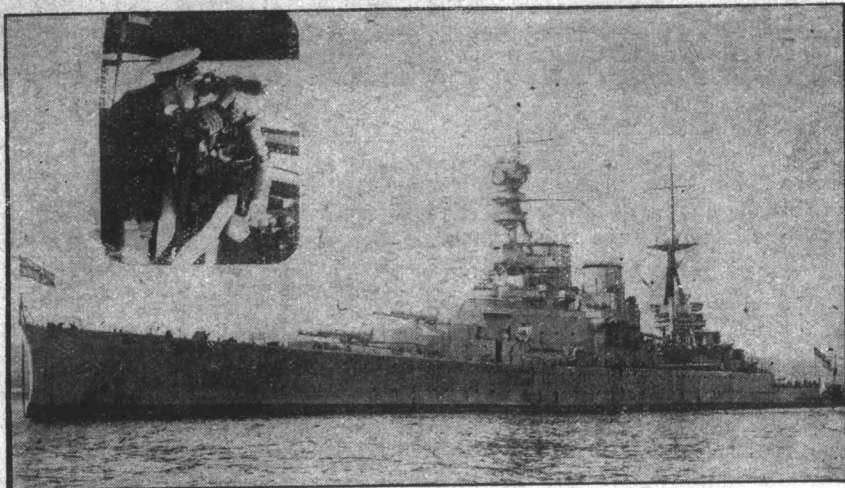


TIMKEN TAPER

WORLD EVENTS IN PICTURES



War veterans killed by Reds in Centralia, Wash., armistice parade. Upper left, Dale Hubbard; right, Arthur McElfresh; lower left, Warren O. Grimm; right, Benj. Casagrande.



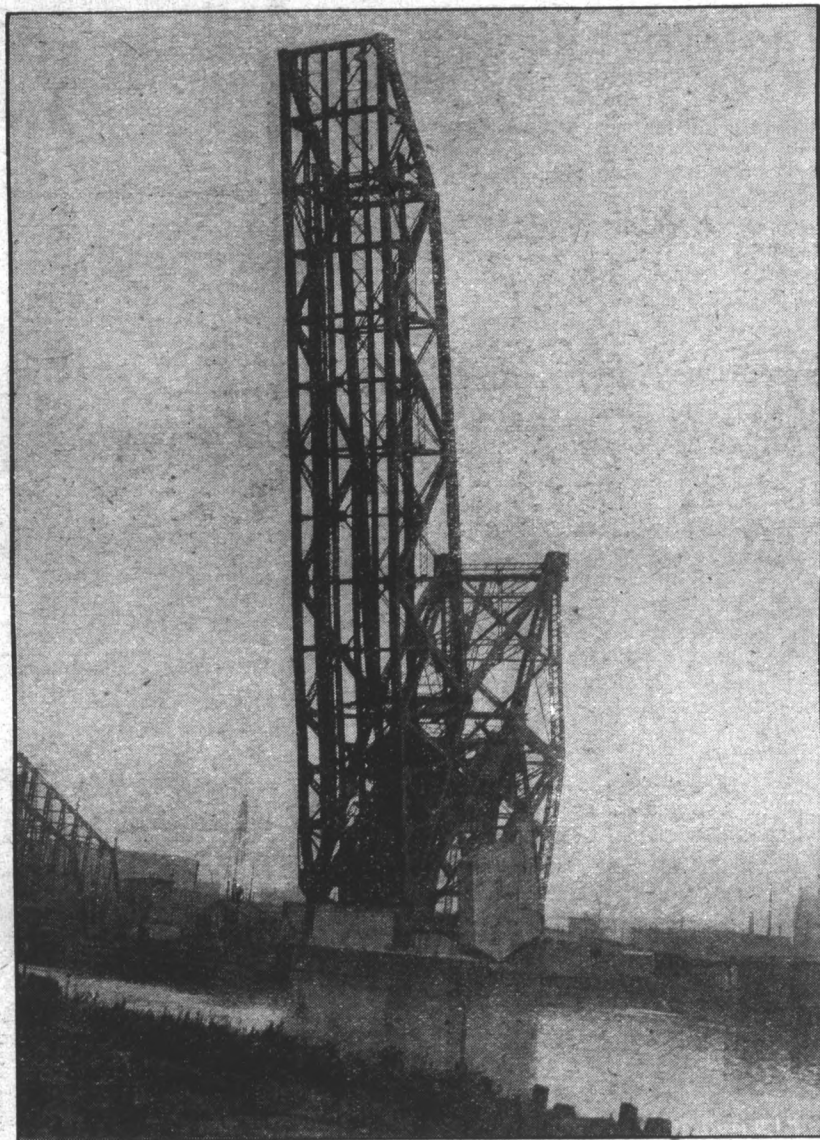
H. M. S. Renown, the giant British cruiser, on which the Prince of Wales lived during his stay in New York. The vessel is now conveying the Prince back to England.



Lieut.-Col. D'Olier was elected as First National Commander of the American Legion.



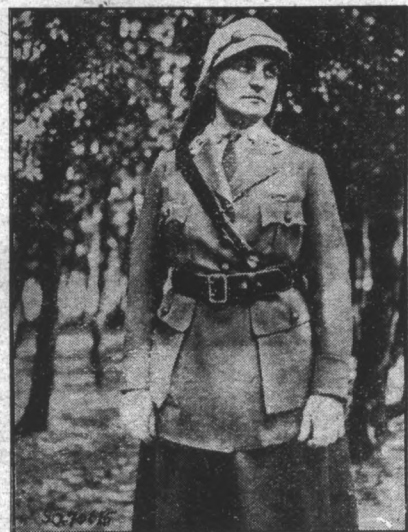
The citizens of Toledo, Ohio, last election day voted that the Toledo Railway Co. be ousted.



Longest lift bridge in the world, 300 feet in length, spans Chicago river, at Chicago, Ill., is to be opened to traffic next month. It took two years to construct this masterpiece of engineering.



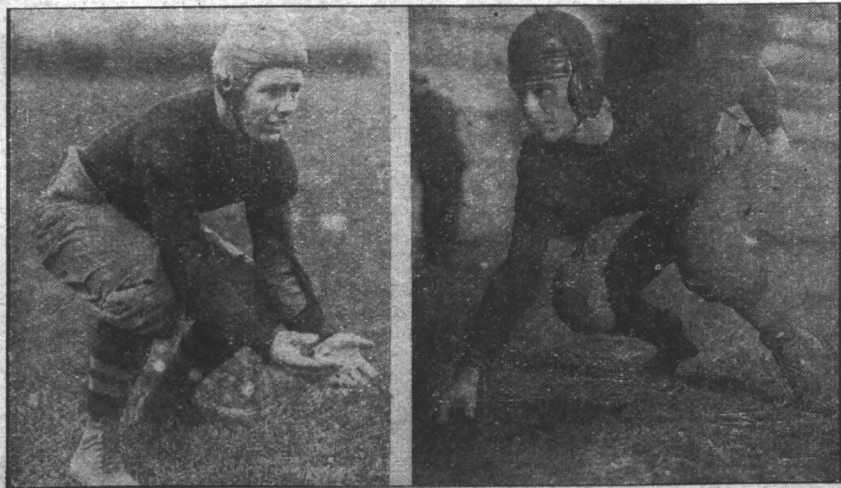
Miss Mary Vail Andrees is the only woman to be awarded the American D. S. M. for war work.



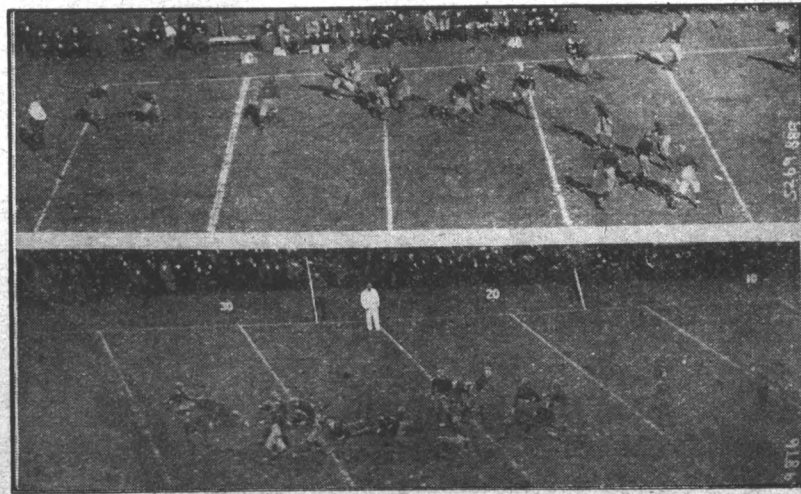
Mrs. Anna L. Fisher, who was recently appointed a captain in the Arabian cavalry.



Mme. Clemenceau-Jacquemaire, the daughter of the French Premier, arrives on S. S. LaFrance.



Left—Capt. George, quarterback of the Army Team. Captain George is confident that the army will be supreme this year. Right—Capt. E. C. Ewen, of the navy team.



Garrity, Princeton fullback on the thirty-five yard line, with his hand upraised, ready to receive a forward pass from Trimble, left halfback, who is seen on the Yale forty-five-yard line.

More Money

The season of seasons for raw furs is here. This means "more money" for your catch Mr. Shipper. It also means that it is more important than ever before that you get big money for your pelts. We guarantee to pay highest prices. Our long established reputation is your protection—send for price list to day—it's free.

RAW FURS

We must have shipments immediately to fill orders. We will be more liberal than usual to get them. Rush your pelts to us. Our price list proves the high prices we pay—send for yours today.

L. Briefner & Sons
EST. 1861
151 W 25th St. New York

MORE \$\$\$\$ FOR Your RAW FURS IN NEW YORK

My Prices Are Guaranteed

Beware of High Price Lists sent out to deceive you and get your furs. The higher they quote the loss you get.

The secret of a square deal is honest grading at market prices. I guarantee my price until next list is issued and will not quote more than I can pay on an honest assortment.

Enjoy that peace of mind that comes to a shipper when he knows he is shipping to an honest firm.

You will make no mistake shipping to me and be glad you made my acquaintance.

HONEST GRADING HONEST PRICES

No commissions deducted. I pay express & parcel post charges. Prompt returns guaranteed.

Write at once for Price List while you have me in mind.

BENJAMIN DORMAN
147 W. 24th St. NEW YORK

MONEY IN FURS

TRAP AND SHIP TO

McMILLAN

Dealers in

FURS

HIDES PELTS WOOL

AND GET HIGHEST PRICES, HONEST GRADING, PROMPT CASH RETURNS, FREE ILLUSTRATED TRAPPERS' GUIDE TO SHIPPERS : : : : :
Write for Price List

McMILLAN FUR & WOOL CO.
MINNEAPOLIS, MINN.

RAW FURS WANTED

Mr. RAW FUR SHIPPER—We want your raw furs. Put your own assortment on them and mail us a copy. If we cannot net you more than you expect, we will return them to you, express paid. Our price list is yours for the asking.

Milton Schreiber & Co.
RAW FURS
Dept. W
138-140 West 29th St. NEW YORK CITY

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Largest returns on your small catch of furs. We are tanners and manufacturers of cattle and horse hides for coats, robes, rugs and mittens. Ladies furs from coon, opossum, fox, muskrat, mink, coyote, badgers, skunk and rabbits. Taxidermist work on deer heads and rugs. Tell us the kind of fur you have and we will answer fully.

W. W. WEAVER, Custom Tanner, Reading, Mich.

Mention The Michigan Farmer When Writing Advertisers

The Trap--- By Jack Reynard Young

NOW don't forget to stop at Joel's and give him the fruit and cookies," Mrs. MacKenzie called out to Max as he set out over the wagon road to the south.

Max found Joel cleaning trout. The big Indian was always glad to see him, especially when Max had a can of preserves or some other delicacy to surprise him with. He was a typical, northern Michigan Indian, barely over twenty-five, friendly and intelligent. Although full-blood to his own race, Joel was wise in the ways of the white men, for he spent his summers and falls guiding the hunting and fishing parties that came up from the cities in the south, his winters he trapped, but during the springs he again worked with the white men in the lumber camps along the river.

While the trout were rapidly being cleaned, the two talked of the fishing, of the trapping, of Max's school and a hundred other things both were interested in. But chiefly they talked of the big black bear that had come down across the ice from the Ontario woods and apparently had settled down to spend the winter in the river valley. In some of the many holes and caves along the river the black Bruin had found comfortable quarters and sallied forth only in the warmest winter weather.

Joel had vowed to catch the bear. He had tried traps, still-hunting and various kinds of baits, but to no avail. Finally after repeatedly seeing the bear's tracks at the old Eau Claire cabin a few miles from his own, he devised a unique but practical trap. More strong and well preserved than most log houses, the Eau Claire cabin was ideal for his purpose. Here with the help of Max and his father's tools, Joel had re-enforced the heavy door, barricaded the windows, and ingeniously contrived an arrangement of hickory springs and triggers so placed that when the bear had been attracted into the cabin and tampered with the bait, the door would snap shut and securely bolt itself.

On the way to town, after leaving Joel, Max passed the cabin but the door was un sprung. Although past seventeen years old, all of which had been spent in the northern Michigan woods, Max could not remember of ever having seen a live bear, even though he had been as far north as the Ontario region above Sault Ste. Marie. He had vivid recollections of a dead bear which his father had brought home several years ago after shooting it in the woods along the river. Not even a tame bear or one in a cage had Max ever seen, and so he was in high hopes that Joel would catch this big fellow that had made such enormous looking tracks.

At the village, Max went to the post office, then to the general store. After he had made his purchases he went back to the large wood stove around which a dozen or more men had gathered. New developments in world affairs were being discussed by several lumberjacks down from Canada, as well as some other men who had come up from some of the settlements to the south.

Jenkins, the storekeeper, came back and suddenly interrupted.

"Boys, I jist he'd that ol' man Henderson killed a timber wolf on his place this mornin'."

And immediately leagues of nations and wars were forgotten and talk turned to wolves; several of the men claiming they had seen small packs in the vicinity lately.

Noticing that the dull winter sun was hanging low in the west, it occurred to Max that if there were wolves in the neighborhood it might be well for him to get home before dusk. For

in northern Michigan the winter night settles quickly. Slinging the coarse cotton wheat sack over his shoulders he left the store and set out at a brisk pace for home. He had not left the outskirts of the village till the sun became overcast with low hanging gray clouds.

Max quickly realized that it would soon snow. He shifted his bag from shoulder to shoulder preparatory to quickening his pace to a dog trot when the first flakes fell. It would get dark muck quicker now—he must hurry, he thought. The shadows of the second growth spruce, balsam and bare hardwood, began to lengthen. It was over two miles to Joel's and over a mile from there to Max's own home.

Max was proud of his endurance. It was from Joel that he had learned the long, swinging stride, half run, half trot, that would carry him hour after hour, and mile after mile, over hills and through timber, with a much heav-

door, propelled by the hickory springs, slammed shut with a bang. Scarcely had the sound ceased when Max heard a roaring growl from out of one of the corners of the cabin—a growl so ominous and terrifying that it seemed to make his very pulse and breath stand still.

The quickness of thought and the resources of the nerves are things that no man can understand. Max had a healthy body and likewise an active brain. In a crisis thought and actions are one and the same thing. And so it was with Max. After a moment's frightened pause he acted. Clearly understanding that it was the bear that had growled, that it had come into the cabin shortly before his arrival and that up to that time it had failed to spring the door, Max flung the bag straight towards the dim corner, from where the sound had come, to divert the attention of the bear from himself to the bag, and simultaneously with



The Bear Trap—Eau Claire's Cabin—Flashed in His Mind.

ier pack than he had now; and leave him scarcely more tired at the end of the day than at its beginning.

Soon he was close to the Eau Claire cabin. He would pass within a quarter of a mile of it. And then suddenly, breaking the keen, cold stillness, he heard ahead of him and from the opposite side of the frozen river, the clear, long-drawn bay of a running wolf. It frightened him. It thrilled him. He gripped the bag more firmly, every muscle tense; ready to double his pace.

But instead of increasing his pace into a run, he stopped stock still. For there, not twenty yards ahead of him, he saw a wolf sitting on its haunches watching him intently. Max's pulse began to quicken. The wolf pointed its nose to the sky and with no other movement emitted a ringing howl. Even as it did this, other wolves came slinking in through the scant timber from all directions. Max knew that they would not attack him while it was yet light, and he reasoned that it would be deep dusk before he could reach Joel's cabin. He knew that sooner than then the wolves would be leaping for his throat.

The bear trap—Eau Claire's cabin—flashed in his mind and so without a moment's hesitation Max started for the cabin. What if the trap was sprung? But he did not stop to consider what he would do in that case. Knowing that it was a possible haven of refuge, his only thought was to get there. He well knew that to run would show the wolves his fear; so he strode as rapidly as possible with the beasts loping in his rear, keeping about fifty yards distant. It took but a few moments to reach the cabin, to run in, and to spring the trigger. The big

this action he sprang for the mouth of the sooty fire-place. Here was his only chance.

As Max knew, the chimney was over two feet square on the inside, and commencing some six feet from the floor; iron bars had been laid crosswise to re-enforce the chimneys. The bars were laid one above the other and at a distance of about two feet. Quickly catching the first bar and by squeezing and squirming he managed to get above it and reach the next bar and so on to the top of the chimney. Here he stopped to rest. During the last few minutes he had had scarcely time to breathe, and now he found himself panting like a tired dog. Regaining his breath he began to shout for help, now and then calling out Joel's name.

It was a miserable situation. With one leg on the outside and one in, Max sat on the cold, sharp stones of the chimney top, while below him he could see and hear the bear, gazing at him and sniffing. Occasionally the bear's eyes would gleam a fiery golden or green, and sometimes, after it had sniffed about the cabin for awhile and came back to look up at Max, it would open its jaws slightly and snarl, showing its shining white teeth. Outside the wolves sulked noiselessly through the underbrush. A big owl soared like a shadow overhead, and like a shadow faded away through the tree tops. The wind was howling and moaning in the trees and rattling the bushes.

Suddenly Max heard a faint call from the direction of Joel's, and immediately began calling again at intervals. Joel it was.

"Here I am, on top of the cabin. Look out for the wolves, Joel."

Crack! Crack! sounded Joel's rifle. (Continued on page 729).

Lady Randolph Churchill writes a tribute to Mr. Edison

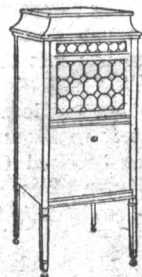


LADY Randolph Churchill is England's greatest authority on furniture. Her home is the best furnished house in London.

Lady Churchill saw the Edison Period Cabinets. Immediately she wrote:

(HER LETTER)

"What an extraordinary man Mr. Edison is! He perfects his phonograph to a point where its realism is astounding. Then he determines to make each Edison Phonograph, even the least costly an attractive piece of furniture. Instead of the usual dentist-like looking cabinet, his designers have succeeded in putting the character and feeling of the best periods into his phonograph cases. These graceful and artistic productions will be hailed with delight by all who can afford them, and will cause Mr. Edison's new phonograph to be received in many houses where less worthy machines have not been welcomed heretofore."



Sheraton
(Sans inlay)

These Edison Period Cabinets are American adaptations of Europe's richest furniture treasures. This letter is the Old World's stamp of approval on the

achievement of Edison's American designers and craftsmen.

BUT Lady Churchill has overlooked the second great part of Edison's purpose. She has received the impression that these cabinets are only for the well-to-do. Nothing could be farther from the fact. Edison has developed an authentic period cabinet for each New Edison,—even the lowest priced models. Isn't this exactly what you would have expected of the man who spent three million dollars in order to give the world his musical ideal,—the Official Laboratory Model?



William and
Mary

THE New Edison is truly the phonograph of two arts. It brings you the world's noblest music, RE-CREATED in all its beauty and soul. It brings you the world's purest furniture art perpetuated in furniture which will enrich your home forever.

See the different period designs. Hear the wonder of RE-CREATED Music. If no Edison dealer is near you, write for the beautiful new book, "Edison and Music."

