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Don't "Hold the Bag" for the Bean Jobbers

SO many loose and misleading statements have been made and published with regard to the bean situation, and particularly with regard to promises and performances of the United States Food Administration relating to the purchase of Michigan beans, that the average bean grower has been utterly confused as to the real situation and even close market students have been kept "guessing." To the end that Michigan bean growers might have accurate and reliable information regarding the situation, the Michigan Farmer has carefully followed the course of known events relating to the bean deal and closely investigated the mysterious undercurrent of real cause and effect which has made the market history of Michigan beans during the past twelve months.

A member of the Michigan Farmer staff accompanied the committee of dealers and growers which went to Washington last May to secure all possible relief from the then serious market situation, and a full report of the conference and its results was published in these columns.

This year, as is well known by the majority of Michigan bean growers, the organized bean jobbers of the state withdrew from such measure of cooperation with the bean growers of the state as the growers had been able to secure after several years of effort in this direction and determined to "paddle their own canoe," as they had so long done in the past, and with the following result:

A Gentlemen's Agreement.

Early in the bean marketing season there were rumors afloat that an arrangement had been made with the government buying agencies whereby the market for Michigan beans would be stabilized at \$8.00 per hundred pounds to the growers, the dealer to have a fair and legitimate profit above that figure for his services, for beans purchased on government account. Investigation of that rumor failed to develop any concrete evidence that a definite contract of this kind had been entered into. It has since been referred to as a "tentative agreement" by a publication apparently enjoying the confidence of the Michigan Bean Jobbers' Association, or at least the committee of the jobbers which recently spent a week or ten days in Washington and New York in the interest of Michigan bean growers. (?) According to the alleged information of that publication this "Gentlemen's Agreement" fixed the grower's price at \$8.00 per cwt., the dealer's margin at \$1.00 per cwt., and the jobber's profit at twenty-five cents per cwt., all on a choice hand-picked basis.

But beans didn't move as had been anticipated (?) and prices to growers soon commenced to sag. Elevators were filled with cheap beans and the market still dropped, or buying was discontinued entirely, as was the case in many localities. Something seemed to have gone wrong with the "Gentlemen's Agreement" when the time came to unload and take the profit.

As a result charges were preferred involving alleged official acts of K. P. Kimball, former head of the bean section of the United States Food Administration, and an alleged accomplice in the Food Administration Grain Corporation, by members of the

Michigan Association, pursuant to der will, of course, be distributed among the members of the association. Growers cannot get in on it except through this medium. It is a bean jobbers' deal.

Government Pays Jobbers \$9.25 for Beans.

As a result of this committee's plea that the Michigan bean industry should be aided by the immediate purchase of Michigan beans, the Food Administration Grain Corporation gave them a contract for three hundred and fifty cars (not seven hundred cars as their erstwhile mouthpiece reported), at \$9.25 per hundred pounds, f. o. b. Michigan common points. This contract was given in a block to the Michigan Bean Jobbers' Association. This or-

Iosco Co., March 1.—Elevators have not been buying beans for some time and do not intend buying until stock on hand is disposed of.—G. C. A.

Shiawassee Co., March 1.—Beans \$7 per cwt. on hand-picked basis. Not much brought to market, and farmers are dissatisfied with price.—O. E. G.

Arenac Co., March 1.—Dealers have just started buying beans after a month lay-off; prices \$6@6.75, hand-picked basis.—F. R. P.

Tuscola Co., March 1.—Only one elevator is buying beans, paying \$6.50 per cwt.—J. K.

Oakland Co., March 1.—Dealers are offering \$6 per cwt. for beans.—G. B. D.

Sanilac Co., March 1.—Bean dealers are not buying at present.—B. R.

Newaygo Co., March 1.—The white beans are selling for \$6 per cwt.; red kidneys at \$10.—O. D. P.

Lapeer Co., March 1.—There is no market for beans here and dealers are not buying.—J. C.

Shiawassee Co., March 1.—Dealers in Corunna and Owosso are buying beans, paying \$7 per cwt.—W. W. D.

Bay Co., March 1.—Beans are selling for \$7 per cwt.—C. W. K.

Newaygo Co., March 1.—Beans are bringing \$6 per cwt.—C. B.

Bay Co., March 1.—Beans were down to \$5.60 per cwt., but are now bringing \$6.50 and the buying is very limited.—J. N.

Kent Co., March 1.—The bean deal is dull. Some not buying, others are paying \$6@7.50 per cwt.

St. Clair Co., March 1.—Local dealers are not buying beans.—W. A. K.

Ottawa Co., March 1.—Dealers are buying 1918 beans on a \$6 basis.—F. C. H.

Osceola Co., March 1.—Beans are bringing \$5 per cwt.—O. C.

Gladwin Co., March 1.—The elevator at Beaverton is paying \$7 for beans.—F. A. C.

Midland Co., March 1.—Dealers here are paying \$7 per cwt. for beans.—G. H. W.

Newaygo Co., March 1.—Dealers have just commenced buying beans; they are offering \$7 per cwt.—F. S.

Make the Bean Jobbers Divide.

On the basis of this big sale to the government beans should be purchased everywhere in Michigan on an eight dollar basis. The grower should get eight dollars. The dealers may claim that the domestic trade outlet will not warrant this price. Tell them they didn't pay this price for the beans they are selling at \$9.25. Tell them, too, that the grain corporation placed this contract to aid the Michigan bean industry, not merely the bean jobbers. And write us the excuse of any bean jobber who will not buy beans on an eight dollar basis, so we can let others know how he is interested in the Michigan bean industry. Also let us know if your dealer comes through clean with an eight dollar price, which is to his credit. Just a little cooperation along this line will mean thousands of dollars to Michigan bean growers who still have beans to sell. Don't simply "hold the bag" for the bean jobbers.

Michigan Bean Growers!

If you have beans to sell get quotations from your local buyer at once.

On the basis of the recent government contract for Michigan beans he could buy on an \$8.00 per cwt. basis.

Write THE MICHIGAN FARMER advising what he offers and what reason he gives for a lower offer.

If you have already sold your beans, advise us when and to whom they were sold and at what price.

Lacking any degree of cooperation from the bean jobbers, the information thus secured may be of great future value to Michigan bean growers.

Michigan Association, pursuant to which charges a hearing was held by the Division of Enforcement of the Food Administration in Washington and New York, at which a committee of Michigan bean buyers and jobbers appeared to present testimony and direct the investigation. A prominent official of the Food Administration Grain Corporation advised a member of the Michigan Farmer staff, who went to New York to secure first-hand information regarding this matter, that judgment has not yet been rendered in the case. In the meantime the official connection of these men with government bean activities has been severed.

But the reader's interest in the practical results of the bean jobbers' ef-

Unless the bean jobbers buy beans on this basis from now on the growers will get no benefit from this sale. Let us see what they are doing.

What Bean Jobbers Are Paying.

To aid bean growers who still have beans to sell in getting some benefit from this contract we have sent out a large number of inquiries regarding prices paid for beans at Michigan elevators. The following are a few of the replies to some of these inquiries. Many others will be published next week:

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CURRENT COMMENT

Get Those Cost Figures

OUR readers are familiar with the fact that when the various governmental agencies, including the Federal Trade Commission and the Senate Committee on Agriculture, sought information on the cost of producing farm products, Secretary of Agriculture Houston expressed his regret that the Department of Agriculture could give no dependable figures on the cost of producing farm crops. Such a statement coming from the head of a great governmental department supposed to be operated for and in the interest of the country's agriculture, and that notwithstanding the fact that it was known that the Bureau of Farm Management of the Department of Agriculture under the efficient leadership of Dr. W. J. Spillman had been making such investigations for a decade, was a sad blow and a great disappointment to the thinking farmers of the country.

The most charitable view that could be taken of this situation was a lamentable incompetency in the conduct of the department. More light has apparently been shed upon this situation by Dr. Spillman, who resigned as head of the Department of Farm Management as a result of the squabble, in an address before the National Board of Farm Organizations which met at Washington last month.

In his address on the subject, "Reliability of Cost Production Data," Dr. Spillman reviewed the history of the department squabble which resulted in his resignation, and quoted Secretary Houston as stating that "the farmer is not entitled to any information on cost of production. His business is to produce," and further stated that investigations that had been in progress for many years were ordered stopped.

One of the interesting features of Dr. Spillman's address was his statement that in all twenty-three reports on the cost of production were submitted covering various farm products, many of which included carefully kept reports of five years, all of which were in hand when Secretary Houston wrote the senate committee that he regretted he could not send the senate depend-

able data on crop production costs. Further serious charges were also made that the secretary's action was in accord with a typewritten sheet circulated through the department, said to have been written by a member of the Rockefeller General Education Board, stating that the department should make no investigations which would reveal the profits made by farmers or determine the cost of producing farm products. Without doubt the National Board of Farm Organizations will insist on a sweeping inquiry of Dr. Spillman's charges by the next congress. A resolution providing for such an investigation was introduced in the House by Congressman Cramton of Michigan during the closing hours of the congress which has just adjourned.

Dr. Spillman's charges, which passed the lie direct to Secretary Houston, are of too serious a nature to be passed by as the utterances of a disgruntled former employe of the department. Dr. Spillman had a long and honorable connection with the Department of Agriculture and is widely known as a man of ability and force. His work was believed by a large number of our best informed farmers to be the most valuable undertaken by the department. His courage in making these charges is commendable, and a thorough investigation should and will be demanded by the farmers of the country.

But congressional investigations are slow. Let us have the figures given in the twenty-three reports to which Dr. Spillman refers without waiting for an investigation. The proper function of the Department of Agriculture is to serve the farmers of the country, not to use them or deceive them. The farmers of the country are the proper judges of the work which the department should do for them, not the Rockefeller General Education Board. Here is a situation in which the newly organized State and National Farm Bureaus should function. These organizations may properly demand the immediate release of these reports on production costs. The farmers of the country will be able to judge quite as well regarding their dependability as is Secretary Houston. Let us have a full investigation by all means, but let us have the figures now.

If the State and National Bureaus of Agriculture will act in this case, they will settle once and for all the mooted question as to whether they are to become a directing force as regards department activities or simply a convenient tool of a bureaucratic organization. A present demand for the release of these cost figures by state and national farm bureaus would at once place these organizations in their rightful place in the estimation of farmers who have hoped much for their future value.

Senators Reject League Plan

DURING the week which intervened between President Wilson's return to the United States and his return to France, occurred much discussion pro and con in the United States Senate relating to the attitude of that body toward the plan for a proposed League of Nations contained in the covenant reported by the Committee of the Peace Conference, of which President Wilson was chairman.

The sentiment expressed by the several senators was crystallized through the medium of the following resolution offered by Senator Lodge at midnight on March 3:

"Whereas, under the constitution it is a function of the senate to advise and to consent to, and resent from, the ratification of any treaty of the United States and no such treaty can become operative without consent of the senate expressed by the affirmative vote of two-thirds of the senators present; and

"Whereas, owing to the victory of the arms of the United States and of the nations with whom it is associated, a peace conference was convened and

is now in session at Paris for the purpose of settling the terms of peace; and,

"Whereas, a committee of the conference has proposed a constitution for a league of nations and the proposal is now before the peace conference for its consideration.