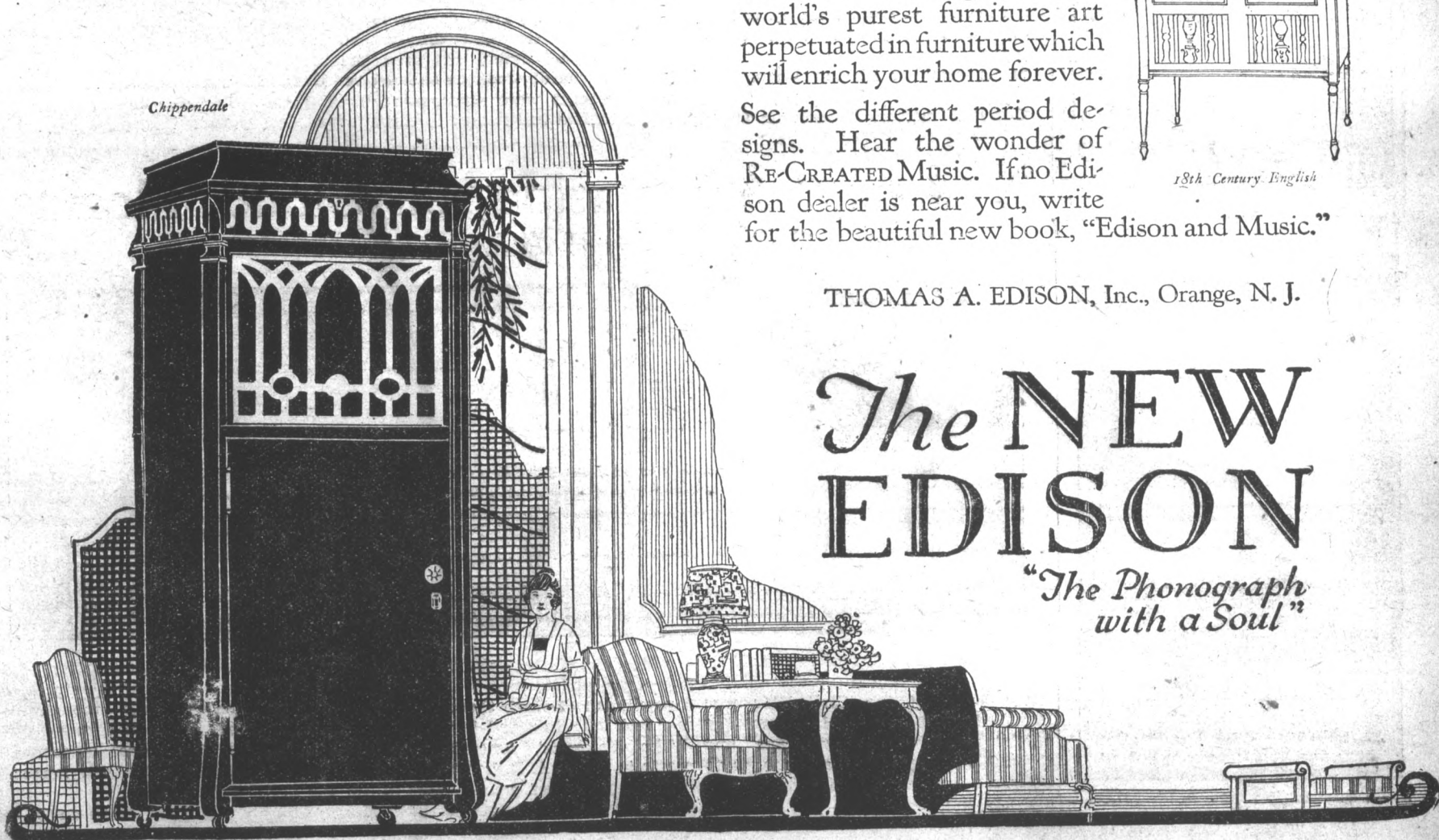


18th Century English

THOMAS A. EDISON, Inc., Orange, N. J.

The NEW EDISON

"The Phonograph
with a Soul"



STOVER SAMSON Windmill

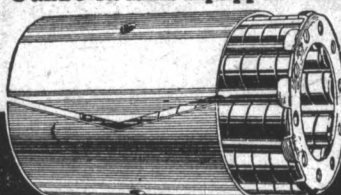


**Noiseless
Oil-less
Light Running**

Every essential necessary for both mill and tower to withstand the heaviest wind-pressure and work perfectly in all kinds of weather, day or night, all year round, practically without expense or labor—lasts lifetime.

Write for Windmill Book FREE It fully describes the greatest windmill improvement since the advent of the famous Stover Double Gear.

STOVER MFG. & ENGINE CO.
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Mfgs. of Stover Good Engines, Feed Mills, Engine Cutters, Pump Jacks, Etc. 1862. Free Cat.
8 and 9-ft. Mills Equipped With



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Enjoy Homer Warmth
This Winter**

Months of below zero weather are still to come.

You can keep your house at 70 degrees or better with a Homer Furnace, no matter how cold it gets outside.

Only one day is required for installation—no tearing up of your house, for the Homer is a pipeless furnace. Ventilates and warms your house—every room—through one combination register directly over the furnace. Write for detailed information and catalog.

HOMER FURNACE COMPANY
Dept. F-2 Homer, Mich.

HOMER FURNACE
THE ORIGINAL PATENTED PIPELESS FURNACE



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PISTON RINGS

Our booklet—"To Have and to Hold Power"—will help you know piston rings. It will explain clearly the causes of lost compression, lost power, faulty lubrication, and carbon deposits. It will save you time and money. Free on request.

McQuay-Norris Manufacturing Co.
2877 Locust St., St. Louis, U. S. A. 157

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Crooked Trails and Straight

By Wm. MacLeod Raine

CHAPTER X. "Stick to Your Saddle."

THE old Arizona fashion of settling a difference of opinion with the six-gun had long fallen into disuse, but Saguache was still close enough to the stark primeval emotions to wait with a keen interest for the crack of the revolver that would put a period to the quarrel between Soapy Stone and young Flandrau. It was known that Curly had refused to leave town, just as it was known that Stone and that other prison bird Blackwell were hanging about the Last Chance and Chalkey's Place drinking together morosely. It was observed too that whenever Curly appeared in public he was attended by friends. Sometimes it would be Maloney and Davis, sometimes his Uncle Alec Flandrau, occasionally a couple of the Map of Texas vaqueros.

It chanced that "Old Man" Flandrau, drifting into Chalkey's Place, found in the assembled group the man he sought. Billie Mackenzie, grizzled owner of the Fiddleback ranch, was with him, and it was in the preliminary pause before drinking that Alec made his official announcement.

"No, Mac, I ain't worrying about that any. Curly is going to get a square deal. We're all agreed on that. If there's any shooting from cover there'll be a lynching pronto. That goes."

Flandrau, Senior, did not glance at the sullen face of Lute Blackwell hovering in the background, but he knew perfectly well that inside of an hour word would reach Soapy Stone that only an even break with Curly would be allowed.

The day passed without a meeting between the two. Curly grew nervous at the delay.

"I'm as restless as a toad on a hot skillet," he confessed to Davis. "This thing of never knowing what minute Soapy will send me his leaden compliments ain't any picnic. Wish it was over."

"He's drinking himself blind. Every hour is to the good for you."

Curly shrugged. "Drunk or sober,

Soapy always shoots straight."

Another day passed. The festivities had begun and Curly had to be much in evidence before the public. His friends had attempted to dissuade him from riding in the bucking broncho contest, but he had refused to let his name be scratched from the list of contestants.

A thousand pairs of eyes in the grandstand watched the boy as he lounged against the corral fence laughing and talking with his friends. A dozen people were on the lookout for the approach of Stone. Fifty others had warned the young man to be careful. For Saguache was with him almost to a man. Dick Maloney heard his voice called as he was passing the grandstand. A minute later he was in the Cullison box shaking hands with Kate.

"Is—is there anything new?" she asked in a low voice.

Her friend shook his head. "No. Soapy may drift out here any minute now."

"Will he—?" Her eyes finished the question.

He shook his head. "Don't know. That's the mischief of it. If they should meet just after Curly finishing riding the boy won't have a chance. His nerves won't be steady enough."

"Dad is doing something. I don't know what it is. He had a meeting with a lot of cattlemen about it—I don't see how that boy can sit there on the fence laughing when any minute—"

"Curly's game as they make 'em. He's a prince, too. I like that boy better every day."

"He doesn't seem to me so—wild. But they say he's awfully reckless." She said it with a visible reluctance, as if she wanted him to deny the charge.

"Sho! Curly needs explaining some. That's all. Give a dog a bad name and hang him. That saying is as straight as the trail of a thirsty cow. The kid got off wrong foot first, and before he'd hardly took to shaving respectable folks were hunting the dictionary to find bad names to throw at

him. He was a reprobate and no account. Citizens that differed on everything else was unanimous about that. Mothers kinder herded their young folks in a corral when he slung his smile their way."

"But why?" she persisted. "What had he done?"

"Gambled his wages, and drank some and beat up Pete Schiff, and shot the lights out of the Legal Tender saloon. That's about all at first."

"Wasn't it enough?"

"Most folks thought so. So when Curly bumped into them keep-off the grass signs parents put up for him he had to prove they were justified. That's the way a kid acts. Half the bad men are only coltish cowpunchers gone wrong through rotten whiskey, and luck breaking bad for them."

"Is Soapy that kind?" she asked, but not because she did not know the answer.

"He's the other kind, bad at the heart. But Curly was just a kid crazy with the heat when he made that fool play of rustling horses."

A lad made his way to them with a note. Kate read it and turned to Dick. Her eyes were shining happily.

"I've got news from Dad. It's all right. Soapy Stone has left town."

"Why?"

"A dozen of the big cattlemen signed a note and sent it to Stone. They told him that if he touched Curly he would never leave town alive. He was given word to get out of town at once."

Maloney slapped his hand joyously on his thigh. "Fine! Might a-known Luck would find a way out. I tell you this thing has been worrying me. Some of us wanted to take it off Curly's hands, but he wouldn't have it. He's a man from the ground up, Curly is. But your father found a way to butt in all right. Soapy couldn't stand out against the big ranchmen when they got together and meant business. He had to pull his freight."

"Let me tell him the good news, Dick," she said, eagerly.

"Sure. I'll send him right up."

(Continued on page 728).

Veterans' Association, St. Cloud, Florida

By Ruth Raymond



THE movement of building St. Cloud as a winter home for the old Union soldiers of the Civil War was launched by the National Tribune, the official paper of the veterans and through reading of the advantages to be found here they came from every state in the Union.

The settlement was begun about ten years ago and though at first they lived in tents and rude huts hastily put up to accommodate them and their

families, St. Cloud is fast becoming one of the finest cities in Florida, with a population of three thousand in summer and four thousand in winter.

The Veterans' Association which meets in the G. A. R. hall once a week is made up of men who enlisted in the early sixties and served through the War of the Rebellion.

The drum corps as seen in this picture, takes a prominent part in all the doings of the association.

There are more people here from Ohio than any other of the states, and Michigan comes next, though New York ranked as second three years ago. Some live here permanently while others return to their homes in the north every winter.

The tourists have come early this year and are still coming so that The City Wonderful, as it is called, will soon be overflowing with "the youngest old men on earth."



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Most any brake lining gives satisfactory service when you **first** put it on your brakes. Even the cheapest holds for a month or two. But it isn't long before **grind, grind, grind** at the brakes begins to wear away the fabric. Brakes lose efficiency, refuse to hold and fail to grip.

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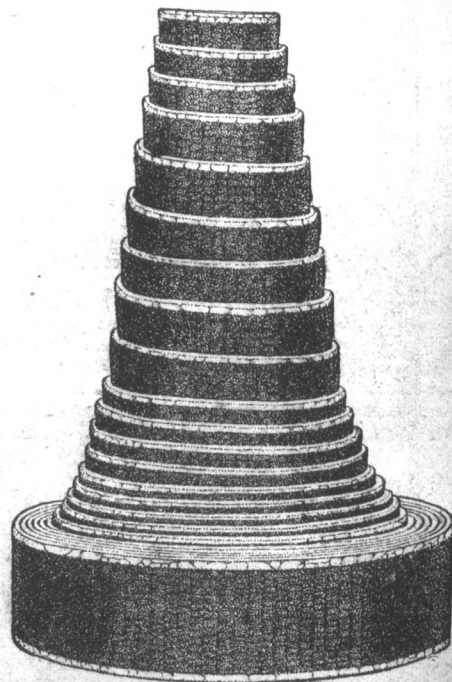
For your own sake; for safety's sake; for your car's sake, avoid cheap lining. Remember that Raybestos is built to WEAR; will WEAR and is guaranteed to WEAR at least 12 months.

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WESTERN CANADA
Farm Lands at Low Prices
The Wheat Belt of America

Bronzed almost to a coffee brown, with the lean lithe grace of youth garbed in the picturesque regalia of the vaquero, Flandrau was certainly a taking enough picture to hold the roving eye of any girl. A good many centered upon him now, as he sauntered forward toward the Cullison box cool and easy and debonair. More than one pulse quickened at sight of him, for his gallantry, his peril and his boyishness combined to enwrap him in the atmosphere of romance. Few of the observers knew what a wary vigilance lay behind that careless manner.

Kate gathered her skirts to make room for him to sit beside her.

"Have you heard? He has left town."

"Who?"

"Soapy Stone. The cattlemen served notice on him to go. So he left."

A wave of relief swept over the young man. "That's your father's fine work."

"Isn't it good?" Her eyes were shining with gladness.

"I'm plumb satisfied," he admitted. "I'm not hankering to shoot out my little difference with Soapy. He's too handy with a six-gun."

"I'm so happy I don't know what to do."

"I suppose now the hold-up will be put off. Did Sam and Blackwell go with him?"

"No. He went alone."

"Have you seen Sam yet?"

"No, but I've seen Laura London. She's all the nice things you've said about her."

Curly grew enthusiastic. "Ain't she the dandiest girl ever? She's the right kind for a friend. And pretty—with that short crinkly hair the color of ripe nuts. You would not think one person could own so many dimples as she does when she laughs. It's just like as if she had absorbed sunshine and was warming you up with her smile."

"I see she has made a friend of you."

"You bet she has."

Miss Cullison shot a swift glance at him. "If you'll come back this afternoon you can meet her. I'm going to have all those dimples and all that sunshine here in the box with me."

"Maybe that will draw Sam to you."

"I'm hoping it will. But I'm afraid not. He avoids us. When they met he wouldn't speak to father."

"That's the boy of it. Just the same he feels pretty bad about the quarrel. I reckon there's nothing to do but keep an eye on him and be ready for Stone's move when he makes it."

"I'm so afraid something will happen to Sam."

"Now don't you worry, Miss Kate. Sam is going to come out of this all right. We'll find a way out for him yet."

Behind her smile the tears lay close. "You're the best friend. How can we ever thank you for what you're doing for Sam?"

A steer had escaped from the corral and was galloping down the track in front of the grandstand with its tail up. The young man's eyes followed the animal absently as he answered in a low voice.

"Do you reckon I have forgot how a girl took a rope from my neck one night? Do you reckon I ever forget that?"

"It was nothing. I just spoke to the boys."

"Or that I don't remember how the man I had shot went ball for a rustler he did not know?"

"Dick knew you. He told us about you."

"Could he tell you any good about me? Could he say anything except that I was a worthless no-count—?"

She put her hand on his arm and stopped him. "Don't! I won't have you say such things about yourself. You were just a boy in trouble."

"How many would have remembered

that? But you did. You fought good for my life that night. I'll pay my debt, part of it. The whole I never could pay."

His voice trembled in spite of the best he could do. Their eyes did not meet, but each felt the thrill of joy waves surging through their veins.

The preliminaries in the rough riding contest took place that afternoon. Of the four who won the right to compete in the finals, two were Curly Flandrau and Dick Maloney. They went together to the Cullison box to get the applause due them.

Kate Cullison had two guests with her. One was Laura London, the other he had never seen. She was a fair young woman with thick ropes of yellow hair coiled round her head. Deep-breasted and robust-joined, she had the rich coloring of the Scandinavian race and much of the slow grace peculiar to its women.

The hostess pronounced their names. "Miss Anderson, this is Mr. Flandrau. Mr. Flandrau—Miss Anderson."

Curly glanced quickly at Kate Cullison, who nodded. This then was the sweetheart of poor Mac.

Her eyes filled with tears as she took the young man's hand. To his surprise Curly found his throat choking up. He could not say a word, but she understood the unspoken sympathy. They sat together in the back of the box.

"I'd like to come and talk to you about—Mac. Can I come this evening, say?"

"Please."

Kate gave them no more time for dwelling on the past.

"You did ride so splendidly," she told Curly.

"No better than Dick did," he protested.

"I didn't say any better than Dick. You both did fine."

"The judges will say you ride better. You've got first place cinched," Maloney contributed.

"Sho! Just because I cut up fancy didoes on a horse. Grandstand stunts are not riding. For straight stick-to-your-saddle work I know my boss, and his name is Dick Maloney."

"We'll know tomorrow," Laura London summed up.

As it turned out, Maloney was the better prophet. Curly won the first prize of five hundred dollars and the championship belt. Dick took second place.

Saguache, already inclined to make a hero of the young rustler, went wild over his victory. He could have been chosen mayor that day if there had been an election. To do him justice, Curly kept his head remarkably well.

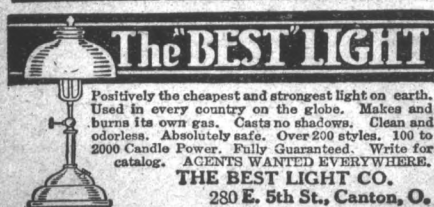
"To be a human clothes pin ain't so much," he explained to Kate. "Just because a fellow can stick to the hurricane deck of a crunch without pulling leather whilst it's making a milk shake out of him don't prove that he has got any more brains or decency than the law allows. Say, ain't this a peach of a mo'ning?"

A party of young people were taking an early morning ride through the outskirts of the little city. Kate pulled her pony to a walk and glanced across at him. He had taken off his hat to catch the breeze, and the sun was picking out the golden lights in his curly brown hair. She found herself admiring the sure poise of the head, the flat, straight back, the virile strength of him.

It did not occur to her that she herself made a picture to delight the heart. The curves of her erect tiger-lithe young body were modeled by nature to perfection. Radiant with the sheer pleasure of life, happy as God's sunshine, she was a creature vividly in tune with the glad morning.

"Anyhow, I'm glad you won."

(Continued next week.)



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Woman's Interests

Red Cross Christmas Seals

By Elizabeth L. Parker

THE Red Cross Seal, as millions farm and that there are plenty of city of Americans know it today, is men as well who withhold from their an agent of happiness and of families the comforts they can well health. It was originated in 1907 by Miss Emily P. Bissell, of Wilmington, Delaware, who learned through Jacob Riis of somewhat similar seals that were sold in Norway for the purpose of raising funds with which to fight tuberculosis.

Miss Bissell persuaded the American Red Cross to take up the idea, with the result that seals were sold in a limited number of communities in 1908. The sale yielded a revenue of approximately \$3,000. The Red Cross then decided to issue the seal each year and to turn the proceeds over to the National Tuberculosis Association and its affiliated societies for the purpose of financing the campaign against tuberculosis. The number of seals sold in America increased by leaps and bounds until in 1917 the total reached 180,000,000.

This year the seals are again on sale beginning December 1. More than half a billion seals have been printed for distribution to state and local agents. In addition to seals, "Health Bonds" in denominations ranging from \$5.00 to \$100 are to be sold in lieu of seals to large contributors who do not send out a sufficient quantity of mail in December to make use of all the seals they would like to purchase. The combined quotas of all the state organizations call for more than \$6,500,000 to carry out the intensive educational campaign being conducted by the National Tuberculosis Association and its one thousand affiliated societies.

When an individual buys seals he is really paying a legitimate tax, as there is no government or state tax to carry on the fight against tuberculosis. Until money is given by the people as a tax, the work must be carried on by the national and state tuberculosis associations.