"Now, therefore, be it resolved by the senate of the United States in the discharge of its constitutional duty of advice in regard to treaties that it is the sense of the senate that while it is their desire that the nations of the world should unite to promote peace and general disarmament, the constitution to the league of nations in the form now proposed to the peace conference should not be accepted by the United States.

"And be it resolved further that it is the sense of the senate that the negotiations on the part of the United States should immediately be directed to the utmost expedition of the urgent business of negotiating peace terms with Germany satisfactory to the United States and the nations with whom the United States is associated in the war against the German government, and the proposal for a league of nations to insure the permanent peace of the world should be then taken up for careful and serious consideration."

Under the senate rule unanimous consent was required for the immediate consideration of this resolution. Objection being offered, Senator Lodge read a statement signed by republican members of the present and next senate, certifying that they would vote for the resolution if permitted to do so. Forty-five senators who will be members of the next senate, are said to have signed a statement pledging themselves to vote against a League of Nations. This is twelve more than is sufficient to prevent the ratification of a treaty embodying the League of Nations plan, for which two-thirds vote of the senate is required.

How much of statesmanship and how much of politics has contributed to this apparent deadlock between the President and the senate of the United States regarding a plan for a League of Nations is a debatable question. Reports of the speeches which have been made in the senate in opposition to this plan contained little of constructive suggestion, with the exception of the speeches made by Senators Knox and Lodge. It is a well known fact that President Wilson earned the opposition of republican senators, not alone by his plea for the election of members of his own party to congress, but as well by his failure to place any member of the senate on the peace conference delegation or to otherwise take the senate into his confidence in the formulation of a plan for the League of Nations.

President Wilson also undoubtedly made a serious mistake so far as getting the united support of the people of the country is concerned in not naming on the commission at least one or two strong men of the opposite party in whose ability and experience the people of the country have confidence. But the senators who have gone to the length of pledging themselves against the support of a League of Nations may have made just as serious an error in not recognizing the fact that the people of the country may favor such a League. From present indications, it would seem that this most important matter has, up to date, been badly bungled by the injection of politics into a proposition where statesmanship should be the only determining factor.

Farmers' Income Tax

MANY more farmers will be required under the law to pay an income tax than was the case last year. Due to the fact that there is a general though erroneous impression abroad that farmers have made large profits during the past year, there is bound to be a close scrutiny of the returns made by farmers, hence the wisdom of going into the matter carefully, instead of merely assuming that one's income was not sufficient to require the making of a statement. Every farmer who has any

idea that his total income would even approach the minimum for taxation purposes should secure a blank at once and fill it out according to directions. If in doubt as to the requirements take it to your banker or other competent adviser and get his help. If your net income is below the minimum it will not be necessary to return the statement. If not, the return must be made not later than March 15 to avoid a penalty.

News of the Week

Wednesday, February 26.

GENERAL PERSHING notifies the War Department that divisions in the American Expeditionary Forces excepting those with regular army designations, will be returned to the United States in the same order as the arrival of the respective divisional headquarters in France.—It is reported that President Wilson will not call an extra session of congress until he returns from his second trip to Europe.—Samuel Gompers' president of the American Federation of Labor, states that the labor situation in the United States threatens to become as critical as in Europe.—Federal authorities are closing all roads to rum runners who are endeavoring to smuggle liquor into Michigan.

Thursday, February 27.

THE Soviet government of Russia meets the demand of the state department at Washington for the release of an American citizen with demands that either Eugene V. Debs or Thomas J. Mooney be exchanged for this prisoner.—British House of Commons considers the establishment of a ministry to take charge of all public utilities.—Foreign speaking people are making strong protest to the Moore-Condon bill in the Michigan legislature which would require the courses of instruction in all schools of the state to be conducted in English.—Thirty-three per cent of the enlisted personnel of the army had been discharged by February 19.

Friday, February 28.

REPORT on the complete summary of the world's casualties during the great war, just issued, shows the almost incomprehensible figure of 17,500,000 persons.—Following the English industrial congress called by the government, a joint committee composed of thirty laborites and thirty capitalists were chosen to make a thorough investigation into all questions pertaining to the industrial situation in England.—Representative Gillette, of Massachusetts, is selected on the first ballot by the republican caucus as the party candidate for speakership of the next House of Representatives.—Mrs. Charles E. Townsend, wife of Senator Townsend of this state, is critically ill at her home in Washington.

Saturday, March 1.

PEACE Conference envoys in Paris hope that the peace treaty will be signed within two weeks. The tentative terms take from the enemy all ports on the Baltic, her war ships and naval bases, throws open the Kiel canal to all craft of all nations, and withholds ocean cables, at least temporarily.—German leaders are now urging that Allied troops be used to put down riots instigated by the Reds.—The London Chamber of Commerce asks the British government to remove all embargoes against American products.

Sunday, March 2.

EARLY this morning the United States Congress passes the Victory Loan bill authorizing an issue of seven billion dollars in bonds and certificates.—The Allies are now using embargo methods against the four Slav governments of Russia that failed to meet in conference with Allied representatives.—To date there are 170,000 American soldiers taking advantage of educational courses under the direction of American and French authorities.—Italy agrees to give up her claim on Fiume, the eastern coast of the Adriatic sea.—Wellington R. Burt, Saginaw's "grand old man," dies at his home in that city.

Monday, March 3.

A GENERAL strike threatens Berlin, where political strife continues to grow.—Hostilities between the Ukrainians and Poles are likely to be resumed owing to failure of disagreement between the forces.—The Allied conference will undoubtedly provide that in Palestine shall be laid the foundations of a Jewish commonwealth.—President Wilson meets forty governors and one hundred and twenty mayors in Washington to consider plans for stabilizing the country's industrial

(Continued on page 398).



Training for Disabled Soldiers

THE gates of hope are open for the young men who seem to be hopelessly handicapped by the loss of limbs and other disabilities—marks of the great battle they have fought for humanity. It is the purpose of this country to help them to use the remainder in a way more efficient than before. Veterans of this war will not be social cripples and dependent pensioners, but rehabilitated, self-reliant, and self-respecting men. That was the purpose of the framers of the vocational rehabilitation act passed by congress last June, and carried into effect by a government agency, the federal board for vocational education at Washington, D. C.

Every man discharged from army or navy should know of the opportunities offered him. Friends should point out to him that if he is entitled to compensation from the bureau of war risk insurance, he is entitled also to the services of the federal board for vocational education. The board will assist him in finding suitable employment, and if he is hindered by his physical condition from carrying on successfully his former occupation, the board will give him such a course of training—agricultural, industrial, commercial, or professional, as is suited to his needs and preferences.

While he is training, his family continues to receive the usual allotment, his tuition and other expenses incident to his training are paid, and he is given at least \$65 per month for subsistence. If his last month's pay was more than that amount he may receive an amount equal to his last month's pay. When he has finished his training course a

How Uncle Sam is Meeting One of the War's Perplexing Problems

job is ready and waiting for him, probably, due to his newly acquired skill, at higher wages than he ever before earned. His compensation from the war risk insurance bureau is in no way affected by what he may or may not earn.

The Most Popular Line.

No line of free education for disabled soldiers at the disposal of the Federal Board for Vocational Education has aroused general interest as has the new one of "farm mechanic." Inquiries are received daily from progressive farmers who want to employ these men and from disabled soldiers who want to take the course.

Tractor operation is only one of the lines of activity of the farm mechanic; this in itself is an occupation with a future. Tractor operators are needed and experience of the men with motor equipment in the army will prove of value in this work. The tractor coming generally to be used on the larger farms is extending rapidly to the moderate sized farms. The average farmer is not a mechanic. Many of them realize that a tractor is a profitable outfit to have if they had a trained man to run it. The large farms may afford to keep a man for the purpose, but the farmer with two hundred to five hundred acres feels that unless he can run his own tractor he had better depend on horses. He knows he can run them. The demand for men who can get sufficient work from the tractor would

be greatly increased if such men could be used in a profitable way between tractor jobs. A good tractor operator should be a natural mechanic; one who is ingenious and resourceful. If such a man can couple with his tractor ability a knowledge and ability to repair and keep in order the farm machinery, he has greatly increased his field of usefulness and chance of employment throughout the year. He also makes it possible for a farmer to take advantage of farm machinery which otherwise he might feel that he could not profitably use.

To qualify for this work a man should be able to care for and operate a tractor and other gasoline engines, be familiar with the automobile, understand the binder, mower and other farm machinery, be able to use a forge and make common welds in iron and mild steel, sharpen a plow, do a fair job of wood work such as make a wagon box, hay rack or repair on buildings, mend harness and have a working knowledge of electricity so he can care for a low voltage electric light plant, including the storage battery.

Farms Need Good Mechanics.

"What work is there on a two-hundred-acre farm for a mechanic?" is a common question put to the federal board. The farmer could afford to have a tractor if he has a man who can keep it tuned up to maximum efficiency. Anyone who can handle a tractor can prescribe for the ordinary ills of a sta-

tionary engine. A farm with a gasoline engine can have water under pressure if there is a man available who can do an intelligent job of pipe fitting. Such a man can make the ordinary repairs and adjustments on an automobile. The installation and care of a low voltage electric light plant, including the storage battery, is quite within his ability. The upkeep of farm machinery can be attended to between tractor jobs. The life of farm machinery is short because of lack of care in upkeep. A man who can repair binders, mowers, haying tools, plows, cultivators, and harness, can greatly increase the life of farm equipment. Repairs to buildings and the greater part of the building needed on the farm would come within the ability of the farm mechanic. The farmer gets along without much of this kind of help because of the difficulty of obtaining it.

Labor is the big problem on a farm. Mechanical equipment makes the farmer practically independent of transient labor and enables him to do away with part of his equipment of teams. In doing this he not only saves the cost of the team, harness, barn room and work of caring for them, but he saves their food, or in other words, he has more acres for income crops.

This broadening of the disabled man's training and work increases his ability to locate himself advantageously, and makes it possible for him to obtain a permanent position rather than a temporary or seasonal job. All those interested in obtaining further information write to the Federal Board for Vocational Education, office of the Board, Washington, D. C.

Poor Sires Cut Down Profits

PROMOTERS of the greatest branch of the agricultural industry in Wisconsin have launched a project in their state which promises to be one of the most important and far-reaching in its effects on the dairy and cattle business of anything carried on there for many years.

The project is known as the "Better Wisconsin Campaign." Its primary object is the elimination of all grade and scrub bulls from the state. Just what this would mean to our neighbor across the lake can hardly be imagined. Better bulls mean better cows. Better cows mean more money for the farmer. More money means better farm homes, more prosperous rural communities and a bigger and better Wisconsin.

The good pure-bred sire is the first essential for the improvement of all classes of live stock. Starting with this as a foundation on which to work they plan to induce every cattleman of the state to use the best bull possible.