We need this year to raise in Michigan by the Seal Sale, \$200,000. Why? Because:

1. Influenza has increased tuberculosis.
2. Nearly nine hundred soldiers with tuberculosis have returned to Michigan.
3. Deaths from tuberculosis are increasing. Last year in Michigan there were 3,476 deaths from tuberculosis. Placing the value of a life at \$5,000, the loss to Michigan in dollars and cents is \$17,380,000.

In a recent issue of "Michigan Out-of-Doors," the official magazine of the Michigan Anti-Tuberculosis Association, one woman contributor refutes in a very spirited article the charge that is so often made that farmers care more for the health and welfare of their stock than they do for the health and welfare of their families. The writer, herself the wife of a farmer and a woman who does all the work that is to be done in a typical Michigan farm home, characterizes the charge as a slander. She maintains that the farmer is just as much interested in the happiness and welfare of his family as is the city man. While she admits that there are many selfish farmers who do not give their families the comforts that they need and should have, she very reasonably points out that selfishness is not limited to the

And anyone who has been brought up on the farm or who has come into close contact with farm life will immediately admit that this farmer's wife is wholly correct in her state-



Mrs. Joan H. Norris, who was recently appointed City Magistrate in New York. She is the first woman to sit in a criminal or civil court in New York state as judge. Mrs. Norris is an attorney and a leader among the women in her state.

ments. Human nature is pretty much the same the world over and selfishness will display itself no matter what the man's occupation, as will right-mindedness and liberality.

But the fact remains that the farmers of the state, as a class, have not always taken as deep an interest in movements of public health as have the urban people as a class. Public health workers say that it is hard to get their movement "across" to the rural population.

This is, of course, not due to the fact that the farmer is less interested in the health of his family than is the city man, but because of the fact that the farm population is more widely scattered, less easy to reach, with less social solidarity. Where the farmer is well organized in granges, farm bureaus and similar organizations, he shows as much interest as the city man.

Just now the Michigan Anti-tuberculosis Association is engaged in the biggest task that it has ever undertaken, and this task can not be accomplished without the help of the farmers of the state. By helping to put this job across the farmers of Michigan will give a practical demonstration of the statements that they are not what city people sometimes charge them with being.

The Michigan Anti-tuberculosis Association is engaged in the task of selling 15,000,000 Red Cross Seals this year. It is a selling proposition of such large proportions that at first it staggered those who undertook it. But it can be done, provided everybody does his share, the farmer as well as the city man.

Fifteen million Christmas Seals, sold at a penny apiece, will mean a sum of

more than \$150,000 with which to fight tuberculosis in Michigan during 1920. There are thousands upon thousands of farmer people ill with tuberculosis in Michigan, the percentage from the farm being nearly as high as from the city, in proportion to population. Tuberculosis is as much a farm problem as it is a city problem, and the farmer is looked to to help solve it.

It will mean that every person in Michigan will be asked to contribute five pennies to the campaign. That is not a large sum—five pennies for every man, woman and child in the state.

It will mean some twenty-five or fifty cents for the average family. Suppose this is doubled, for good measure, as it should be, even then it would be very little.

The campaign began December 1 and closes December 10. Although the intensive drive for selling the seals will be between the dates mentioned, the seals will be sold all during December. During the coming month, the farmers of Michigan will have a chance to show that they are as whole heartedly behind the health movement as are the city men.



A Visit to the District School

By a Mother

DID you ever visit your district school? I did this afternoon. I entered a small, rather neat looking room in some respects. Across the front of the room was the blackboard space. No boards on the sides of the room, but between the windows were stretched squares of burlap, probably intended for exhibiting good work or whatever the teacher wished to pin on it. A few stale samples of drawing were pinned on one piece of burlap, and pasted on various parts of the walls, and on the front blackboard were Halloween decorations.

The teacher is a bright girl but she surely missed her calling when she took up teaching. She volunteered the information when she first took the school that she never intended to teach but when the county decided to ac-

cept high school graduates on account of shortage of teachers she decided she would try it.

There are no recitation seats, and a number of the desks are so insecurely fastened that they flop, and squeak, and wiggle more frequently than is pleasant.

I saw children from some of "our best families" whose faces and necks and hands had evidently not seen soap and water for some time and whose hair was unacquainted with comb or brush.

The doors of this building are never locked, there is no way to lock them. The windows have no secure fastenings, and often pupils are in the building an hour before their teacher arrives. No respect for person or property are shown and evidently is not taught. At recess time such noise and disorder prevailed that it was almost impossible to hold conversation with the teacher.

Something is lacking, not only in the school itself, but in the district. Is this school in your district? Are you the teacher of this school? Are you a member of the school board of this district? Are you the father or the mother of some of these children?

Don't blame the teacher, nor the school board but wake up and do something. Remember that a good teacher does not teach for nothing.

NICKNAMING THE BABY.

BY JULIA R. DAVIS.

EVEN when the parents show judgment in giving their child a good, strong name, it is often hard to associate it with the wee, winsome darling, and too often it is ignored, and some diminutive substituted, which seems more fitting for a charming little tot.

Now if the baby could have those nicknames in the nursery all might be well. But alas! as many people can testify to their mortification, the nickname often sticks through life.

A handsome boy first called "Brother," then "Bubber," had to submit to the humiliation of hearing it shouted to him on the baseball field, after he was the best athlete on the high school team. Another boy called by his loving parents, "Sweetheart," later abbreviated to "Sweet," suffered even greater mortification during his boyhood.

One girl, nicknamed as a baby, "Precious," later called by family and friends, "Press," sighs in vain for her own "Margaret." A slender, graceful girl, whose given name was the beautiful one of Mildred, carries the trivial of "Dump." Her doting parents began it by calling her "Dump-

(Continued on page 733).



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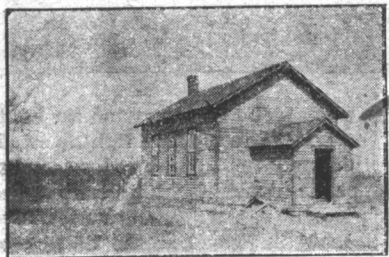
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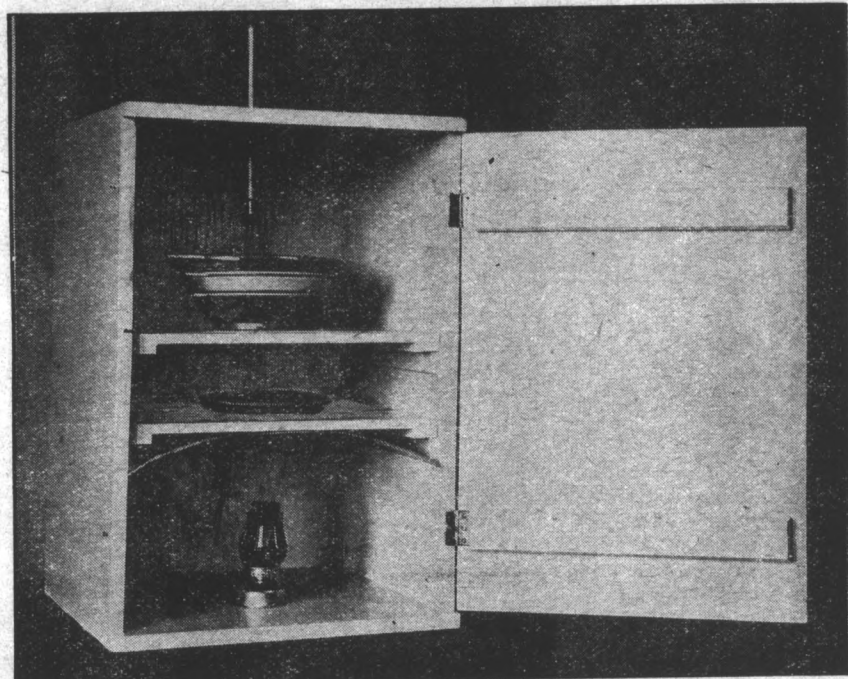
Sponge Box or Bread Raiser

IN making bread in cold weather the of the holes in the top. Any Fahrenheit housekeeper often finds it difficult to hold her sponge or dough at the right temperature so that it will rise in the required length of time. She will find a sponge box or bread raiser like the one illustrated, a great help in keeping the proper temperature.

Such a box can be made from an ordinary dry goods packing box. A convenient size is 26x20x20 inches. About ten inches from the bottom of the box, a shelf made of slats or strips of wood rests on cleats fastened to the sides of the box. A second shelf is placed four inches above the lower one. The shelves can be removed when cleaning the box. On the under side of the lower shelf, a sheet of galvanized iron slightly wider than the shelf is inserted. This piece of metal is curved, in

The temperature of the box should be kept as near eighty-six degrees F. as possible if bread is being made in the quick way. However, if the sponge is set overnight, sixty-five to seventy degrees is the better temperature until the dough is made in the morning, after which the temperature may be increased to eighty-six degrees. The temperature in the box may be varied by raising or lowering the flame of the lamp, or by using warm or cold water in the shallow pan.

To avoid all danger of fire, the box should be lined with asbestos or tin



order to make it slip in and stay in place securely. This prevents scorching of the lower shelf when the lamp is placed below, and also helps to distribute the heat more evenly.

Several small holes are bored in the lower and upper parts of the sides and in the top of the box to promote circulation of air. A cork which has been bored through the center to admit a straight thermometer is inserted in one

when a kerosene lamp is used for heating the box. If an electric light is used, the lining will not be necessary. A sixteen candle-power light will heat the box nicely. A small and inexpensive night lamp is placed in the bottom of the box, and a shallow pan of water is placed on the lower shelf so that the air in the box will be kept moist. The door is hinged and fastened with a thumb latch or hook and staple.

Light for the Short Days

IT is a rather strange thing that with every other line of agricultural activity the provision of good modern lighting systems should have been so long in coming. Until the last three or four years the great majority of farm homes still got along with the old kerosene lantern for barn and yard work and with the lamp for the house.

In the house these lamps were not very satisfactory at best. Cleaning and filling them took a lot of some one's time and, unless there were a number of them used, it was usually a matter of those nearest the lamp getting the light and of those farther away getting along without it. There had to be lamps to carry upstairs at bed time, one for each room. And these meant more cleaning and filling, considerable inconvenience and an ever-present fire hazard. To be sure, they were a lot better than the candles and tallow dips of the generation before, but they left a lot to be desired, too.

In the barn it was a more serious matter. A lantern was the poorest kind of a makeshift. Large open passageways and open lofts without any papered walls to reflect the light made the lantern a mere point of light, the rays from which seemed to be immediately absorbed in the darkness. It was a case of holding the lantern close to the work in hand in order to see at all. The lantern had to be picked up and carried from job to job, and this made a man one-handed and consumed a lot of extra time. Finally in the barn the fire hazard was immeasurably greater than in the house. A lantern balanced unstably on a straw-covered floor had an excellent chance of being upset. And once turned over, the burning liquid kerosene had every chance for destruction.

What a difference there is now in many country homes. Instead of the coal oil lamp lighting just the center of the living-room, carried from room to room when light is needed, and cleaned and filled every day, we find elegant electric fixtures. On the living-room table is a reading lamp with a shade that softens the bright rays of the electric bulbs, but allows them to reach the farthest corners of the room. Bracket lights on the walls and a special lamp on the piano give plenty of extra light whenever it is needed. Simpler but just as effective fixtures are in all the other rooms of the house, upstairs as well as down, in the hall, the lantern a mere point of light, the rays from which seemed to be immediately absorbed in the darkness. It was a case of holding the lantern close to the work in hand in order to see at all. The lantern had to be picked up and carried from job to job, and this made a man one-handed and consumed a lot of extra time. Finally in the barn the fire hazard was immeasurably greater than in the house. A lantern balanced unstably on a straw-covered floor had an excellent chance of being upset. And once turned over, the burning liquid kerosene had every chance for destruction.

upstairs or down, and porch lights are controlled from inside the house.

In the barn the old lantern is known no more. Electric lamps are strung everywhere they will do the most good and the switches are conveniently located. No more carrying lanterns or worrying about fire.

The yard is also made more cheerful. On top of a pole in the center of the yard is a powerful lamp under a reflector, and when this is turned on the whole premises are flooded with a light that reveals every object and that makes it an uncomfortable place for chicken thieves and other night prowlers. This yard light is controlled either from the house or the barn.

The farm of today is enjoying just as complete electrical service as the city home, because electricity on the farm affords power as well as light. Pumps, washing machines, separators, churns and a wide variety of other light power appliances are run today with small electric motors at a great saving of both time and labor.

All this service is developed right on the farm by a small electric plant consisting of a generating unit and a set of storage electric plants in the last few years that today they are more easily taken care of than the average farm implement. They incorporate the best features of mechanical and electrical design.

NICKNAMING THE BABY.

(Continued from page 731).
ling," when she was a chubby tot.

It was a very loving grandmother who nicknamed the little girl who had been left to her care, "Pet." Not a thought, probably, of the later years deterred her relatives and friends from using this diminutive in her early years. But, as is too often the case started the nickname was never dropped. It seems, to say the least, inappropriate to strangers to hear her addressed by this love-name of her childhood, now that she is a middle-aged matron, and unusually tall of stature.

Of course, at boarding school and college girls and boys often nickname each other, but these do not follow them through life as do the names they have carried all through their first years.

But it is encouraging to know that things have improved in this respect during the later years. We often hear parents address the tiny daughter as Elizabeth, Dorothy, Margaret, or similar dignified names, when formerly they would have been Bess, Dot, Mag, etc. And the sons, although of tender years, are now often William, John, Charles, etc.

The choice of a child's name should be for use during all the changing years of life, and it should be attractive, one which a man, or woman, in any station of life will not be ashamed to acknowledge. Therefore steer clear of the sin of naming a boy "Martha," or "Bertha," as I have known unthinking parents to do, nor is it suitable to christen a girl "Peter," "George," or similar names appropriate only for sons.

Strong, appropriate, good names, honest and revered, give even a child a dignity of its own, and in later life will have a tendency to win respect for its owner. So, parents, think well before writing the name of your child on the leaf of your family Bible. Remember, no other gift bestowed upon your child is so utterly a life gift as its name. Be sure to make that gift one that will win gratitude as long as its owner lives.

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Our Boys' and Girls' Department

Dairy Cow Clubs Hold Much Promise

NEW developments in junior agricultural extension should include dairy cow clubs. This, at least, is the opinion of club leaders in Wayne county who are now busy promoting this project and introducing the plan to Michigan. These clubs are similar to calf clubs which have become so popular throughout the state, except

that the boys and girls buy dairy cows instead of calves and keep records of the milk produced as well as of feed consumed.

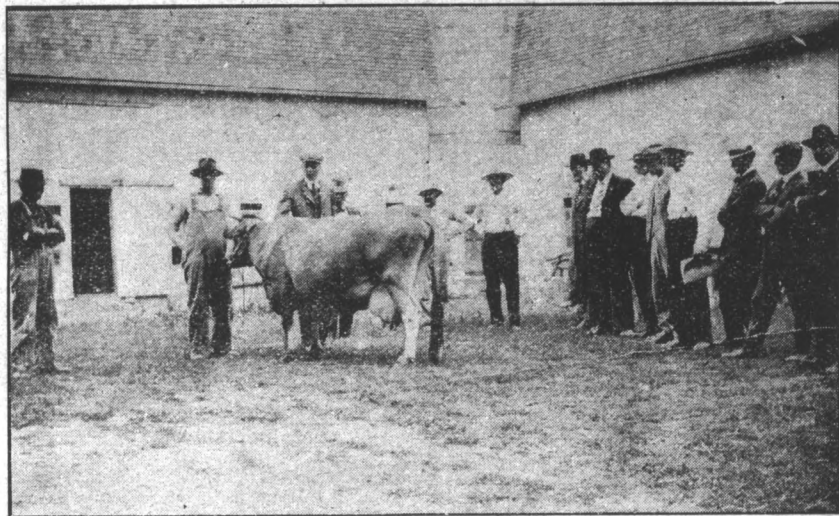
The dairy cow club appeals to many boys and girls who are old enough to care for a cow. It appeals much more than does the calf club for the reason that the dairy cow produces an imme-

diately and tangible income in the form of milk and offspring while there is no tangible income from the calf for the first two years unless it is sold.

From the standpoint of improving the herd, the dairy cow club has another advantage over the calf club inasmuch as the profit from milk and offspring is likely to be equal to, or even more, than the interest on the investment. This makes it possible for the boy or girl who has to borrow the money, to pay the interest, and possibly something on the principal, and thus renew the note from year to year until it is paid.

In the case of the calf club the owner is likely to sell his calf at the end of the year to meet the note instead of keeping the calf as a nucleus of a future herd, or for purposes of herd improvement.

A country-wide dairy cow club is being formed in Wayne county now. The People's State Bank of Wayne, Michigan, is making the loans to the extent of \$6,000. Boys entering the club are scattered all over Wayne county. Hon. D. D. Aitken, president of the National Holstein-Friesian Association, and J. A. Waldron, dairy specialist of M. A. C., are assisting County Club Leader G. O. Stewart in this new project.



The Cow Produces an Immediate and Tangible Income in the Form of Milk and Offspring.

Boys' and Girls' Club Work

How I carried Out my Poultry Project.

THE first information that I received as to the poultry project was from Mr. Hall, principal of the East Leroy High School, who visited our school and explained it thoroughly. I was interested and secured by parents' consent. Then I was enrolled as a member of the East Leroy Poultry Club. I joined for the reason that I could work for some end and perhaps increase the value of my fowls.

The object of the poultry club is to interest the boys and girls in poultry raising and also to bring his or her breed of fowls to a higher point of perfection. This can be done if the fowls have the proper care and are not mistreated in any way. If a person makes a research as to the origin of some domesticated fowls, he will find that the Brahmas are about the oldest breed and originated from India and China. The important breeds of chickens are classed as follows, according to their types: Brahmas, Cochins and Langshans, represent the large meat-producing type, and originated from India and China. Leghorns and Minorcas represent the egg-producing type. All of the Leghorns originated from Italy, while the Minorcas are from Spain. The Plymouth Rocks, Wyandottes, Rhode Island Reds, and Orpingtons represent the general-purpose breeds or type. They are of American origin, having been produced here by the crossing of the two other types, and we have improved them greatly.

The breed that I selected to raise from was the Single Comb Rhode Island Reds. My reason for doing this was because they are good heavy birds, good winter layers, having an excellent grained flesh and very beautiful plumage. The color of a Rhode Island Red male is a deep rich red in all sections except the tail, which is black. The color of the female Rhode Island Red is an even shade of red except for the back, tail and wings, which are the same as in the male. The Rhode Island Red is a very hardy chicken, for

it originated from the cold coast of Rhode Island. The farmers of that state raised them simply for meat and eggs, not caring for their perfection. There was no distinction as to their combs, for they were all bred without notice of this particular part of the fowl. Later when the fancier began to breed the Rhode Island Reds, he bred for the kind of comb he desired, and also perfected their color.

When I got the eggs I selected large smooth ones of uniform size. I set three settings of thirteen eggs each, thirty-nine in all. Thirty chickens hatched and did very good until five were lost through being killed by hens and by drowning, leaving me twenty-five young chickens. The total expense of the chickens, including eggs

Club work has done a good thing for me because it led me to keep an account of feeds, labor and my net profits. If I should ever take up the poultry projects again, I believe I would follow nearly the methods that I used this year, for I have been very successful, in my estimation, and hope to be as good during the coming year.



Bumper the White Rabbit Plays King

By George Eschelbert Walsh

STORY IV. Spotted Tail Shows Enmity.

YOU can imagine how grateful Fuzzy Wuzz was to Bumper for saving her from Killer the Snake! Not only that, but she was mightily impressed by his wisdom. Who but a king would have thought of gnawing off the butt of the tree so it would fall on Killer!

She was so grateful that she told the story again and again to her people, and they seemed as greatly impressed as Fuzzy Wuzz at Bumper's shrewdness. But Spotted Tail was not pleased. Perhaps he was still suspicious, and thought it was more luck than knowledge that had saved Bumper's reputation. He still believed that

Bumper had never seen a hornet's nest until that day he innocently mistook Mr. Yellow Jacket's home for a big, harmless ball.

This fact, coupled with several other little things that he had observed, Bumper's avoidance of certain plants, for instance, that he seemed to think might be poisonous until the others ate them, convinced him that Bumper was not fit to be the leader of his people.

"If Old Blind Rabbit could see with his eyes," he reasoned, "he'd know, too. But some day I'll catch him, and show him up. He's no king, for a king should know everything."

By letting such things dwell upon his mind, Spotted Tail worked himself up into a pitch of excitement that was

not very pleasant. He fancied himself wronged by Bumper. If the white rabbit hadn't come into the woods, Spotted Tail would have been chosen the natural leader.

Jealousy and spite are enough to sour any disposition, and Spotted Tail was in a fair way of showing that he was not really fitted to be a leader. A good leader never grows sullen and discontented because somebody else happens to get more favors than he. Fuzzy Wuzz's attachment to Bumper further increased Spotted Tail's displeasure. In time he came almost to hating Bumper, and tried to think of ways and means to disgrace him before the others.

Bumper was only partly conscious of this feeling toward him. He knew that Spotted Tail was suspicious of his knowledge of wood lore, and he was on his guard all the time to prevent any mistake that would give him away. But he never dreamed that the big rabbit was beginning to dislike him. He seldom hunted with him, and had few words with him, but there had been no open enmity between them.

Then one day in the woods Bumper found himself unexpectedly separated from the others, with only Spotted Tail in view. Fuzzy Wuzz and the rest had crossed the brook on a natural rustic bridge of logs, and were feeding on the opposite side when Bumper discovered them.

"Hello!" he exclaimed. "How'd they get across there? Surely, they didn't jump that distance."

Spotted Tail, to whom this was addressed, replied:

"You should know by this time that a rabbit never jumps a stream that he can get across any other way."

Bumper nodded and smiled. "Still, I don't see how else they got across."

Spotted Tail said indifferently:

"Oh, I suppose they crossed on Mr. Beaver's house."

This remark caused Bumper to reflect. He had heard of Mr. Beaver, but he wasn't sure just what kind of an animal he was. And his house was more of a mystery than anything else.

"On Mr. Beaver's house?" he asked, before thinking. "Oh, you mean—"

He stopped in confusion, and Spotted Tail smiled gleefully.

"You mean what?" he asked his eyes twinkling wickedly. "Don't you know what kind of a house Mr. Beaver builds?"

"Why, what a question?" laughed Bumper, trying to evade a direct answer.

"I think it's a very natural question," added Spotted Tail. "I don't believe you ever saw Mr. Beaver or his house."

Bumper laughed heartily at this, but it was a laugh to conceal his embarrassment and not an expression of his enjoyment.

"Ho! Ho! You can be very comical if you want to!" he said. "Now maybe you can describe what sort of a house Mr. Beaver builds. Let me see if you can."

But Spotted Tail felt he had Bumper in a corner, and he wasn't to be bluffed. "I could describe it," he said, leaning back. "but I don't have to. If you have any eyes in your head you can see for yourself what it is like."

"How's that?" asked Bumper, growing more uncomfortable.

"That's what I said," was the quick rejoinder. "We've been standing near it for some time, and you can see it with your own eyes—if you know where to look for it."

"Oh! Ho!" laughed Bumper, less joyously than before. "Mr. Beaver's house is in plain sight, is it? Well, then, neither one of us will have to describe it."

"No, but where is it?" pursued Spotted Tail relentlessly.

Now Bumper was in a terrible quandary. There was nothing in view that looked like a house. So he cast a glance up at the trees, hoping to find it among the branches, and then back through the thick, tangled bushes. There was nothing in sight that suggested the home of any animal.

All the time his eyes were searching around for some evidence of Mr. Beaver's house, Spotted Tail was watching him with an exultant grin on his face.

"Ah! I thought so," he said finally, with a triumphant grin on his face. "You don't know what kind of a house Mr. Beaver builds. You don't even know where he builds it. You've been looking for it up among the trees, and back in the woods. Ho! Ho! And you call yourself a leader—the king of the rabbits! Why, you don't know anything about the woods."

Bumper felt he was cornered, and he was mighty glad the others were not present to witness his discomfiture.

"Now, if you're king, show me where Mr. Beaver's house is, and where he builds it," continued Spotted Tail. "If you can't I'll go back and tell the others you're an ignorant impostor. You're no king! You don't know anything about the woods or its people. A king indeed!"

There was such scorn and contempt in the voice that Bumper winced. He realized for the first time that he had an enemy in Spotted Tail. There was no other excuse for his words and actions.

"Spotted Tail," Bumper began in an injured voice, "why do you dislike me, and try to offend me?"

"Don't give me any such talk," rudely interrupted the other. "I see through it all. You're trying to avoid the question. Answer me! Where's Mr. Beaver's house? If you don't know confess your ignorance."

Bumper's wits failed him for the first time. He saw no way out of the corner. Spotted Tail had him, and the disgrace of confession was horribly mortifying.

A sudden splash in the water attracted his attention. A big rat-like animal was swimming toward the shore, with only his head and muzzle above the surface. Bumper watched him in fascination. When he reached the shore, he crawled upon it, and said quite angrily:

"I wish, Mr. Spotted Tail, that your people would stop crawling across the roof of my house. It annoys me very much. I was fast asleep when they thumped over it."

Spotted Tail was deeply upset by this interruption, and Bumper's wits, coming to his rescue, made him smile. Speaking at a venture, he addressed the rat-like animal.

"I'll ask them not to do it again, Mr. Beaver. Of course, it is very annoying to be disturbed when asleep by people climbing over the roof of your house."

"Thank you!" replied Mr. Beaver, dipping into the water and swimming back to his dam. Bumper pointed to the dam across the stream, and said to Spotted Tail: "There's Mr. Beaver's house."



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In salting butter, it gives the butter a nice flavor and good keeping qualities, dissolving quickly, preventing gritty butter.

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to prevent hardening, it leaves the boiling water clear and free from scum, and gives the perfect salt flavor.

On account of its purity, it is unexcelled for salting stock.

COLONIAL SPECIAL FARMER'S SALT

is the quickest dissolving salt produced because of its soft, flaky grains. It is this quick dissolving quality that is the chief reason for the great popularity of our salt. Therefore, it will pay you to always order Colonial Special Farmer's Salt from your dealer.

THE COLONIAL SALT COMPANY
AKRON, OHIO

Chicago, Ill. Buffalo, N. Y. Boston, Mass. Atlanta, Ga.



New York Dairymen Meet

(Continued from page 713).

ic distribution must be carefully worked out that the rights of all parties may be protected.

The feeding stuffs problem was discussed by Dr. W. H. Jordan, director of the New York Experiment Station at Geneva. The facts he presented had a bearing upon the various suggestions that have been made in regard to legal control of concentrated commercial feeds. His statements were based chiefly upon fifteen years' experience in administering feeding stuff laws, and upon the knowledge gained from a laboratory which has examined during the past twenty years not less than ten thousand samples of feeds.

In reviewing the steps which have been taken to defend the farmer against the wasteful expenditure of money in the purchase of commercial feeding stuffs, Dr. Jordan said it was probable that the extensive use of oat hulls first suggested the inspection of feeding stuffs and the necessity of legislation regulating their sale.

The new legislation asked for is for the purpose of supplying to the farmer full information as to what he is buying on the basis of the sound principle that dairymen and other cattle feeders have the right to know what they are purchasing, not only in kind, but in quantity. The following suggestions have been made with reference to future legislation:

1. Guaranteeing the percentage, either of the so-called inferior ingredients or of all the ingredients entering into the compounded feeds.

2. Guaranteeing the proportions of the several classes of ingredients, such as high protein feeds, carbohydrate feeds, and feeds rich in crude fiber.

3. Requiring a guarantee of the percentages of digestible nutrients in the compounded feed.

4. Requiring the separate sale of the materials designated by law as being inferior.

5. Exclusion by law of certain very inferior ingredients from the compounded feeds and limiting under certain conditions the percentage of crude fiber which a compound may contain.

"It is my personal conviction," says Dr. Jordan, "that suggestion No. 5 is the most practicable means of aiding the farmer, of any that have come to the front. It is enforceable. It cuts out the worst materials and limits the use of oat hulls, screenings and elevator dust. There should be a reluctance to enact law which is not enforceable. It would prove embarrassing and give an opportunity to unscrupulous manufacturers to do about as they please. It is better to secure an improvement of feeds through legislation than to bring about an impracticable situation. It is unfortunate that the present practice of compounding feeds was ever instituted, for it violates good economics, both on the part of the trade and on the part of the farmer. It has brought about the sale of materials which should be classed as roughage, as no better than ground straw, in mixtures regarded as concentrated feeds. There is no good reason why these refuses should be sent back to the farm under the general title of concentrated feeds.

"The real remedy to be applied to this feeding stuff situation, and perhaps the only effectual one, is the intelligent use by farmers of our existing knowledge concerning cattle foods. They have been buying freely mixtures concerning which it is plainly stated that they contain screenings, rice hulls and other low-grade ingredients. It is a serious question whether a knowledge of the proportions of these will depress the sale of such mixtures. If the consumer has bought these, knowing what is present he is as likely to purchase them knowing the proportion of what is present and so the effective appeal must be to intelligence rather than to law."

Commissioner of Agriculture Charles S. Wilson, referring to the importance of dairying in New York state, said that last year the value of the dairy products was estimated at over \$298,000,000, representing one-fourth the value of all the agricultural products of the state. In reviewing the work of the State Department of Agriculture in regulating the sale of dairy products, Commissioner Wilson presented figures showing that seventy-five per cent of the shipments of milk to New York City in 1884 were adulterated either by the addition of water or by skimming. A contrast of present conditions with those of earlier days is astounding. Last year, of the milk shipped from up-state into New York state, less than one-half of one per cent showed even a trace of adulteration, and this percentage is based upon an analysis of more than one hundred thousand lots of milk examined. This is assurance to the consumer that the adulteration of milk offered or exposed for sale within the state has been reduced to a minimum and that he enjoys a maximum degree of protection.

(Continued on page 738).

FARMERS MUST CUT COSTS TO MAKE BUSINESS PAY.

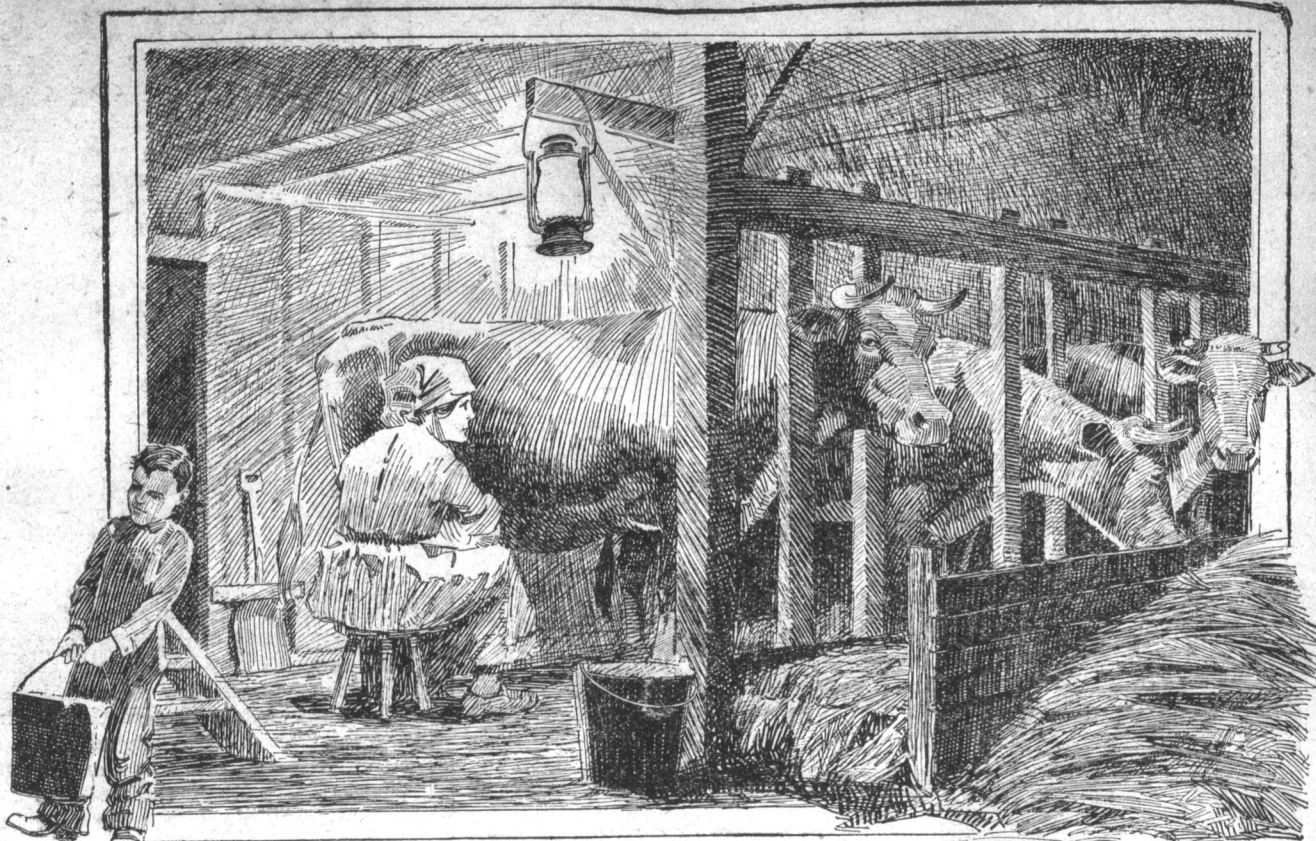
FARMERS' profits in the next year are going to depend largely upon the lowering of production costs, thinks K. L. Hatch, in charge of county agent work in Wisconsin. At a recent conference of county agents Mr. Hatch said:

"The farmer is between two millstones, agitation for lower prices on farm products, and continued high cost of everything else. Prices on no other class of products, no matter what the increase, have met with such protest as that which has come from the public where farm products are concerned. The farmer is expected to meet this demand for lower prices on farm products in the face of increased cost of labor, money, and practically everything else. The only way to do this is to keep down production costs."

Two methods to keep down production costs, especially in the dairy business, were advanced at the conference. By each farmer's growing legumes to feed his cattle and to increase the fertility of his soil, lower feed costs and higher yields of feed are possible. At the same time it is necessary to have cows that will convert the feed into the largest possible amount of milk, and higher production, it is pointed out, comes through better breeding. The purebred sire campaign will be carried on this year in connection with a "grow your own feed" campaign, both tending towards decreased production costs.

CHICAGO'S HOG MARKET.

WONDERFUL markets have been experienced since the European war started, and as remarkable markets have been witnessed since the war came to an end, this year's advances and declines in prices being astonishing. The old-fashioned law of supply and demand has been thrown to the winds, and the packers and other speculators have put prices down and up at their own will, keeping the farmers owning droves of hogs mystified as to what would happen later. Following the early year high records in prices, wonderful declines in values took place, and there was a widespread impression that the market was going to be placed upon a \$10 basis. This belief was responsible for an extensive sacrificing of pigs and underweights in rather recent weeks, and this was becoming so general that the big packers decided to call a halt, which they did by putting market prices on a much higher level. This resulted in materially lessening the marketing of stock prematurely, but the higher prices have brought greatly increased supplies of matured hogs to market. On Monday of last week the receipts of hogs reached the largest proportions seen in the course of four months, but they were disposed of readily at an average advance of from ten to fifteen cents per hundred pounds and it was plainly seen that the packers were paying higher prices to create confidence among owners. Some help in advancing prices has been furnished by marked increases in the purchases made by eastern shippers, although this movement is still on a much smaller scale than in that part of the year when eastern packers are largely dependent upon the middle western markets for their supplies. Hogs now going to market include a very fair representation of lots fed on new corn, and their average quality is excellent. Pigs of strong weights have been selling extremely well, and feeder pigs are much sought after and bring high figures. The bulk of the hogs marketed sell within a range of fifty cents, the spread being unusually narrow. Light and heavy hogs sell close together.—F.



Mrs. Reynard Used to Milk Until 11 O'Clock at Night

"WE lost the price of our Perfection several times over last Spring due to field work that was delayed and crops we had to plant again," says Mrs. C. T. Reynard. "It took so much time to milk by hand that we couldn't take care of the fields properly and we were too tired anyway."

Is this the situation on your farm? Are you tied down to milking drudgery? Read how Mrs. Reynard and her husband won their freedom.

Then the Perfection Came

"Then we bought a Perfection Milker to help us," says Mrs. Reynard, "and it has surely proven itself the greatest machine that ever came on this farm. Before we owned it my husband and I used to milk our 19 cows every night after the

field work was done and often it would be ten or eleven o'clock before we got it done. But everything's fine now. With our Perfection my husband milks our 19 cows in 45 minutes. The cows like the milker and we're going to increase our herd to 40 head just as soon as we can. The Perfection has made us all happier and it's making money for us, too. I'd gladly pay the fare of my brother from North Dakota just to come down and see our Perfection Milker because I know he needs one too."

Send for Names, Addresses and Catalog

Milking drudgery is a thing of the past on every farm where there is a Perfection Milker at work. If the milking is a burden on *your* farm write us for names and addresses of Perfection owners and investigate this great labor saver yourself. We will also mail free a copy of, "What the Dairyman Wants to Know"—the book that answers every question about milking machines. Send today.

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All you need do is to pay closer attention to cow health. A big milk yield is a genuine health certificate; if the quantity falls off the chances are the cow is suffering from some impairment of her digestive or genital organs—the starting point of nearly all cow ailments.

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KOW-KURE is a cow medicine designed to act directly on these vital organs. There is nothing "just as good" for the treatment or prevention of Abortion, Barrenness, Retained Afterbirth, Scouring, Bunches and Milk Fever. For more than a quarter-century it has been used in the most successful dairies. Feed dealers and druggists sell KOW-KURE—in 60c and \$1.20 packages. Send for free treatise,

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It gives full instructions on treating cow diseases—should be in every farm library.

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Offices Dallas, Texas
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Grinds ear corn, shelled corn, oats, wheat, barley, rye, kafir corn, cotton seed, corn in shucks, alfalfa, alfalfa oats, or any kind of grain. Bagger has a double spout attached to either side of mill. We furnish extra hopper for grinding small grain and ear corn at the same time. Made with double set of grinders or burrs. Have a grinding surface of just double that of most mills of equal size, therefore, do twice as much work. Requires 25% less power. Especially adapted for gasoline engines. We make 7 sizes. Write for Free Catalog.

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A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, \$18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 536, New Washington, O.

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how you can make several hundred EXTRA dollars this winter sawing wood with a

DIXIE PORTABLE DRAG SAW
You can cut 25 to 40 cords day after day with only 2 gallons of gasoline—easy to operate—the best built. Make big money cutting wood for yourself and your neighbors. Free descriptive folder, etc. THE PETER GERLACH COMPANY, Sole Makers, Dept. 25 Cleveland Ohio

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Get a sack from your dealer. If, after feeding it as directed, you are not absolutely satisfied, he will refund your money.

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No! She's Not a Mooley

She has been dehorned with a KEYSTONE DEHORNER, making her gentler, safer and more profitable. This also applies to steers. We make Keystone Dehorner, Bull Staffs, and other appliances for dairymen and cattlemen—all sold on a money back guarantee. Write for circular.

M. T. Phillips, Box 126 Pomeroy, Pa.

**-MILK
-CALVES
-MONEY**



New York Dairymen Meet

(Continued from page 736).

"I am of the opinion that the time has come when the standard of quality of cheese for our home markets must be raised, until it approximates that of the export. It is well understood that much of cheese of inferior quality is sold for home-trade that would not be suitable for export. The time has come when the consuming public should demand as good quality of cheese for the markets at home as is used for shipment abroad. Therefore, I take the position that we should use the export cheese as our standard of quality. I mean an honestly-made cheese that will stand up and praise its maker when offered for sale six months after it is manufactured."