A year ago the move started in Fond du Lac county. This county offered exceptional opportunities for such an undertaking. The three principal dairy breeds are very well represented by men of national reputation. The county and its breeders have long been before the public. Colantha 4th's Johanna, that famous Holstein cow, who at one time held the world's record for butterfat production from seven days to one year, was bred and made her records there. The famous Jersey, Loretta D, champion cow at the St. Louis Exposition, was bred and raised in Fond du Lac county. Charles L. Hill, one of

How Wisconsin is Putting Across the Idea of Using Pure Bred Bulls

By D. S. Bullock,

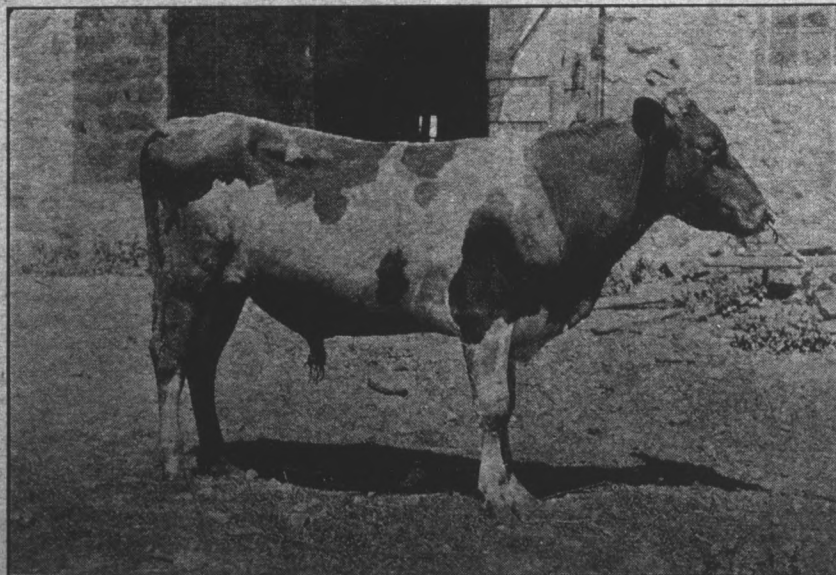
Fieldman, Wisconsin Live Stock Breeders' Association

the great leaders in the Guernsey nity breeders' associations representing the dairy cattle interests of the county. An executive committee consisting of the president and secretaries of these organizations, a representative of the rural development bureau of the Chamber of Commerce, the county

The first step in the starting of the campaign in the county was the getting together of the three county commu-

agent and a representative of the Wisconsin Live Stock Breeders' Association was formed to have complete charge of the work in the county.

The next step was the taking of a cattle census. To accomplish this the cooperation of the county superintendent of schools and the rural teachers was obtained. The teachers and the pupils did the actual work of taking the census. They forwarded the returns to the county agent who compiled them. This census was not complete, and as far as actual numbers was concerned left much to be desired. The percentages, however, we feel were fairly accurate and represent actual conditions as they exist in the county.



Grade Guernsey Traded in for Pure-bred by J. P. Brown, of Malone, Wis.

	Cows.	Heifers	Old Bulls.	Young Bulls.	All Cattle.
Pure-breds ...	% 6	% 7	% 26	% 37	% 7
Grades	48	53	37	37	50
Scrubs	46	40	37	26	43

From this table it will be seen that of the bulls of breeding age thirty-seven per cent were scrubs, thirty-seven per cent were grades, and only twenty-six per cent were pure-breds. Practically only one bull in four in use in this great dairy county were pure-breds. This was at once an alarming and surprising situation. One town showed as high as fifty-four per cent of the bulls pure-breds, while another had only twelve per cent pure-breds and eighty per cent scrubs. Animals

(Continued on page 396).

News of the Agricultural World

SUGAR BEET SEED NEEDED.

THE necessity is pointed out for conserving the supply of sugar beet seed. There appears to be a sufficient quantity to plant a normal acreage in 1919, but the necessity under existing circumstances for protecting the supply for 1920 is so great as to make imperative the strictest economy in the use of the available supplies this year. Thorough preparation of the seed bed is suggested as one of the essentials to conservation. This promotes uniform germination to such an extent that the old seeding rate of twenty pounds to the acre has been reduced, in many cases, to fifteen or even ten pounds, with just as good results.

The supply of seed for the leading staple crops is shown to be adequate. In some parts of the southwest and the northwest, there are local shortages due to drought, but in the main they are balanced by surplus in surrounding sections.

SHEEP INDUSTRY ON DECLINE.

REPORTS from various sections of Michigan that have been placed in the hands of authorities at the Michigan Agricultural College tell of a marked falling off in the sheep industry within the state during the last fifteen years. The statement sets forth that while the number of head of sheep in Michigan in 1903 was 2,465,000, the number on January 1, 1919, was only 2,119,000. This decrease has occurred in spite of the fact that sheep, on the average, were worth only \$3 a head in 1903 as compared with an average value of \$12 a head now.

Inability to control the dogs of villages, towns and cities is said to be the chief cause of the decline in this field of husbandry. Tales of almost wholesale slaughter of flocks by dogs in many counties have come in.

"No one denies the value of the dog as a pal and a pet, and perhaps as a protector," declared E. G. Read, president of the Michigan Sheep Breeders' and Feeders' Association, "but neither do we deny the need for mutton and wool. The masses of the people are paying more for their meat and clothes because we lack an effective dog law. If the sheep-raising business is to be restored, such a law must be passed—one that will make it possible for people who prize their dogs to keep them, but will at the same time give officers of the law authority to dispose of vagrant animals that are the principal sheep killers and marauders."

FEED THE BEES.

LARGE numbers of bees in many parts of the state are on the verge of starvation this winter because of the prevailing mild weather, according to B. F. Kindig, of M. A. C., state inspector of apiaries. The unusual warmth is said to have made the honey-gatherers unusually active and to have caused them to eat up the stores of honey that otherwise would have served them until the flowers open in the spring.

"Unless many of these colonies are fed, the loss from starvation will be astonishingly high," declared Mr. Kindig. "As soon as the weather is warm enough for feeding syrup, the bees should be given a liberal allowance of it, made from two parts of sugar and one part of water.