At present much wash curd cheese is manufactured in northern New York that contains above forty per cent of moisture. Mr. Hogue said he believed the law should be amended placing a legal standard of forty per cent as the limit of moisture in cheese. The proposition to limit the moisture content of cheese was discussed by several cheese manufacturers and dealers, who agreed that forty per cent was a fair limit.

"Market Milk" was the subject of an address by Hon. Bradley Fuller, president of the Dairymen's League Cooperative Association in which he said he was convinced that education was one of the most potent factors in solving the milk problem. Farmers will have to be educated in two things—clean milk and cold milk on the farm. Last summer producers lost thousands of dollars through neglect to put in a supply of ice.

"It is important," said Mr. Fuller, "that producers shall know cost of production. In figuring the price of market milk, one should take fundamentally the cost of production, add to that a reasonable profit, as well as allow the producer to go into the labor market and compete with other industries for labor."

Mr. Fuller opposed legal milk standards, and spoke of the purpose of his organization to concentrate large quantities of milk at central points, thereby saving overhead charges and doing business in a large way. If the league succeeds in perfecting its plans for handling milk, the supply will be so distributed between New York and the other cities, and the manufacturing plants as to insure the greatest economy in handling the transportation.

In an address on "Controlling a City Milk Supply," Robert S. Breed, bacteriologist at the Geneva Station, said that his investigations had shown that harmful bacteria comes largely from unclean utensils; that some of the best milk is produced in ordinary dairy barns, while very poor milk has come from expensively equipped stables. As the consumer drinks milk, not dairies, and regulate the supply, is progressing he suggested that more attention be given to the care of the milk after it

leaves the stable, and less to dairy barn scoring.

Referring to the milking machines, Professor Breed said the trouble with them does not lie so much with the make of the machine as with getting dairymen to follow instructions.

Professor Brew, of the Cornell College of Agriculture Dairy Department, gave a demonstration of cleaning milking machines, in which he emphasized the need of thorough cleaning with hot water and chemicals to enable the user to secure first quality milk.

In an address on "The Maintenance of a Tuberculosis-free Herd," George A. Smith, dairy expert at the Geneva Station, told how tuberculosis had been eradicated from the station herd by tuberculin testing and the "Bang" method of isolating the reacting animals. The calves are kept separate from the cows, and the milk fed to them is pasteurized at a high temperature.

D. W. McLaury, director of the Bureau of Animal Industry, Division of Agriculture, Albany, spoke on "The Accredited Herd Plan." While the work has been in progress only a few months in New York state, ten thousand cows have been tested. Ten accredited herd certificates have been issued and eighty herds have passed one test. Otsego county has adopted a five-year program to eradicate tuberculosis in the county. Every man in two communities has agreed to start work, and one hundred have signed applications. Mr. McLaury reported that France has imported ten thousand cattle from the United States, of which six thousand were from New York state. These animals were tested by government officials. Eleven per cent were found to have tuberculosis. Of the cows tested in the accredited herd work seven per cent have reacted, showing that New York state has no larger per cent of tubercular cows than other states.

Professor H. C. Troy, of Ithaca, was re-elected president; H. J. Richardson, of Lowville, vice-president; Thomas E. Tiquin, of Albany, secretary, and R. R. Kirkland of Philadelphia, treasurer.

Many kinds of cheese were on exhibition in the dairy show and they were of exceptionally high quality.

In conversation with dairymen in attendance at the state meeting, I found considerable dissatisfaction over the November milk price, but most of them agreed that the Dairymen's League is doing its best to secure satisfactory returns for the milk producers.

The work of organizing the dairymen in the league's cooperative enterprise, which contemplates the establishing of a system of local and centralized milk shipping and manufacturing plants, to handle the surplus and regulate the supply, is progressing as rapidly as is best for safety and permanency.—E. E. R.



Clean Milk is Often Found on Farms with Ordinary Equipment.

Great Hog Profits

MILKOLINE
For HOGS
2¢ A GALLON

Hustles Heavy Hogs to Market

Cuts your feeding costs. Have bigger pigs, fatter hogs. Get them ready for market in far less time. You can do it. Prove at our risk that Milkoline is the surest farm money maker known.

Guaranteed Trial Offer We will ship you ten gallons, half a barrel, or a barrel. Take 30 days—feed half to your hogs and poultry. If not absolutely satisfied return the unused part and we will refund every cent you paid us—no charge for the half you used.

Milkoline has a base of Pure Modified Buttermilk to which essential fats and acids are added. Milkoline comes in condensed form. Will keep indefinitely in any climate. Will not mould, sour or rot. Flies will not come near it.

2c a Gallon For feeding mix one part Milkoline with 50 parts water or swirl and feed with your usual grain feeds. It helps keep hogs healthy, their appetites keen and makes more pork per bushel of grain. Stop buying inferior buttermilk of uncertain quality. Use Milkoline and you will always be sure of uniform acidity, and at a cost of 2c a gallon or less when fed as directed. Many users say Milkoline saves them one-third on feed bills because it makes their hogs and poultry assimilate all their feed.

1400% Profit W. H. Graham, Middleton, Mo., writes that he got an extra \$400 worth of pork from \$30 worth of Milkoline in a sixty day feed. He made an actual test of this lot of hogs in comparison with another bunch. We could quote hundreds of testimonials, but the best proof is that we legally guarantee Milkoline to be satisfactory or refund your money, (you are the judge) and refer you to S. W. Blvd. Bank of Kansas City, Mo., and R. G. Dunn & Co. **MILKOLINE is just as good for Poultry as for Hogs.**

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Edgars Calves, are as yet too young to offer for sale but are a promising lot of calves, and are going fast.

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Mich. State Fair 12 1sts 2 cham. 1 gd. ch.
N. Y. " 9 1st 2 " 1 " "
West Mich. " 11 1st 2 " 2 " "
Saginaw " 10 1st 4 " 2 " "

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Cloverly Angus, 5 cows with calves, rebred; 2 bred cows; 1 two year old, 2 yearling heifers. Price \$2800, 6 yearling bulls, \$225 each. Geo. Hathaway & Son, Ovid, Mich.

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Those choice heifers we adv. have gone to good homes. We have a fine bull calf—worth the money.
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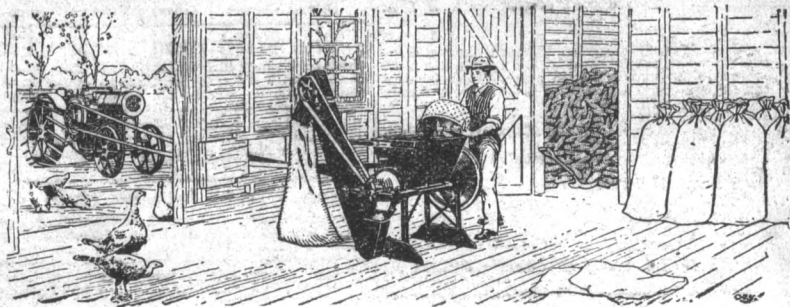
PRIME CATTLE HIGHER.

THE steady upward climb of cattle prices in the Chicago market has been in progress for many weeks, and everybody is wondering where it is going to end. Perhaps the packers pay higher prices than they are compelled to because they desire to encourage cattlemen to finish off their holdings more carefully than many are in the habit of doing, but it is not a matter of great expense, as the percentage of cattle selling from \$18.25 to around \$20.25 per hundred pounds is extremely small from week to week. The poorer class of little canner steers have been selling as low as \$7.25@8, but the greater part of the steers sell around \$13.25@18. Since the weather turned colder the consumption of beef has increased very perceptibly, and but for this, cattle prices would be much below where they are today. The changed general conditions are encouraging farmer-stockmen to go rather extensively into cattle feeding for the approaching winter, and normal feeding is going to be carried on in most feeding districts, according to reliable advices. The spread in prices paid for stockers and feeders is extremely wide, extending all the way from \$6 to \$7 per one hundred pounds for the cheaper class of little stockers up to \$12 to \$12.50 for a few lots of prime fleshy feeders requiring a short finish, but not many sales are made higher than \$11.50. The approaching cold weather has been bringing a great many thin cattle weighing from 600 to 1000 pounds on the market and many of these are going back to the country for proper finishing. During the last few days the demand for cattle of all kinds improved remarkably, and the advance in prices extended to about all descriptions on small receipts in Chicago and other western markets. Cattle weighing around 1,350 pounds with enough beef quality to bring \$18.25 to \$18.50, were taken as substitutes for prime beefs, while 1,175 to 1,250-lb. short-fed steers at \$16.50 to \$17 looked fifty cents higher than a week earlier. Fair 1,150 to 1,250-lb. grassers at \$14.25 to \$14.50 looked seventy-five cents higher, and cut-backs from the feeder purchases went to killers at \$6.50 to \$8. Western range cattle have kept on arriving freely, the receipts including many Canadians.—F.

VETERINARY.

Metritis (Inflammation of the Uterus).—Have a cow that freshened two weeks ago; since then she has gradually lost flesh and shrinks in milk yield. Her appetite is pretty much gone, but she chews her quid. C. E. P., Glennie, Mich.—I am inclined to believe your cow did not clean properly and she may have become infected. Give her one teaspoonful of hyposulphite of soda and ½ oz. of fluid extract of cinchona at a dose in one quart of water as a drench three times a day for ten or fifteen days. Then give 2 drs. of dilute hydrochloric acid three times a day in one quart of water as a drench or in drinking water, preferably after meals. It is needless to say, she should be well fed.

Chronic Indigestion.—I have a two-year-old heifer that freshened nine weeks ago, which is most inclined to eat old dried feed, dock stems that are dried, in preference to good corn fodder. She is rather fond of dry oat straw. Lately she has lost flesh and gives less milk. Part of my stock is thriving. I lost a valuable bull two years ago. Our Vet. called his a case of hardening of gall bladder, caused for want of lime. Have been a reader of the Michigan Farmer for years and profit by it. O. G. W., Fennville, Mich.—Mix equal parts of ground or powdered gentian, ginger, baking soda, powdered red cinchona and salt together and give her a tablespoonful or two in ground feed twice daily. Supply her with a good quality of the kind of roughage she craves and if her bowels are costive, give her an occasional dose of epsom salts.



You Wouldn't Plant Whole Potatoes

because that would be an expensive waste of good seed. You raise just as good a crop by cutting each potato into several pieces of about 2 ounces each. In this way one potato furnishes seed for a number of hills.

When you feed whole grain or corn to your stock, you are cheating yourself the same as you would by planting whole potatoes. Experiments conducted by government stations have brought out the fact that farm animals don't masticate whole feed thoroughly and that much of it passes through the intestinal tract undigested—a total waste.

International Feed Grinders

will effect a saving of from 12 to 35% in feed for the farmer who has been accustomed to feeding on the whole grain basis. Ground feed is easily assimilated and converted into beef, pork, milk and horse power without waste.

If you use small grain or shelled corn for feed, you have need for a type "C" grinder, made in 6" and 8" sizes, requiring from 2 to 8-h. p. to operate and having capacities ranging from 5 to 15 bushels an hour. If you feed corn on the cob, you will want either a type "B" machine, which grinds corn on cob, or a type "D" that grinds it in the husk. The type "B" is made in three sizes—6", 8" and 10"—and the type "D" in two sizes—8" and 10". The power requirements range from 2 to 12-h. p. and the capacities from 5 to 30 bushels an hour.

Write for a catalogue—or ask your International dealer about these grinders.

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Atta Boy of Maple Crest born April 1919. Sire Imp. Spotswood Sequel A. R. 19 A. R. daughters Dam imp. Albinia price \$175.00. Pride's May King of Avondale born June 1919 Sire Nora's May King of Bailey Falls dam Queens Pride of Harrington A. R. price \$150.00. May Boy of Halcyon born April 1917 Sire Byron S. dam Mixer Mildred price \$250.00.

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Reg. Guernsey bull calves for \$50.00 delivered, sired by the best bred bull in Michigan. Also heifer calves for sale.
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Bennie of the Ridge No. 41637. His dam is Trixie of the Ridge B. F. 53738 in class E. E. Granddam Abbie of Riverside 81612 B. F. Champion Guernsey cow of Michigan. Herd of federal and state accredited list.
E. J. SMALLIDGE, Eau Claire, Mich.

GUERNSEYS—REGISTERED BULL CALVES

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

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

Registered Guernsey Bull for sale, 2 years old. **KRESTEN THOMSEN**, Rudgate Farm, Birmingham, Mich.

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.

"Top-Notch"
HOLSTEINS

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

GET A BETTER BULL

WINNWOOD HERD

BREEDERS OF

Registered Holstein-Friesian Cattle

We have bull calves ready for service and a new crop of baby bulls coming all of Maplecrest breeding. We have one of the largest pure bred herds in Michigan and this will be the last chance to buy sons of Flint Maplecrest Boy, cheap. For his daughters start to freshen this winter and they will all go on yearly tests. We own them all and will develop them. Don't wait, a bankable note is the same as cash to us and our price will be right. Tell us your wants.

JOHN H. WINN, (Inc.)

Lock Box 248, Roscommon, Mich.

A Fine Herd of Reg. Holstein

yearlings. Consisting of 10 richly bred heifers and the 8 months old bull, Sir Johanna Ormsby Pietertje. This is a great foundation for a herd and a fortune. I also have 8 cows, two to five years old, fresh or soon due. I am going to sell these before Nov. 15th. It is your move if you want them.
Fayette, Ohio.
L. E. CONNELL.

Hatch Herd (State and Federal Tested) Ypsilanti, Michigan. Offers young sires 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 33.33, 20 nearest 27.83.

Additional Stock Ads on Page 740

Holstein Friesian Cattle

I am offering my entire herd for sale consisting of herd bull, 9 cows and heifers fresh or due to freshen soon, 4 yearlings, 1 heifer calf, 2 bull calves.

Herd Bull.
2 yrs. old in Dec. 1/2 white (a good one). Dam a 30 lb. 3 yr. old that milked around 35 lbs. milk a day for 7 days. His sire, a son of a 38 lb. 3 yr. old daughter of a 32 lb. ten yr. old cow. Average of two nearest dams, butter 7 da. 34.10, milk 574.65.

No. 1 Bull calf born in Sept.
Dam 13.34 2 yr. old (record made 37 da. after calving. Sire from a 43 lb. four year old.

I also have bull calves from untested dams from my herd bull.

Herd on the accredited list.

C. W. WILSON,

R. F. D. 4, Mason, Mich.

Farm located 1/2 mi. south of Okemos Station on P. M. railroad.

Wah-Be-Me-Me Farms

White Pigeon, Mich.

Holstein-Friesian Cattle

Herd Headed by

Segis Pontiac De Nijlander

A 32 lb. grandson of Michigan's great 35 lb. champion cow, Pontiac De Nijlander. His dam, Oak Valley Korndyke Beets Segis Fan, 32.06, also a Michigan prize winner on yearly production and a prize winner in the National Ass'n.

Write for list of bull calves from 18 lb. 2 year olds to over 30 lb. dams.

CLUNYSTOCK FARM

A Semi-Official Bred Bull to Head

Your Herd

Maplecrest Application Pontiac No. 132652, heads Our Herd

His dam's record is 1344.3 lbs. butter, 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515.6 lbs. milk in 7 days.

One of his sons from our good record dams will carry these great blood lines into Your Herd.

For Pedigrees and Prices write to R. BRUCE McPHERSON, Howell, Mich.

HOLSTEINS OF QUALITY

Cows all sold. Have 15 choice heifers some bred to a 33 lb. and 35 lb. bulls. Some open, will breed anytime to suit purchaser to a grandson of May Echo Sylvia. Record of two nearest dams of herd sire is 35 lb. butter and 82 lb. milk in 7 da.

E. C. HARDY, Rochester, Mich.

FOR SALE

High class Holstein Bull ready for service. Sired by King of the Pontiacs Segis a 38 lb. bull. Dam Moonlight Pietertje Rosewood 15.40 lbs. 7 days, with 13745.2 milk in one year.

Pedigree and price upon request. HILLCREST FARM, Ortonville, Mich.

Holstein Bull born Apr. 19, 1919 nice straight top, about half white. Son of a 21 lb. dam sired by grandson of Annie DeKol Buttergirl 31.43 lbs. Must sell for want of room. Price \$150. JOHN P. HEHL, 95 Atkinson Ave. Detroit, Mich.

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

Registered Holstein Bull Calves grandson's of King Dollar from 1 to 8 mos. old, straight and thrifty from good producing dams. Heng, breeding; priced to sell. Herd T.B. tested. Write for prices and pedigrees. Ceresco Stock Farm, Ceresco, Mich.

Reg. Holsteins Herd bull, a double grandson of DeKol 2ds Butter Boy 3d. A splendid individual, kind, sure server. Dams record at 6 yrs. butter 7 days 28.33 lbs., milk 619. 365 days at 2 1/2 yrs. butter 82 lbs., milk 1822 lb. W. B. Reader, Howell, Mich.

\$204 Profit above cost of feed from Feb. 1 to Oct. 1, 1919, can have son born June 1, 1919 for \$100 Liberty Bonds or terms. Sire of calf 27 lb. son of Maple Korn. Heng. M. L. McLAULIN, Redford, Mich.

\$125 buys choice Reg. Holstein Bull nearly 1 yr. old. Color 3/4 white; breeding, Pontiac and King Segis. Guaranteed B. B. Reavey, Akron, Mich.

Beautiful Holstein bull calf nearly white born Oct. 23, 1919, Price \$75.00 reg. and del. Better wire for him. J. ROBERT HICKS, St. Johns, Mich.

REGISTERED Holstein bulls sired by King Zerna Ralcartra Pontiac, son of the \$50,000 bull; some from good A. R. O. cows. C. H. Giddings, Gobleville, Mich.

MICHIGAN JERSEYS

Which is the best dairy breed? Michigan Jersey breeders feel that this question has been answered many times.

Jersey superiority was proven at the Chicago, St. Louis, and Ohio tests when large herds from different breeds were tested for a year, and the Jersey led them all.

Many beginners like to do their own experimenting, but that takes time and is usually very costly.

The question of superiority being settled leads us to the point of offering you the benefit of our years of experience. We know you can succeed with Jerseys and we are willing to help you get a good start.

Write to, or call upon, any Jersey breeder in Michigan for assistance. The way to get ahead is to go ahead. Start with Jerseys now!

MICHIGAN JERSEY CATTLE CLUB.

LILLIE Farmstead Jerseys. A few heifers bred to L. Freshen this fall, also yearling heifers; and two or three R. of M. cows. Colon O. Lillie, Coopersville, Mich.

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

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

Maple Lane R. of M. Jersey Herd. For sale Blue Belle's Premier son of Sophie's Premier that sold for \$1500 this fall. Bulls and bull calves. R. C. Red cockerels. IRWIN FOX, R. 3, Allegan, Mich.

Pure Bred Jersey Bull Calves
We are milking fifty registered cows and wish to sell all of the young bull calves. FERTILE FIELDS FARM, Litchfield, Michigan.

Bulls ready for service from our herd bull Marguerites Premier, grandson of Pigeon 99th of Hood Farm, and cows now on test for R. of M. Smith & Parker, Howell, Mich.

HARWOOD HEREFORDS
Young stock both sexes for sale.
"Keep On 508019" heads the herd. Write us your wants. Visitors welcome.

JAY HARWOOD, 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 MCARTHY'S, Bad Axe, Mich.

Herefords of Quality. Renner Bullion, sired by the \$3500.00 Bullion the 4th. now heads our herd. Inspection invited. COOLE & GARDNER, Hudson, Mich.

HEREFORDS: young stock of either sex for sale. RALPH S. SMITH, Kewadin, Mich.

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

BIDWELL SHORTHORNS For Beef and Milk

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

BIDWELL STOCK FARM
Box B, Tecumseh, Mich.

FOR SALE

I am offering my herd of Shorthorns. Cows from \$200 to \$300. Two year-olds \$200. Yearlings from \$150 to \$200. Both sexes. Scotch Topped.

JOHN McCANN, R. 1, Hart, Mich.

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

Ionia Co. Breeders Ass'n
Have for sale Reg. Shorthorns, Herefords, Angus, Holsteins, Jerseys, Red Polls and Brown Swedes, Shropshire, Hampshire and Rambouillet sheep. Poland China and O. I. C. swine. FRED W. BRICKLEY, Sec., R. 3, Ionia, Mich.

Scotch Shorthorns Imp. Royal Bruce heads a section of the Rosewood, Lovely Orangethroes Lady and several other good females. Two bulls ready for service for sale also a few females. CARR BROS. & CO., Bad Axe, Mich., Address Norman Car, Secretary.

MEADOW HILLS SHORTHORNS. Herd headed by Silver King, full brother of Lavender Sultan. Pure due University's great sire. For sale females of all ages, a few young bulls. Geo. D. Doster, Doster, Mich.

NO STOCK for sale at present. Kent Co. Shorthorn Breeders Ass'n. L. H. LEONARD, Sec., Caledonia, Mich.

MILKING SHORTHORNS. Clay bred bull calves. Davidson and Hall, Tecumseh, Mich.

SHORTHORN BULL CALVES FOR SALE. Chas. Metzger & Sons, Ithaca, Mich.

Milking Shorthorns of best Breds, breeding 2 and 7 months old for sale. E. H. Kurtz, Mason, Mich.

For Sale Several choice young Shorthorn cows and heifers Aldrie Duchess and Rose of Sharon families. E. S. Batchelor, R. 6, Howell, Mich.

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

Shorthorn BULL CALVES: 1 to 12 mos. \$50 to \$125 each. IRVIN DOAN, Crosswell, Mich.

SCOTCH Shorthorns for sale. Special-A roan 17 mo. old, bull suitable for herd header. Lawrence P. Otto, Charlotte, Mich.

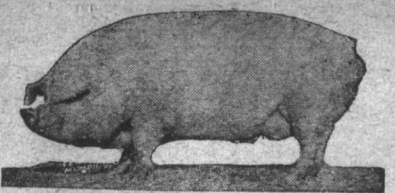
FOR SALE One car load registered Shorthorn Cattle. H. W. HUBBARD & SON, Ovid, Mich.

HOGS

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

Registered Berkshire pigs for sale and also sows with pigs; call or write KRESTEN THOMSEN, Rudgate Farm, Birmingham, 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. BOARS FOR SALE

One of the Best Herds in Michigan

Big type, growthy boars of all ages. I ship C. O. D., pay express and register in buyer's name. If you want a real choice boar, guaranteed right in every way, write me.

J. CARL JEWETT, R. 5, Mason, Michigan.

Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him.

It paid this man to use one of our boars it will pay you.

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

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

DUROC JERSEYS Boars sired by a son of King of the Col. E. D. HEYDENBERG, Wayland, Mich.

Duroc spring boars. Sired by Orion Cherry King Col. 2nd, first aged boar at State Fair. These boars priced reasonable. W. C. Taylor, Milan, Mich.

DUROC JERSEYS CAREY U. EDMUNDS, Hastings, Mich.

DUROC BOARS of size, quality and breeding. All are sired by State Fair Winners. Come see herd. NEWTON BARNHART, St. Johns, Mich.

Mr. Boar Buyer. The best bargains in the state quality and price considered, is at Michigan Farm. All ages. Sired by Panama Special, Brookwater Orion Specialty, and the Principle 19th. Satisfaction guaranteed. O. F. Foster, Mgr., Pavilion, Mich.

Pleasant View Durocs Spring boars and gilts. Well bred and individually good. Prices reasonable. Inspection invited. W. C. BURLINGAME & SON, Marshall, Mich.

Registered Duroc Boars We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 118479. Ira Jackson selected this boar to head our herd. Our prices are within every farmer's reach. The Jennings Farms, Bailey, Mich., R. F. D. No. 1

Duroc Jerseys Our herd won 15 firsts, 4 fourths, 3 fifths at leading Michigan fairs including State Fairs. We have some choice boars ready for service, reasonable prices. Some bred sows later on. RUSH BROS., OAKWOOD FARM, Romeo, Mich.

Duroc Jerseys Two good yearling boars that best herds in Michigan, also spring boars large enough for service. Sired by the Grand and Junior Champion boars. F. J. DROTT, R. 1, Monroe, Mich.

Duroc Boars. Spring boars, fashionable breeding, right prices. BOARDMAN FARMS, Jackson, Mich.

Duroc Jerseys For sale: spring and fall pigs of both sex. CHAS. BRAY, Okemos, Ingham Co., Mich.

For Sale Duroc pigs both sexes farrowed Sept. 14; quality guaranteed; \$20 each until W. E. CUMMINGS, Coleman, Mich.

For Sale: Yearling Duroc Boar, bred by Newton Barnhart, Sire Walts King 82949. Dam Joe's Orion Belle 247134. Grand sire and Granddam bred by Ira Jackson. ELBERT SOUTHWORTH, Vicksburg, 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. 26, Portland, Michigan

Chester Whites, spring and fall stock for sale won highest honors against strong competition. F. W. ALEXANDER, Vassar, Mich.

Pure Bred Chester White Hogs We have the lengthy, big type that you want. We ship on approval and pay express charges both ways on any shipment returned. FERTILE FIELDS FARM, Litchfield, 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. 20 Choice Young Boars and a few fine gilts. Clover Leaf Stock Farm, R. 1, Monroe, Mich.

O. I. C's. I will ship C. O. D., pay the express and record free of charge every boar sold in Oct. and Nov. F. C. Burgess, R. 3, Mason, Mich.

O. I. C's. Last spring boars all sold. Have an extra good lot of last spring gilts, good fall pigs not akin. Good stock, registered free, 1/2 mile west of Depot. 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. One June boar and fall pigs not akin. Also Shorthorn bull calf 7 mos. old, stock registered free. JOHN O. WILK, Alma, Mich.

O. I. C's. Big type serviceable boars, summer farrowed open or bred. G. P. ANDREWS, Dansville, Mich.

O. I. C's Have some choice spring boars and gilts; also this year's fall pigs. WEBBER BROS., R. 2, Phone 408, Royal Oak, Mich.

L. T. P. C. I spring boar, (by Long Jones) the best pig you ever saw; price \$100.00; send check with first letter or the other fellow will beat you, if you don't like description will return check. A few good spring boars left at farmer's prices. Gilts will be bred to a grandson of Giant Buster and a Grand Son of Dishers Giant, no better pair of young boars in the state, and Wiley's King Bob. H. O. SWARTZ, Schoolcraft, Mich.

Boars also sows and pigs. Real Big Type Poland B. Chinas. Bred big for 25 years. Sired by Mich. Buster by Giant Buster, litter 14 out of Mouw's Miss by Rust's Big Joe, out of a Wonder Queen, nuf said. Write us your wants, we will treat you right, our prices are low. J. C. BUTLER, Portland, Mich.

SALE—72 MEDIUM P. C. All ages. Nov. 12, 1919. Tony B. Fox, Pewamo, Mich.

LARGE Type P. C. the largest in Mich. Spring boars now ready to ship. Boars for the breeders and boars for the farmers. Come and see the real large type with quality. Free livery from Parma furnished visitors. Look up my exhibit at the Great Jackson Co. Fair, Sept. 8th. to 12th, expenses paid if not as advertised. W. E. Livingston, Parma, Mich.

Big Bob Mastodon Sire is Caldwell Big Bob Champion of the world, his dam's sire was the Grand Champion at Iowa State Fair, Boars ready to ship. C. E. Garnant, Eaton Rapids, Mich.

B. T. P. C. Spring Boars all sold. One Oct. 21st perfect as any pig in Michigan. Price \$125. Gilts ready Jan. 1. Bred to a good son of \$10,100 Harrison's Big Rob. Every pig recorded free. JOHN D. WILEY, Schoolcraft, Mich.

L. S. P. C. Ten husky spring boars. Well bred and well fed ready to ship. F. T. Hart, St. Louis, Mich.

B. T. P. C's for sale, our herd boar, Mouw's Wonder 10215 bred by Mouw, extra good one. Price \$100. Spring boars and gilts from prize winning sires and dams. W. Brewbaker & Sons, R. 5, Elsie, Mich.

Big Type P. C. Boars, best breeding. A. A. WOOD & SON, Saline, Mich.

For Sale Medium T. P. C. Hogs All sizes. J. E. Myrants, St. Johns, Mich.

P. C. Boars Long bodied, heavy boned, with best of breeding. Satisfaction guaranteed. R. W. MILLS, Saline, Mich.

Two gilts for sale, sired by C. A. King Joe. Dam is sired by Great Big Half Ton, by Big Half Ton and out of a Dishers Giant Sow. (Breeding.) Bred to Mon-ster Big Bob by Luken's Big Bob (same breeding as the Grand Champion of the World, Caldwell's Big Bob). A very valuable litter to possess. Fall pigs farrowing now. Book orders early. C. A. Boone, Blanchard, Mich.

Big Type Poland Chinas. Spring boars by BIG BOB. Out of sows by Grand Master and Hillcrest Wonder. Also Fall Pigs. HILLCREST FARM, Kalamazoo, Mich.

Large Type Poland Chinas for sale: something good in spring boars; write or see them; free livery from Manchester. A. A. Feldkamp, R. 2, Manchester, Mich.

Big type P. C. Choice spring boars from Iowa's greatest herds out of 100 lbs. sire and mammoth sows; big boned fellows. E. J. Mathewson, Burr Oak, Mich.

BIG Type Poland Chinas. Sired by Smooth Mastodon litter mate to the Ill. Grand Champion. The big boned, deep, long bodied kind at farmer's prices. Wah-be-me-me Farms, White Pigeon, Michigan

Large type P. C. Spring boars and gilts now ready to ship. Also one fall yearling boar and fall pigs. CLYDE FISHER, R. 3, St. Louis, Mich.

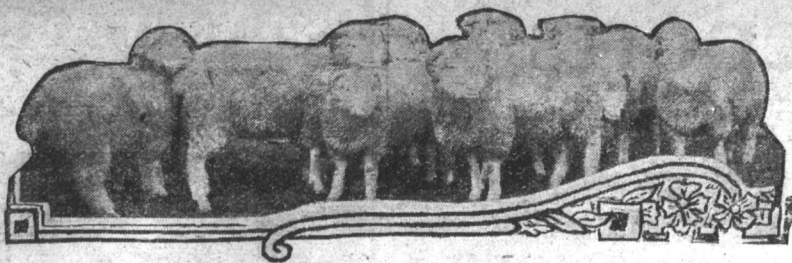
Big Type Poland Chinas. We aim to keep our herd in size and in quality. We have sows sired by Big Bob, the Yankee, Gerstale Jones and Gerstale King. Our herd boar is one of the largest and smoothest and of choice breeding. He is proving to be a great sire. We like the good ones and believe you do also. We now have a litter of 10 "Clansmans" and the dam booked again for spring litter to the Clansman. Visitors welcome. Wesley Hile, R. 6, Ionia, Mich.

Leonards Big Type Poland China boars, all ages fall boar pigs at a bargain, none better. Call or write, E. R. Leonard, St. Louis, Mich.

When In need of something right good in A. I. T. P. C. boar just come and see or write W. J. HAGELSHAW, Augusta, Mich.

Bargains on big type Poland Chinas, both sex, all ages. Shorthorn calves, either sex, and B. P. Rock cockerels. Robert Neve, Plerson, Mich.

Additional Stock Ads. on Page 743



MARKETING INFERIOR CATTLE.

RECENT receipts of cattle in Chicago and other western markets have reached enormous proportions, and the Chicago receipts for the week ending November 22 footed up 110,386 head, being 694 head larger than the previous high record week, which was a year ago. The recent receipts have been decidedly the poorest ever seen, with a fast-growing scarcity of fat heaves, and on Monday last week, with Chicago receipts of about 28,000 cattle, there was not a single carload good enough to bring from \$19.25 to \$20 per hundred pounds, the prices recently paid for choice to prime steers. The best sale on that day was made at \$19, with the next best sale at \$17.50, and the bulk of the steers selling for \$11.50 to \$16.25. The offerings of fat cattle that day were so meager that there were instances where suitable kinds sold at advances of anywhere from fifteen to forty cents per hundred pounds, following the enormous decline in prices of the previous week. On the same day Kansas City had 30,000 cattle, including large numbers from Colorado, while Omaha credited Nebraska with the bulk of its 23,000 head, and St. Paul, with 28,000, received a large share from Montana and Canadian ranges. The late marketing of cattle from the western ranges has kept up surprisingly, with about 7,000 head reaching the Chicago market on Monday. Monday was followed later in the week with a lively market and far higher prices, and on Tuesday prime steers brought \$20.25, some of the in-between steers selling at seventy-five to \$1 higher than at the close of the previous week.

FEEDING CATTLE ACTIVE.

FOR many weeks there has been an exceedingly large demand for the stocker and feeder cattle in the Chicago market, and it has been evident that while some farmers lacked sufficient faith in the future to stock up with thin cattle, the great majority thought differently and were prepared to back their convictions with judicious buying of thin cattle. Part of this conviction was based upon the unusually wide range of prices existing between feeders and finished beef cattle, for, while the best beef steers were bringing from \$19 to \$20.25 a short time ago, the best feeders were selling for \$11.50 to \$12.50, with not much trading higher than \$11.50. The demand has been coming from all directions, with especially good buying at times from eastern parts of the country, and a short time ago over twenty carloads of feeders went out from the Chicago stock yards during two consecutive days to Lancaster county, Pennsylvania, a long time famous district for feeding cattle. These feeders weighed from 845 to 1,025 pounds. The higher priced fleshy feeders are taken by stockmen who will give them a short feed and have them back on the market in a comparatively short time. Quite recently an Ohio buyer picked up on the Chicago market 210 head of medium weight feeders for distribution among the farmers of Seneca county, and not long ago a cattle feeder of Newton county, Indiana, bought in Chicago 160 head of fine feeders which averaged 1,100 pounds. Many purchases have been made by Michigan stock feeders, and many feeder cows and

heifers have been bought by farmers for finishing, among them being a car of 1,044-pound cattle to go to Waupaca county, Wisconsin, and forty head of 579-pound heifers to go to Allen county, Ohio. Sales range all the way down to \$6 to \$8 for the poorer class of little stock steers.

HOGS ARE PLENTIFUL.

THANKSGIVING week is never regarded as a favorable time for having live stock marketed, the day being a holiday in the stock yards and no killing being done by the Chicago packers. However, early week receipts of cattle, hogs and sheep were on a liberal scale, causing sharp breaks in prices for hogs after a firm early Monday morning market. It seems to be pretty generally admitted that there are plenty of hogs throughout feeding districts, and as there is a general state of good health among the young hogs, owners are adverse to letting their pigs go to market. At the same time owners are not inclined to hold on too long, and in recent weeks there has been a very marked falling off in the proportion of weighty hogs offered for sale. Young hogs fattened on the new crop of corn comprise most of the daily Chicago receipts, and the recent swine receipts averaged only 224 pounds. The supplies grade well as a rule, and sales are made of the better class of heavy and light butchers and light bacon grades within a narrow range of prices. Violent fluctuations in prices are still frequent in occurrence, and purchases made most of the time by eastern shippers are usually not large enough to make genuine competition between rival buyers. Pork is away off in price, with recent sales for January delivery around \$12 a barrel lower than a year ago. January short ribs sold the other day about \$6 per hundred pounds lower than a year ago, while January lard sold considerably lower. Exports of lard for recent weeks from the seaboard amounted to 9,573,000 pounds, comparing with 7,880,000 pounds a year ago, while bacon exports were 7,118,000 pounds more than a year ago. Recent excessive receipts of hogs made a bad market and prices broke in a single day as much as fifty cents to \$1.25 per one hundred pounds, about 72,000 hogs arriving on Tuesday.

GOOD OUTLOOK FOR SHEEP.

THE winter period is starting off with every promise of a good market for mutton and wool, and sheepmen who understand the business expect to come out with substantial profits. Already some good upturns have taken place in fat yearlings, wethers and ewes, while advances in lambs have been most marked in feeders, which continue in large demand, despite the lateness of the year. Chicago receipts continue to embrace large numbers of half-fat flocks of lambs shipped in from Iowa and Illinois, which are largely bought and shipped back to the country for a second feed. It has happened frequently of late that the supply of feeders was nowhere near large enough to meet the demand. Such great numbers of lambs have come back to the market from feeding districts that the supply left in the country is greatly cut down, and handlers of sheep are predicting much better times for the winter season.

PRINCE ALBERT

the national joy smoke

Copyright 1919
by R. J. Reynolds
Tobacco Co.

Toppy red bags, tidy red tins, handsome pound and half pound tin humidors—and—that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.

PUT it right up to Prince Albert to produce for you more smoke happiness than you ever before collected! P. A.'s made to fit your smoke appetite like a glove. It has the best flavor and coolness and fragrance, ever!

Just what a whole lot of joy Prince Albert really is you want to find out the quickest way you know how! And, put it down how you could smoke P. A. for hours without tongue bite or parch. Our exclusive patented process cuts out bite and parch.

Realize what it would mean to get set with a joy's jimmy pipe and to fill 'er up every once and a while. And, puff to beat the cards! Without a comeback!

Just as sure as you're reading this, P. A. will hand you everything you ever yearned for in tobacco joy! Why, it's so good you feel like you'd just have to eat that fragrant smoke!

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

HOGS

POLAND Chinas, I saw Jossie Giant sell for \$1610. at Ashley, Ind. Nov. 6th. She is a litter mate of my Michigan Buster. Offer Big Des Moines 5th, weighing over 800 lbs. or Bob-O-Link for \$130. Spring boars and gilts. O. L. WRIGHT, Jonesville, Mich.

Miller Meadows, L. T. P. C. Ready to ship immune. None better in Mich. Write or come and see. 2 1/2 miles west of Marshall. Clyde Weaver, Ceresco, Mich.

B.T. P.C. Spring boars for sale. The best I ever bred. Weighing 250 lbs. and up. Inspection invited. Recorded free. L. L. Chamberlain, Marcellus, Mich.

HAMPSHIRE

Steuben's Hampshire Farm

Spring Gilts and boars. Orders taken for bred gilts. Weanling boar pigs priced to sell. Hogs of the large and winning type carry the richest blood lines. Address your wants to

STEBEN'S HAMPSHIRE FARM

ANGOLA, IND.

Pine Grove Hampshires, "Quality First" Michigan Boy, Grand Champion boar of Michigan, Bred and owned by us. Many other prize winners at Michigan State Fair 1919. Hog's for sale all ages, both sex. "Lookout Joe" a \$1000 boar heads our herd. GEO. COUPAR & SONS, R. 1, Marlette, Mich.

Spring Hampshire, boar pigs for sale. Fall pigs from new blood lines. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Edgewood Hampshires, spring boars sired by our prize winning and Grand Champion boar. Make the right buy today and get a good one. either for Hampshire breeding or for a cross on your other sows. Depew Head, Edgewood Farm, Marion, O.

Fairview Stock Farms Tamworths. Registered spring pigs for sale, either sex, from massive ancestors. W. H. Warner, Concord, Mich.

HORSES

Percherons, Holsteins, Angus, Shropshires, Durocs DORR D. BUELL, Elmira, Michigan

SHEEP.

Whittum Farm Shropshires 50 good ones including 30 imported ewe and ram lambs. None better to start a new flock or improve the old one. 10 imported, one and two year old rams. THE WHITTUM FARM, Eaton Rapids, Mich.

BUY A SHEEP

Wait a minute, buy Hampshires. The American Hampshire Sheep Association wants to send you a dandy little booklet with list of breeders. Some near you. Write COMFORT A. TYLER, Secretary, 22 Woodland Ave., Detroit, Mich.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS



Parsons Pure Bred Sheep

PARSONS, Grand Ledge, Michigan R

Shropshire and Hampshire Rams

In order to finish the ram trade quickly I will give you your choice of a dozen very good yearlings at \$35.00.