"Hard candy is the most practical thing to use during the cold weather with bees wintering outside. The recipe for making this hard candy is as follows:

"To a given quantity of hot water slowly add an equal amount of granulated sugar. Bring to the boiling point as soon as possible and do not stir

after the sugar is dissolved. A candy-maker's thermometer should be at hand and the syrup should be boiled until it reaches a temperature of 275 degrees F. The syrup should then be poured into suitable pans lined with wax paper. If directions have been carefully followed the resulting candy will weigh about the same as the weight of sugar used and it will be very hard, quite clear and of a light straw color. If by accident the syrup should be burned the resulting candy would be as poison to the bees and therefore should not be used. In order to prevent burning, the syrup should be allowed to boil more slowly as the temperature rises. This candy should be fed by placing it directly above the cluster on the brood frames."

SUGAR BEETS IN WESTERN MICHIGAN.

W. P. HARTMAN, agricultural and industrial agent, Grand Rapids & Indiana Railroad, commenting on the commercial and the experimental crops, the future outlook of the crop

and the promise of a new industry says: "It is now an established fact that the soil and climatic conditions of Western Michigan are adapted to the successful production of sugar beets, as regards both quality and tonnage. The analyses by the government and by the factories determines the former, and reports from the growers proves the latter. Management of the soils and of the crop are the factors making for success or failure. Soils so light, or depleted in fertility, as to produce less than an average yield of potatoes will not produce a satisfactory tonnage of beets. In other words, as pointed out in a recent bulletin of the United States Department of Agriculture: 'Any fertile soil capable of producing crops of other kinds, will if properly handled, produce good sugar beets.'

"The sugar beet is destined to become one of the leading money crops in Western Michigan. At \$10 a ton, f. o. b. loading station, and with yields ranging up to twenty tons to the acre it isn't difficult to figure whether or not the crop is profitable. It is a frost-proof crop, and one with which the

grower does not have to speculate so far as markets or prices are concerned. He knows before he plants the seed that the market is assured and just how much he will receive for every pound produced. Properly handled in crop rotation it increases the production of other crops and among other things will stimulate the dairy and live stock industries. The tops alone are worth \$35 a ton feeding value, according to the United States Department of Agriculture.

"Occasionally one hears the chronic kicker say that the crop is not profitable to grow in Western Michigan. Of course, these fellows, with their preconceived ideas, are next to hopeless. They would profit in visiting any of the centers in the southern part of the state, Ohio or elsewhere in the United States where the ninety-five factories are in operation, and to get the opinions of growers in those centers, where land values are three to five times greater than in Western Michigan."

THE ENGLISH WOOL SITUATION.

A MEETING of the British Wool Federation took place in Bradford last week, when H. Norman Rae, M. P., addressed a large gathering. In a very pointed speech he reviewed the work done by the trade representatives on the Wool Council and, after a very frank discussion everybody felt that excellent service had been given. There are still two or three items which need settling with the officials of the war office, but a spirit of consideration seems to obtain which makes it reasonable to expect that before the sales begin in London in April they will be straightened out.

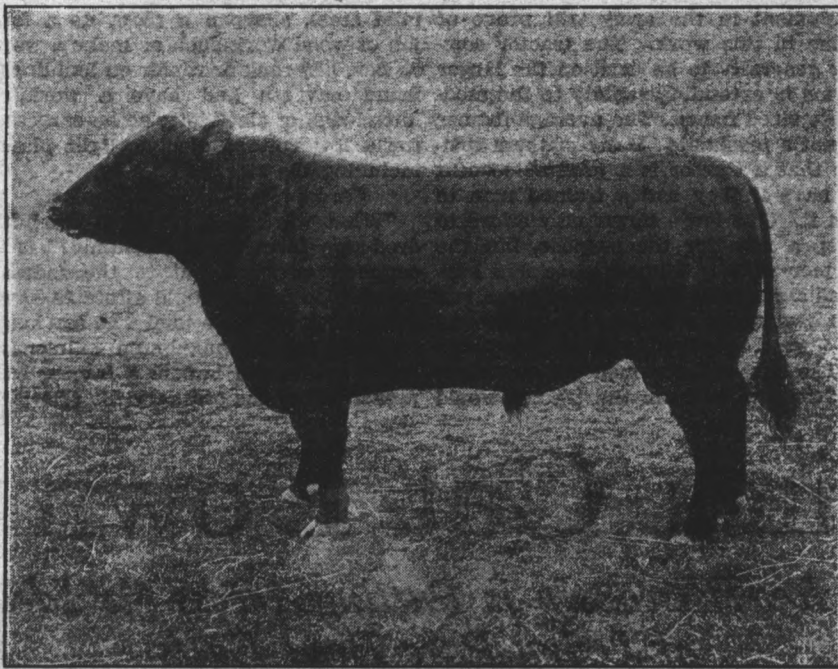
The trade regards with approval the fact that colonial wools are to be auctioned, and that free competition is to be the order of the day. This will be a godsend to everyone. It might appear that nobody would be able to buy expected that eighty thousand bales will be sold that everybody will be able to buy without let or hindrance, the same opportunity being given to our allies as to home merchants and users. It is expected that eight thousand bales will be available; 140,000 bales were mentioned as the quantity which will be available for an auction in May, after which monthly auctions are expected to follow.

The first series will be largely an experiment. Some think it will be a fiasco, but that will depend entirely upon what the department does. We have been told by Sir Arthur Goldfinch, director of raw materials, that the reserve price of every lot will be fixed somewhat lower than today's issue prices in Bradford. But how much lower? Will the wool section of the war office limit values in April, and then fix a lower limit at the May auctions? If that is done the April sale will be a fiasco.

Future Course Outlined.