KOPE-KON FARMS, COLDWATER, MICH. S. L. WING, Prop.

Shropshire ram lambs of good quality and some ewes all registered. DAN BOOHER, R. 4, Evart, Mich.

Registered Shropshire bred ewes. 1 to 3 years old. Large, healthy, well fleeced representatives of this flock gave satisfaction in 15 states, last season rams all sold. C. Lemen, Dexter, Mich.

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

Registered Shropshire sheep, 30 rams and 40 ewes. HARRY POTTER & SON, Davison, Mich.

For sale, Reg. Shropshire rams yearlings and 2 yr. olds \$30 to \$50, one 4 year old ram sired by Coopers (\$120). I will pay return express if they are not as I represent them. C. V. TRACY, Ithaca, Mich.

Shropshires Registered ram lambs sired by Imp. Buttar. Also choice bred ewes. W. B. McQUILLAN, R. 7, Howell, Mich.

10 Reg. Shropshire ewes. Bred, First check \$250 takes them. B. D. KELLY & SON, Ypsilanti, Mich.

For Sale REG. YEARLING SHROPSHIRE RAMS, with quality and fleece. H. F. Mouser, R. 6, Ithaca, Mich.

\$100 Buys 5 good registered Shropshire ewes bred for March lambs. C. K. Topliff, Eaton Rapids, Mich.

For Sale Registered oxford Down yearling rams and lambs also a few choice ewes. D. P. Beasore, R. F. D. No. 1 Eaton Rapids, Mich.

CHOICE delaine rams, also 2 "B" type stock rams of high quality, large, oily fleeces, shearers, write. S. H. Sanders R. No. 2, Ashtabula, O.

Polled Delaine Rams for sale. Good heavy shearers. F. L. BROKAW, Eagle, Mich.

Hampshire and Rambouillet rams for sale yearlings and lambs. A. A. WOOD & SON, Saline, Mich.

Latest Market Reports

SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, December 4.

WHEAT.

The wheat market continues to advance. It is believed that there will be but little Canadian wheat available for use in the United States. The government purchased over a half million barrels of flour Monday at \$10.29 per barrel. Millers are busy filling old orders. Mill feeds are in excellent demand and firm, while the general flour market is quiet. Flour consumers appear to be temporarily supplied and are satisfied to await developments before making new contracts. The American visible supply decreased 3,168,000 bushels the past week. One year ago No. 2 red wheat was quoted on the local market at \$2.24 a bushel. Present Detroit prices are:

No. 1 red.....	\$2.36
No. 1 mixed.....	2.34
No. 1 white.....	2.34
No. 2 red.....	2.33
No. 3 red.....	2.30

CORN.

Several factors have aided in giving corn a somewhat stronger tone since the close of last week. The unsettled weather has interfered with the movement and small receipts have resulted. Hog prices are higher and dealers are apprehensive over rail embargoes due to the coal situation. Stocks in Chicago are unusually small. The American visible supply shows an increase of 217,000 bushels for the week. One year ago No. 3 corn was held on this market at \$1.40 per bushel. Present Chicago prices are, No. 3 mixed \$1.45 @1.46; No. 2 yellow, old \$1.58; December \$1.39%; May \$1.32%. Present Detroit prices are:

No. 3 corn.....	\$1.54
No. 3 yellow.....	1.56
No. 4 yellow.....	1.52
No. 5 yellow.....	1.48

OATS.

Export buying has had a bullish influence in this market. Southwestern interests have also aided in advancing prices through increased business. The visible supply decreased 372,000 bushels, indicating that farmers are marketing but little of the grain. One year ago standard oats were quoted at 74½¢ per bushel. Present Detroit prices are as follows:

No. 2 white.....	.83
No. 3 white.....	.82
No. 4 white.....	.81

RYE.

Substantial advances followed export buying of this grain. The visible supply showing a decrease of 257,000 bushels furnished further bullish influence. At Detroit cash No. 2 is quoted at \$1.57 per bushel.

BEANS.

Marketing conditions are but little changed from last week. About the only hopeful sign for improved trading is that dealers are looking forward to a slight increase in the demand from the retail trade. In New York the market is generally quiet with the new crop of Michigan pea beans quoted there at \$7 f. o. b. country elevators. The New York quotation for choice pea beans is \$7.75 and common to fair \$7@7.50. The Chicago market rules steady with hand-picked pea beans, choice to fancy at \$7.50@8 and red kidneys \$13@13.50. The Detroit market shows little activity and the quotation at \$6.75 for immediate and prompt shipment is the same as for last week.

FEEDS.

Quotations show few changes as follows: Bran \$46; standard middlings \$51@51.50; fine middlings \$61@61.50; coarse corn meal \$60@63; cracked corn \$64; corn and oat chop \$53@55 per ton in 100-pound sacks.

SEEDS.

The trade in seeds is active and the market is active and higher. Prime red clover spot \$30.75; March \$30.50; alsike at \$30.50; timothy \$5.50.

POTATOES.

This market has slowed up considerably with the total car movement about cut in two since a fortnight ago. Some markets are easier but the majority are holding steady to firm. The cold weather has eliminated practically all deliveries at local warehouses. Detroit market higher, with Michigan U. S. No. 1 stock, well graded, quoted at \$4.50 per 150-pound sack. Chicago's market is higher with the above grade selling at \$3 per hundredweight.

The same description brings \$4.50 per 150-pound sack in Cleveland and \$4.65 @4.75 in Pittsburgh, where the market has advanced. Columbus quotes this grade at \$4.75@5.

HAY.

Market for hay is active and higher. All kinds in small supply. No. 1 timothy \$29.50@30; standard and light mixed \$28.50@29; No. 2 timothy \$27.50@28; No. 1 clover \$27.50@28.

Pittsburgh.—Receipts are small and prices higher. No. 1 timothy at \$30@30.50; standard timothy at \$29@29.50; No. 1 clover mixed \$30.50@31; No. 1 clover \$32@32.50.

BUTTER.

A slightly easier feeling follows the reduction in consumption due to high prices. Exporters are showing but little interest. At Detroit fresh creameries have advanced to 64@65¢ per pound. The Chicago market is higher at 57@72¢ for creamery. A firm tone is reported in New York where the range for creamery stock is 74@74½¢.

EGGS.

Good fresh eggs continue scarce and prices for all descriptions have moved upward. Local prices have advanced to 74½@80¢ for fresh eggs and 47½@51¢ for storage stock. Chicago market is steady at 67@70¢. On the local markets good fresh stock is finding sale in a small retail way at \$1 per dozen.

GRAND RAPIDS

Snow fall of six inches Sunday put the fall sown wheat under a white blanket in the best condition in many seasons. City market closed for the season Saturday. Attendance was 69,309; loads of produce sold 31,363; receipts \$8,081. Last market price for potatoes was \$1.60 per bushel; cabbage \$1.50; onions \$2; turnips, carrots and beets \$1; apples \$3; hay \$32 a ton. A car of Michigan Christmas trees arrived last week, selling at \$2.25 per bundle wholesale, one to five per bundle, as to size. Western Michigan motor truck company is now operating a fleet of twelve trucks to all the cities within a radius of 125 miles from Grand Rapids. Capacity of each is two and a half to five tons. Wholesale market in beans is dull and the jobbers' price to growers is \$6 per cwt. for white, and \$10 for red kidney.

There is little trading on the city markets. Apple prices range from 75¢ @3.50 per bushel; potatoes at \$1.80@1.90; onions \$3; turnips \$2.50@3; hens 25¢ per pound; springers 24@26¢.

DETROIT CITY MARKET

There is little trading on the city markets. Apple prices range from 75¢ @3.50 per bushel; potatoes at \$1.80@1.90; onions \$3; turnips \$2.50@3; hens 25¢ per pound; springers 24@26¢.

NEWS OF THE WEEK.

(Continued from page 706).

bor problems.—A tie-up of the hard coal business is expected to follow action of anthracite coal miners to walk out in a few days without the formality of calling a strike.

Tuesday, December 2.

THE Spanish ministry resigns.—Premier Drury, of Ontario, voluntarily cuts \$3,000 from his salary of \$12,000.—Prince of Wales arrives in London from his American trip.—Twelve thousand employees of the packing houses of the central west are awarded an annual increase of \$12,000,000 in pay by a federal arbiter.—The war-time fuel regulations go into effect and coal will be furnished only to essential industries.—United States prepares to deport sixty-eight Russian anarchists.—Great Britain and this country have resumed heavy trading with Germany.

Live Stock Market Service

Reports for Thursday, December 4th

BUFFALO.

Pigs sold here today at \$14.50 and other grades of hogs at \$15. Lambs brought \$16.25 and calves \$22.50.

DETROIT

Cattle.

Receipts 1,970. Canners 25@50¢ lower; all other grades steady. Best heavy steers.....\$12.50@13.00 Best handy wt bu steers.. 10.00@11.00 Mixed steers and heifers.. 9.00@ 9.50 Handy light butchers..... 8.00@ 8.50 Light butchers..... 7.00@ 7.50 Best cows..... 9.00@11.00 Butcher cows..... 8.00@ 8.50 Cutters..... 5.75@ 6.00 Canners..... 5.00@ 5.50 Best heavy bulls..... 9.00@10.00 Bologna bulls..... 7.50@ 8.50 Stock bulls..... 6.50@ 7.00 Feeders..... 9.00@11.00 Stockers..... 7.00@ 8.50 Milkers and springers.....\$65 @ 150

Veal Calves.

Receipts 1,002. Market is strong. Best.....\$20.00@21.00 Others..... 8.00@17.00

Sheep and Lambs.

Receipts 10,400. Market steady. Best lambs.....\$15.50@15.60 Fair lambs..... 13.50@14.75 Light to common..... 10.00@12.75 Fair to good sheep..... 7.50@ 8.25 Culls..... 4.00@ 4.50

Hogs.

Receipts 7,590. Pigs steady; others 25¢ lower. Mixed.....\$14.25 Pigs..... 14.00

CHICAGO.

Hogs.

Estimated receipts today are 53,000; holdover 9,192. Market fairly active at about 20@25¢ lower. Bulk of sales \$13.75@14.20; tops \$14.25; heavy 250 lbs up, medium, good and choice at \$13.75@14.20; medium 200 to 250 lbs, medium, good and choice at \$13.85@14.25; light 150 to 200 lbs, common, medium, good and choice at \$13.75@14.20; light lights 130 to 150 lbs, common, medium, good and choice \$13.50@14; heavy packing sows 250 lbs up, smooth, \$13.10@13.50; packing sows 200 lbs up, rough \$12.50@13; pigs 130 lbs down, medium, good and choice at \$13@13.75.

Cattle.

Estimated receipts today are 15,000. Market steady to 25¢ higher; calves strong; grand champion steers sold at \$2.62 per pound; grand champion carloads at \$45 per cwt. Beef steers, medium and heavyweight, 1100 lbs up, choice and prime \$18.25@20.75; do me-

deum and good \$10.75@11.65; do common \$8.50@10.75; light weight 1100 lbs down, good and choice \$13.65@20.25; do common and medium \$7.50@13.60; butcher cattle, heifers, common, medium, good and choice \$6.50@15; cows, common, medium, good and choice at \$6.40@13.65; bulls, bologna and beef \$6.75@11.25; canners and cutters, cows and heifers \$5.25@6.40; do canner steers at \$5.75@7.75; veal calves, light and handyweight, medium, good and choice \$16.50@17.50; feeder steers common, medium, good and choice at \$7@12.50; stocker steers, common, medium, good and choice \$6@10.75; do cows and heifers, common, medium, good and choice \$6@7.75; do calves, common, medium, good and choice at \$7.75@11.25; western range cattle, beef steers, medium, good and choice \$10.75@14.75; do cows and heifers, medium, good and choice \$6.70@12.50.

Sheep and Lambs.

Estimated receipts today are 22,000. Market steady to 25¢ lower; feeders firm. Lambs 84 lbs down, medium, good, choice and prime \$14.50@16.50; do culls and common \$10@14.25; spng lambs, medium, good, choice and prime \$11.25@14.75; ewes, medium, good and choice \$7.75@9.50; ewes, cull and common \$4.25@7.25; breeding ewes, full mouths to yearlings \$7@11.25; yearling wethers, medium, good, choice at \$12@14.50.

BUFFALO.

Cattle.

December 3, 1919. Receipts 20 cars. Market is ruling slow. Prime heavy steers at \$16@17; best shipping steers \$13.50@14.50; medium shipping steers \$11.50@12.50; best yearlings, 950 to 1000 lbs \$16@17; light yearlings, good quality \$13@14; best handy steers \$10.50@12; fair to good \$10.50@11; handy steers and heifers mixed \$9.50@10.50; western heifers \$10.50@11.50; best fat cows at \$10@11; butcher cows \$7.50@8.50; cutters \$6@6.50; canners \$4@5.25; fancy bulls \$9@10.50; butchering bulls \$7@8; common \$6@7; best feeding steers \$10@11; medium feeders \$8.50@9.50; best stockers \$6.50@7.50; light to common \$5@6; milkers and springers at \$7.50@15.00.

Hogs.

Receipts five cars. Market is steady to higher. Heavy and yorkers at \$15; pigs \$14.25@14.50.

Sheep and Lambs.

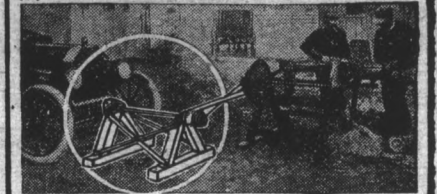
Receipts five cars. Market steady; \$22.50; grass calves \$5@8.

Calves.

Receipts 900. Market strong; tops \$22; grass calves \$5@8.

Use Your Auto!

GRIND YOUR FEED
FILL YOUR SILO
SAW YOUR WOOD
SHELL YOUR CORN
PUMP YOUR WATER
ELEVATE YOUR GRAIN



Ward Work-a-Ford

Can be used with Ford, Overland, Dodge, Reo and Chevrolet 490 cars and Fordson Tractor. Your automobile has a powerful engine—it will outlast the car and you might as well save your money and use it to do all your farm work. No wear on tires or transmission. Hooks up in 3 minutes. No permanent attachment to car. Cannot injure car or engine. Friction Clutch Pulley on end of shaft. Ward Governor, run by fan belt, gives perfect control. Money back if not satisfied. Ask for circular and special price. WARD MFG. CO., 2038 N St., Lincoln, Neb.

Fistula & Poll Evil

Approximately 10,000 cases are successfully treated each year with Fleming's Fistoform. No experience necessary; easy and simple; just a little attention every 5th day. Price \$2.60 a bottle (war tax paid)—money refunded if it fails. Send for free copy of FLEMING'S VEST-POCKET VETERINARY ADVISER. Valuable for its information upon diseases of horses and cattle. 197 pages, 67 illustrations. Write today. Fleming Bros., Chemists, 282 Union Street, Ypsilanti, Mich.

Steel Mantle Burners

Increase your Lamp and Lantern Light three times. No smoke. No odor. Fit common kerosene lamps and tubular lanterns. Every Burner Fully GUARANTEED. If your dealer doesn't keep them send his name and address and your name and address with 40 cents for a Sample. Agents Wanted: Write for FREE Particulars, Today. The season is on. STEEL MANTLE LIGHT CO., 4026 Cottage Grove Avenue, CHICAGO

DICKEY GLAZED TILE SILOS

"The Fruit Jar of the Field" Order your silo now. Pay next summer when silo arrives. Send for catalog No. 9. W. S. DICKEY CLAY MFG. CO., MACOMB, ILL., Kansas City, Mo., Chattanooga, Tenn.

SHIP YOUR POULTRY, VEAL and HOGS

TO J. W. Keys Commission Co.

470 Riopelle St., Detroit, Mich.

Eastern Market

You Will Get a Square Deal and Returns Daily.

For Best Net Results Ship to

CULOTTA & JULL

Detroit, Mich.

"Enough Said!"

Mr. POULTRY FARMER:

We make a specialty of White Henney Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henney 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., Pittsburgh, Pa.

Married man wanted as working foreman on large fruit and stock farm in Allegan County. Position open for immediate acceptance. Highest wages, good conditions, fine house, etc. Experience in fruit desired but not necessary, send reply Box B, 126 care Michigan Farmer, Detroit, Mich. for interview.

Agricultural Lime High calcium hydrated lime in 50 lb. paper bags, in car lots of 20 tons or more. Delivered, price promptly quoted on request. Northern Lime & Stone Co., Petoskey, Mich.

CULL BEANS FOR FEED Car lots or less. Ask for prices. YOUNG-RANDOLPH SEED CO., OWOSO, MICH.

MOLASSES Richest Feed Lowest Cost Write for Special Price CHICAGO MOLASSES COMPANY, 1131 East 77th Street, Chicago, Ill.

RABBITS

Belgian Hares Choice stock, 3 and 6 months old. Write for prices. SHERIDAN RABBITRY, R. 4, Sheridan, Mich.

Flemish Giant Rabbits, dark steel black. Gays 2 months old, \$3.00 & \$2.00 each. Pedigreed stock. DAVID RAY, 709 Norris St., Ypsilanti, Mich.

Please Mention The Michigan Farmer When Writing to Advertisers.

WOOL

There has been a little let up in wool trading the past week as compared with the previous week but the volume of business is still large and values show a tendency toward further appreciation. The demand is general and stocks are so reduced that sellers feel safe in asking higher prices. The best half-blood combing is held in Boston at 85c and three-eighths blood at 62@63c. The receipts of wool to Boston since the first of the year aggregates a gain of 20,945,821 pounds in domestic arrivals while the arrivals of all kinds shows a falling off of over 44,989,411 lbs. Shipments, on the other hand, are about 57,000,000 pounds less than for the corresponding period of 1918. Wool growers' associations and sheep breeders of the country are putting forth special efforts towards securing better marketing conditions and urging congress to enact laws preventing the sale of shoddy and imitation wool goods as made of new wool.

DETROIT MILK PRICE FOR DECEMBER.

The milk price for December is the same as for November except that an increase in the price differential for milk testing above four per cent in butterfat was made. The price for 3.5 milk is \$4.05 f. o. b. Detroit railway station, with differential of four cents per point above or below for milk testing from three per cent to four per cent, and seven cents per point for milk testing above four per cent. For milk testing above four per cent the differential is to be figured at four cents per point from 3.5 to four per cent and at seven cents per point for additional butterfat. City prices remain unchanged.

NEW YORK PRODUCE MARKET.

Butter.—The condition of the butter market has changed very little during the past week, with the exception that conditions that have prevailed for some time are accentuated at present. In other words, the demand for high quality butter can not be met and there is a very noticeable lack of demand for under-grade butter. As a result of those conditions the quotation on high quality butter has advanced one cent, while that on undergrades has receded. Large quantities of firsts and seconds are accumulating, and the receiver is in somewhat of a dilemma. Receipts of butter are at the low mark of the year and there is little hope that production will increase for some time. High prices have caused consumers to turn to substitutes and also have been instrumental in stopping practically all export trading. Storage butter is moving readily at prices within 3½c of those paid for fresh butter. Centralized butter is not moving freely, the highest price being paid for 90 score being about 66½c. Prevailing quotations are: Extras 73@73½c; higher scoring than extras 74@74½c; firsts 62½@72c; seconds 57@61c.

Cheese.—Receipts of cheese are very low and indications are that there will be a light winter production. Local trading has been very light and an easier feeling exists in the market. Quotations on fresh and held cheese as yet are about the same and are as follows: Common to good 29@31c; average run 31¼@32c; specials 32½@33c.

Eggs.—As is usual at this season of the year the demand for eggs far exceeds the supply. As a natural result prices continue to soar. During the past week the advance has been about three cents per dozen. The percentage of high quality eggs in current arrivals is low. As with butter, the consumer demands the best and is willing to pay the price. Quotations are: Seconds 68@75c; firsts 76@79c; extra firsts 80@82c; extras 83@84c.

Poultry.—This has been a very active week but receipts have been exceedingly high and, in consequence, the feeling is weak. Ruling quotations are: Spring chickens 24@26c; heavy fowls 27@28c; light to medium fowls 20@25c; old roosters 20c; turkeys 40@43c; ducks 32c; geese 26@30c.