At the last Wool Council meeting Sir Arthur Goldfinch laid down three principles which will operate for some months, it being clearly stated that in addition to free sales in London the department will continue to comb wool up to April 30, and will sell until stocks are exhausted. The Wool Distribution Office will also continue its work at Manor Row, Bradford. This is all done for the express purpose of curbing speculation, but there will be no speculation unless a very different temper obtains than is seen today. It looks as if topmakers will go to London with a knowledge that present government top values will operate for some time to come, and there will be a margin between them and the government issue price of wool in order to enable topmakers to purchase and turn the same to profitable account.

KING OF THE DODDIES



Imp. "Edgar of Dalmeny," W. E. Scripps, Orion, Mich., Owner, is the Sire of "Erodemus I," an Eleven-months-old Bull Calf Recently Sold at the Perth Scotland Bull Sale for the Record Price of \$10,584, or 2,100 Guineas. Two More of his Calves Sold at the Same Sale for an Average of More than \$5,000 Each.

THE Aberdeen-Angus breeders of Michigan were electrified recently by the announcement of record-breaking sales at the Perth, Scotland, spring bull show. By universal consent the best bull calf at the show was "Erodemus I," sired by "Edgar of Dalmeny," now the property of Wm E. Scripps, at his farm near Orion, Michigan. He was born December 25, 1915, and was a winner in the two-year-old class at the 1918 Chicago International. He is also grand champion of Michigan.

Erodemus I, (43553), the property of J. F. Cummings, of Kinermony, Aberlour, was an easy winner of the class for bull calves in February. He is described as a beautifully molded and well balanced bull, a good walker and remarkably well bred. His dam was Kinermony Ella (56071) and she by the famous Evenwood of Harviestoun (34499).

In a letter to Mr. Scripps congratulating him on the reflected value affecting Mr. Scripps' herd because of this unprecedented sale, F. H. Higgins, assistant secretary of the American Aberdeen-Angus Breeders' Association, said: "I guess you can reinventory your Aberdeen-Angus herd and mark

up your imported bull \$15,000 or \$20,000 or so. I wired you today as soon as the Scottish Farmer came in, for fear someone might wire you an offer for your bull before you learned what his get sold for at the Perth Spring Bull Show and Sale. Not only was this February, 1918, calf champion of the show, but he sold for 2,100 guineas, which, translated from the language of the kilt to United States means \$10,584 and there has never been a \$10,000 bull in this country yet. Not only that but three of his calves sold for 822 pounds ten shillings average, which brings forth a fine little tribute to your bull as a getter."

That Aberdeen-Angus interests are appreciating in Scotland is indicated by the report of the general trade as touching this particular sale. "On no former occasion at public auction of any breed of cattle in this country," says a reporter, "have so many high individual prices been got. Another feature of the sale was the success of the Kinermony herd. Major Cummings has in a comparatively short time, built up a record-winning herd. Edgar of Dalmeny proved a valuable acquisition to Kinermony."



Buy Tractor to Fit Farm

THE tractor," said the manager of a well-known tractor manufacturing company, to a representative of the Michigan Farmer, "is not a complicated machine. A tractor is not as complicated as a self-binder. No doubt many farmers who could use a tractor profitably have a mistaken idea that the mechanism is so complicated it would be difficult for them to handle and care for it. As a result they stay with horsepower at a considerable cost to themselves.

"Too, in the beginning of tractor farming hitches were not well worked out, and that caused some trouble. Now every firm selling tractors has worked out practical hitches which have made it possible to use a tractor with almost every machine on the farm."

How rapidly these things are being worked out and how the tractor is gaining in favor is indicated in the fact that one firm has placed nearly four hundred tractors in sixteen counties in one state.

A noticeable feature of a tractor man's "selling talk" is that he makes no glowing promises. He sticks very close to practical matters. They have no foolish notions about tractors displacing horses or anything of that sort. The reason is that the tractor is now established as a practical economic necessity in agriculture and the manufacturers do not want their machines discredited in any measure by having

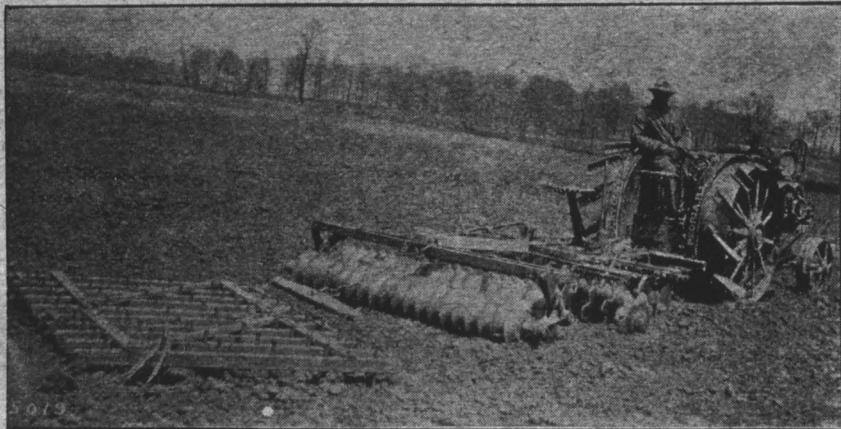
around engine can be useful is seen in the need for lime on many soils. Instead of having a stationary engine setting day in and day out at the rock crusher, whether it is in use or not, a tractor could be used and taken away when the grinding was done. It could be used to get the rock up out of the deep ravines and oftentimes in hauling the lime dust to the farms where it is to be used or to the railroad station.

Takes Work Off Brood Mares.

"In this way and in many other ways," said the manager, "the tractor is going to increase our agricultural output. In the first place there is no doubt that tractors are making it possible to keep more mares on our farms and thus get a larger crop of colts each year, because the tractor takes the heavy work off of them in the spring when they are heavy in foal.