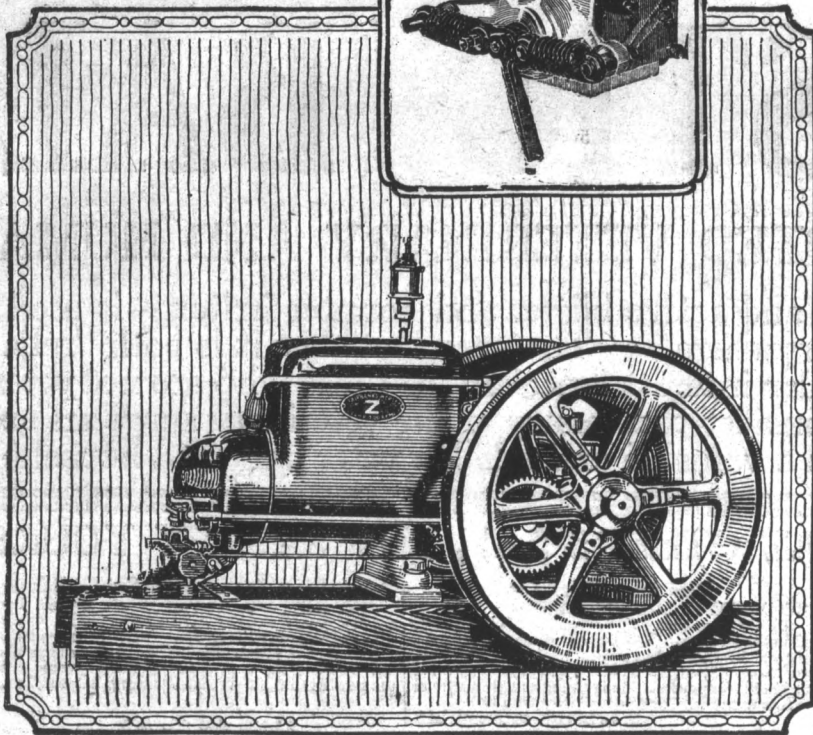
POULTRY SHOW.

Washtenaw County Poultry & Pet Stock Association will hold its first show at the Occidental Hotel, Ypsilanti, December 17-20. Mrs. S. J. Sova, Ypsilanti, Route 2, is secretary.

Farmers and their families everywhere in Michigan are already preparing to take in Farmers' Week at M. A. C. the first week in February.

The Greatest Combination

Fairbanks-Morse
"Z" Engine with
Bosch Magneto



WHEN the full meaning of this "Z" message is realized—mighty few farmers in America will fail to at once call on the nearest "Z" engine dealer. ¶ This example of master engine-building must be seen. ¶ Type and pictures can but suggest this value establishing achievement. ¶ By adding this one possible betterment—Bosch high tension, oscillating magneto—we complete a rare engine service, fully maintained by over 200 Bosch Service Stations in co-operation with every "Z" engine dealer—for all "Z" engine owners. ¶ Prices—1½ H. P. \$75.00—3 H. P. \$125.00—6 H. P. \$200.00—All F.O.B. Factory.

Fairbanks, Morse & Co.
MANUFACTURERS CHICAGO

Reduced Prices on OTTAWA ENGINES

Easy Starting, No Cranking, Fuel Saving!

LOWER PRICES NOW!

2 H. P. \$39.85
3 H. P. \$49.85
4 H. P. \$59.85

Other sizes at proportionately low prices.

I have reduced my prices to a pre-war basis. I have increased my production by making my factory the largest in America, making and selling high quality engines direct to the user. By doing this I am able to cut manufacturing costs.

SPECIAL FEATURES: Equipped with speed regulator, oscillating magneto; constant fuel feed and fuel mixer. 165 styles, any size you want from 2 H. P. to 22 H. P., Stationary, Portable and Saw Rig. Each size pulls from 20% to 50% more than rated H. P. This saving I am passing along to you.

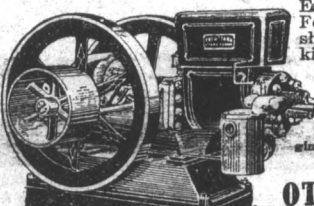
10-Year Guarantee—90 Days Trial

Every engine I sell must be good. Fewer parts, use less fuel and are shipped direct for you to try on any kind of hard work for 90 days.

DIRECT TO YOU The Ottawa is sent direct from the factory—no delay, no waiting. You get the same high grade engine found on thousands of farms and in shops everywhere and that makes every owner a booster.

EASY TERMS Choose either the Cash or Easy Payment Plan—you get the same high grade engine at a wonderful saving, no matter how you pay.

GEO. E. LONG, President,
OTTAWA MFG. CO. 1365 King Street
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Before you pay any more for any engine, cash or easy terms, send for my FREE book and special price. GEO. E. LONG.

FREE BOOK
Write Me for Special Offer

MICHIGAN LIVE STOCK INSURANCE COMPANY

INDEMNIFIES Owners of Live Stock—Horses, Cattle, Sheep and Hogs

Against Death by Accident or Disease

308 Davidson Building,

Bay City, Michigan

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.

Buy Turkeys Now Michigan's best Giant Bronze breeding stock, young toms 23 lbs., bullets 15. Excellent color. Health and vigor guaranteed.
N. Evalyn Ramsdell, Ionia, Mich.

Bourbon Red Turkeys, Fishel-Evans strains. Large vigorous birds of right color. Write for prices.
Chas. A. Beatty, R. 2, Box 2, Milford, Mich.

FOR SALE: Mammoth Bronze Turkeys, hens \$5, toms \$10.
Mrs. WALTER DILLMAN, R. 5, Dowagiac, Mich.

Giant Bronze Turkeys

Young stock for sale from our wonderful 55-pound tom—BLOOMFIELD KING—Buy our Turkeys and improve your flock.

Pullets and Hens . . . \$20.00 to \$25.00
Cockerels and Toms . . . 25.00 to 50.00

Order eggs now for spring delivery from

RING NECK PHEASANTS

WILD MALLARD DUCKS

GIANT BONZE TURKEYS

RHODE ISLAND REDS

Bloomfield Farms

America's Largest Game Farm

1714 Penobscot Building

Detroit, Mich.

Write for Price List and free descriptive Booklet of Instructions.

For Sick Chickens

Preventive and curative of colds, roup, canker, swollen head, sore head, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley of Galien, Mich., says: "I have used Germozone 17 yrs. for chickens and could not get along without it." Geo. F. Vickerman, Rockdale, N. Y., says: "I have used Germozone 12 years; the best for bowel troubles I ever found." Frank Sluka, Chicago, Ill., writes: "I have lost but 1 pigeon and no chickens in the 3 yrs. I have been using Germozone." C. O. Petrain, Moline, Ill., says: "I never had a sick chick all last season." Bernard Hornig, Kirksville, Mo., says: "I cured my puniest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhoea in 3 yrs. I raise over a thousand a year." Good also for rabbits, birds, pet stock.

GERMOZONE is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha postpaid in new 25c, 75c and \$1.50 sizes. Poultry books free.

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POULTRY

HOMESTEAD FARMS

We have some strictly high quality stock—the best we have ever offered—that will please you if you want practical paying poultry true to type. Let us describe the birds we have.

Cockerels—Barred Rocks, highly bred, well marked; White Rocks; R. C. and S. C. Reds, rich dark plumage; White Orpingtons, fine type large birds; White Wyandottes; S. C. Black Minorcas; S. C. and R. C. White and S. C. Brown Leghorns; Anconas, Cock Birds, Reds; Black Minorcas.

Spring Pullets—Small number Barred and White Rocks; S. C. Black Minorcas; S. C. and R. C. White Leghorns; S. C. Brown Leghorns; yearling White Rocks; choice White Orpingtons. A few mated pens from these Pullets.

We will send you our Fall Circular and Price List.

STATE FARMS ASSOCIATION,
Kalamazoo, Michigan

Anconas Fine, well marked cockerels \$2.50 and \$3.00. Eggs in season.
QUINN J. REED, R. 2, Battle Creek, Mich.

LOOK BABY CHICKS \$17 A 100 UP

By Special Delivery Parcel Post, postpaid 20 different thoroughbred breeds. Utility & exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio

Barron's 303 egg stock, S. C. W. Leghorn chks, March hatched, Bourbon Red Turkeys, Toms and Hens. Write for prices. Mrs. E. L. Garlock, R. 7, Howell, 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.

Barred Plymouth Rock Cockerels, large, from prize-winning laying strain, \$5.00 each.
J. A. BARNUM, Union City, Mich.

B. P. ROCKS cockerels, \$3.00 each; pullets, \$2.00 each.
A. A. WOOD & SON, Saline, Mich.

Buff Leghorns and White Leghorn cockerels at reduced prices, if ordered soon, from great laying strains. Dr. William Smith, Petersburg, Mich.

Choice Cockerels

From pure bred quick maturing heavy laying strains. White Wyandottes \$4.00 to \$6.00 each. White Rocks \$4.00 to \$6.00 each. Barred Rocks \$3.50 to \$5.00 each. S. C. R. I. Reds \$3.50 to \$5.00 each. Special prices on larger lots. Above prices for orders received during December only. H. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

Cockerels and yearling hens, Orpingtons, Rocks, Reds, Wyandottes, Leghorns, Spanish, Minorcas, Campines. Tyrone Poultry Farm, Fenton, Mich.

Fowler's Buff Rocks: Cockerels, cock birds and pullets, \$2.00 each.
R. B. FOWLER, Hartford, Mich.

For sale "Buy the Best" eggs for hatching from 20 egg strain Barred Plymouth Rock. \$2.00 per 15, \$5.00 for 45 eggs. H. B. PROCTOR, Grand Haven, Mich.

FOR SALE R. C. Brown Leghorns cockerels. Kulp strain quality and breeding guaranteed single bird \$2.50, two or more \$2.00 each.
W. E. CUMMINGS, Coleman, Mich.

For Sale 100 Large hen hatched Barred Plymouth Rock Cockerels \$1.00 each.
Mrs. E. BELLEN, Whitmore, Mich.

Free range raised, Orpingtons, Rocks, Reds, Wyandottes, Leghorns, Anconas, ducks and turkeys, cheap. Send stamp. C. L. Davis, Gd. Ledge, Mich.

For Sale—Pure-bred Light Brahma Cockerels. Also a few yearling hens \$3 to \$5. Satisfaction guaranteed.
Mrs. E. B. WILLITS, R. 1, Reading, Mich.

Rhode Island Reds, R. C. large fancy cockerels at \$4 each.
BURT SISSON, Imlay City, Mich.

Silver, Golden and White Wyandottes. Choice quality cockerels and pullets \$3.00 to \$5.00 each until Dec. 15. C. W. Browning, R. 2, Portland, Mich.

Vigorous Barred Plymouth Rock Cockerels. Trapped v. A. C. 250 egg strain. Improve your flock. \$3 to \$5 each.
Rosemary Farms, Williamston, Mich.

White Pekin Ducks and White Chinese Geese.
Mrs. CLAUDIA BETTS, Hillsdale, Mich.

WHITAKER'S R. I. REDS BOTH COMBS. Bred for color and eggs. Choice, farm raised cockerels at reasonable prices. Day old chicks. Order now for early spring delivery. Write for prices.
INTERLAKES FARM, Box 39, Lawrence Mich.

White Plymouth Rocks Stock for sale, breeding and quality of the best. Write wants. Richard M. Grettton, Mason, Mich.

White Orpington Cockerels \$2.50 each, nice big fellows.
W. E. WEST & SON, R. 1, East Lansing, Mich.

**ALWAYS
RELIABLE**

Gombault's CAUSTIC BALSAM

**SURE IN
RESULTS**

THE ACCEPTED VETERINARY AND HUMAN REMEDY

A RELIABLE, safe and active blister and counter irritant--is used successfully by the very best stockmen everywhere. The very fact that it is both "reliable and safe" for anyone to use is of particular interest especially to those who are not veterinarians or within reach of one; and when you consider that many of the veterinary surgeons are buying and using it, you can well believe it is a valuable and reliable veterinary and household remedy.

NOT ONLY SEE WHAT OTHERS SAY, BUT SATISFY YOURSELF BY TRYING IT

CAUSTIC BALSAM AS A HUMAN REMEDY IS Penetrating — Soothing — Healing

It is generally true that an external remedy that is good for the animal is also good for the human body, and Gombault's Caustic Balsam is no exception to this rule. In fact, we sincerely believe that there is no liniment or external remedy on the market that is as good or as safe and reliable to apply to the human body as Caustic Balsam. We can safely recommend it in all cases where an external application could benefit. It is also cheaper according to cost because it requires very little and that little is effective.

A Safe and Reliable Germ Killer
Caustic Balsam, applied at once to any bruise or flesh wound, as soon as it stops bleeding and is thoroughly washed, will prevent blood poisoning and cause it to heal at once, with scarcely any soreness. Persistent, thorough use will cure many old or chronic ailments, and it can always be used on any case that requires an external application, with perfect safety, and good results.

Veterinary surgeons use Caustic Balsam. Many recommend it. Why? Because it is a safe remedy for their customers to use and it brings satisfactory results.

Never Failed To Do Its Work

I am in the saw mill business and keep from twenty to thirty head of stock all the time. I have been using your Gombault's Caustic Balsam for the last ten years and I have tried it for every known lameness and it has never failed to do the work yet. I have cured sweeney and never take them from the wagon. I have tried it on oxen's necks with good results. Hoping this will be some benefit to some stock owner.
Clarence J. Henley, Maplesville, Ala.

Information on special cases freely given. The accepted Human and Veterinary Remedy of the World.

Sure Cure For Rattle Snake Bites

Have used Gombault's Caustic Balsam for years and wouldn't be without it. It will not only do what is claimed for it, but it is also a sure cure for rattle snake bites, if taken in time. We have saved two horses and one cow with it. Thought you might want to put this in your list of cures, as so many use Caustic Balsam. It might save them a horse or cow some time if they knew about it.
S. H. Felt, Hartford, Michigan

Caustic Balsam will absolutely remove all poisonous secretions and create a healthy action.

Caustic Balsam Does More Than Claimed for it.

Enclosed please find draft for which send me one dozen bottles of Gombault's Caustic Balsam. I have been using your Caustic Balsam for four or five years and it does more than you claim for it. A neighbor, Mr. Seegar, had a horse with a bad case of sweeney. He could not sell the animal for \$25.00. I advised him to use your Caustic Balsam and he did so, curing the horse and has since refused \$100.00 for her. My niece had her knee badly injured by falling from a wagon. The doctors failed to effect a cure and she began using Caustic Balsam. She is now practically well. I have also known it to cure neuralgia and stop tooth-ache. It is one of the finest medicines for man and beast. H. D. Sweazy, Beecher City, Ill.

Does Away With Firing TO WHOM IT MAY CONCERN:

I have made many fine cures with Gombault's Caustic Balsam. I have cured bowed tendons, capped hock, splints, ringbone, sidebone, shoe boil, quitter, poll-evil, fistula of withers and many other long standing cases. It is either a mild blister or a fine counter irritant; does away with firing.
E. L. Seltzer, Shelltown, Md.

Caustic Balsam Does More Than Guaranteed

I have used Caustic Balsam for the last seven years and found it just as it was recommended, and even more, because it will cure where other medicine fails and I can prove it. I can certainly recommend it.
J. T. Sullivan, Chebanse, Ill.

Twenty Years Success With Caustic Balsam

After using Gombault's Caustic Balsam for twenty years I can say it has never failed to do all you recommend it to do. While it seems high to one that has never tried it, once a customer always one. I have used it for twenty years and use no other but it. W.A. McCauley, Malone, Tex.

Good For Any Cut or Bruise

I recommend your Caustic Balsam for any kind of rusty nail or barb wire cut and has also cured bad cases of blood poisoning. I am a veterinarian and surgeon and I recommend to any man this Caustic Balsam as a cure of what I said.
F. Max Scheibe, V.S., Dulce, N. Mex.

Gombault's Caustic Balsam As a Liniment for the Human Body has no Equal

A Liniment that benefits; it kills pain. A home remedy for the Human Family

ALL TESTS prove the wonderful efficiency of Gombault's Caustic Balsam in relieving human ailments, such as Rheumatism, Neuralgia, Sprains, Sore Throat, Sore Lungs, Chest Cold, Backache, Lumbago, Diphtheria, all Stiff Joints. It is penetrating, soothing and healing, and for Old Sores, Bruises or Wounds, Felons, External Tumors, Cancers, Boils, Corns or Bunions **Caustic Balsam has no equal.** It removes the soreness and strengthens the muscles—in fact aids all troubles where an external application is necessary. We would distinctly say to all who buy it that it does not contain a particle of poisonous substance, and therefore no harm can possibly result from its use.

THIS GREAT REMEDY literally works wonders! It removes bunches on horses and other livestock, thereby increasing the value of the animal fully 50 percent. A successful treatment for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Windpuffs, all Skin Diseases or Parasites, Thrush, Diphtheria, Pink Eye, and Lameness from Spavin, Ringbone, and other Bony Tumors; also all obstructions in circulation, and imparts new life and vigor. It is a peerless remedy for all Throat and Bronchial Troubles.

WHY! Because Caustic Balsam can be applied by anyone with safety, will do its work well and in no way injure the horse, while other blisters need daily attention and care and then are liable to leave a blemish.

If you have a lame or unsound horse, YOU CAN WELL AFFORD TO TRY A REMEDY THAT IS SO HIGHLY RECOMMENDED. Information on special cases freely given on request.

It is **FAR SUPERIOR, MORE ECONOMICAL, and a PERFECTLY SAFE, RELIABLE and PROMPT Remedy** to use as compared with any other remedy used for like purposes.

The demand is produced strictly by its merits.
IT SUPERSEDES ALL CAUTERY OR FIRING IMPOSSIBLE TO PRODUCE ANY SCAR OR BLEMISH IT IS THE SAFEST AND BEST BLISTER

CAREFUL FARMERS

USE CAUSTIC BALSAM

A Safe and Reliable Antiseptic

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam, applied as per directions, just as you are turning the horses out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

Found Nothing That Equals Caustic Balsam

Kindly permit me to express my deep appreciation of Gombault's Caustic Balsam. I have cured sprains, ringbone, strained tendons, sweeney, poll-evil with it in fine shape and do not see how a better liniment could be manufactured. I have used many things for removing puffs from horses but have never found any that would equal Caustic Balsam. I also had a cow that had lump jaw. I used Caustic Balsam and cured it.
John H. Wallgren, Logan, Kansas

Bunches on horses or any other livestock are unsightly.

Caustic Balsam Prevents Blood Poison

We have used Caustic Balsam for several years and have found it to be unequalled for horses or people. My husband ran a rusty nail in his hand and blood poison set in. We used two applications of Caustic Balsam and the swelling and fever left his hand and arm and it healed up without any more bother. It is also as efficient for snake bites and we would not think of being without it.
L. H. Globe, Forest Grove, Mont.

Caustic Balsam is good for that sore feeling after baseball or football games.

A Splendid Human Remedy

I think your Caustic Balsam a splendid human remedy. We use it for cuts, burns, sores, swellings, sore throat and lameness and find it very beneficial. We expect to keep it on hand ready for any emergency.
Mrs. Robt. B. Newton, Columbus, Miss.

The world's greatest and surest veterinary and human remedy. Has imitators, but no competitors.

Worth Its Weight In Gold

I have used Gombault's Caustic Balsam for my own horses and for others, and it has never failed yet. My little girl had rheumatism for a long time. Nothing did her any good until we used Caustic Balsam and she is all right. My wife had throat trouble and used Caustic Balsam with great results. It is worth its weight in gold.
Dr. Ira Le Dunlap, V.S., Rochester, Pa.



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Gombault's Caustic Balsam

MAY HAVE IMITATORS, BUT HAS NO COMPETITORS

PRICE \$1.75 PER BOTTLE AT ALL DRUGGISTS OR SENT BY PARCEL POST.

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