"The tractor is making larger and better field crops possible through plowing the ground when it needs plowing, going deep and breaking it up well. All over our territory plowing at the right time is one of the most important, if not the most important, factors in agriculture. Being able to plow our land, no matter how dry it is, how impossible it would be to do it with horses, makes the tractor invaluable to us."

It is his opinion that few farmers are aware of the many uses a tractor can be put to on the farm and how they fit into the farming program al-



them sold to men who have no need for them or who by misleading statements, have been induced to invest in a machine.

"A farmer who contemplates buying a tractor should go into the matter very thoroughly. He should first determine the various uses he has on his farm for a tractor. He can then arrive at the approximate time the machine could be kept in use. Having done so it would be easy to determine just what returns to expect from the investment.

Buy According to Needs.

"But that is not all. Having listed the things he will want to use a tractor for, he should go into the matter of power needed for and suited to those tasks and buy accordingly. Satisfied users, more than any other one factor, will hasten the growth of the tractor business. Prospective buyers and tractor owners should remember that all the information that tractor manufacturers have been accumulating since the tractor industry first started is available to them."

In short, this manager urges owners of general farms to buy "all-around" engines that can be used for any purpose. An example of how the all

most throughout the year. "From the first spring plowing," he said, "right on through disking, listing, planting and through the harvest they are busy. They are used on the silage cutter and blower to fill the silo. On the binder and on the thresher in the wheat fields. And after the crops are harvested they furnish power for the shellers and grinders. In districts where much wheat is grown farmers no longer wait for traveling threshing crews to come along. They own small separators and thresh their own crops, using the tractor for power. A 20-30 separator will handle fifty to sixty bushels of grain an hour."

In the past it has been difficult to get tractor drivers who were capable of handling a machine and giving it intelligent care. To overcome this condition a number of firms are holding tractor schools at various points in their territory to which tractor owners, prospective tractor owners and tractor drivers are invited. These schools are conducted by experts, who answer questions and explain the different parts and workings of machines. It is noticeable that farm hands are taking advantage of this opportunity to acquire knowledge that will increase their earning capacity.

Store Your Hay in Half the Time With Half the Labor

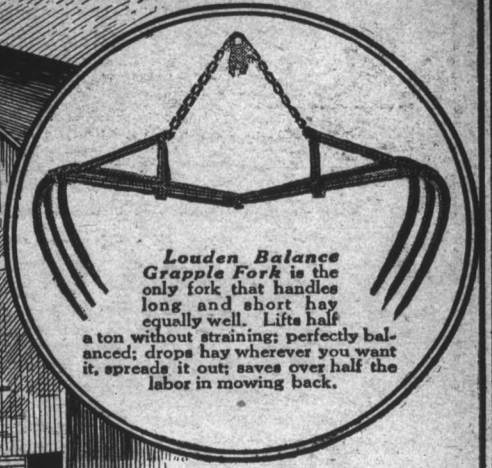
By Using

LOUDEN

HAY TOOLS



W.M. LOUDON
whose Labor Saving
Inventions are
used in many U.S.
government barns



Louden Balance Grapple Fork is the only fork that handles long and short hay equally well. Lifts half a ton without straining; perfectly balanced; drops hay wherever you want it, spreads it out; saves over half the labor in mowing back.

One Man Does Work of Several

Louden Hay Unloading Tools enable you to put away your hay crop with a great deal less help—make every minute count when minutes are worth money.

14-Year-Old Boy Runs Loudon Outfit

Joseph Kofmehl, Manager Springdale Farm, Farley, Iowa, writes:

"The Loudon Hay Unloading Outfit, Power Hoist, Fork and Carrier is doing its work perfectly, managed by my 14-year-old boy. We hoist all kinds of hay, green, damp and dry, and do it with a 3 H. P. engine. The fork works exceptionally well in all kinds of hay. We put 30 loads of straw into the barn and find it works to perfection in straw."

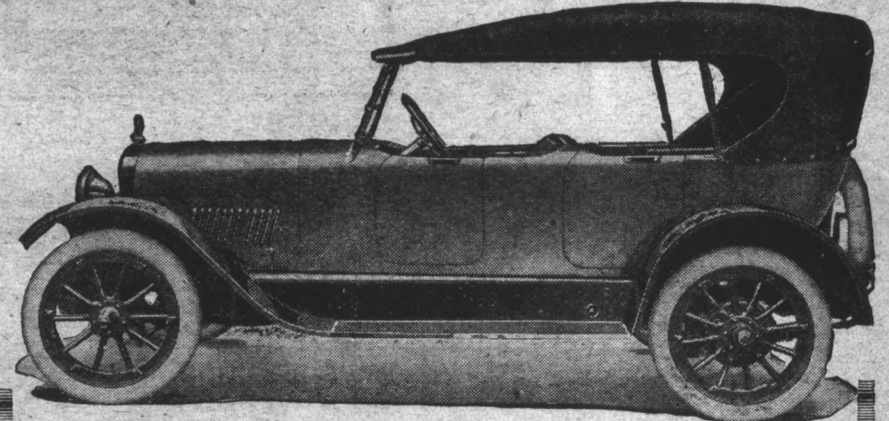
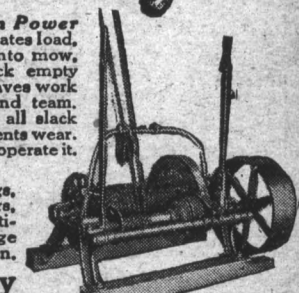
224-Page Catalog—Postpaid No Charge

Write for this book. It shows how to save labor in every department of barn work. Full information about Loudon Hay Forks, Hay Carriers, Hay Slings, Power Hoists, Stalls and Stanchions, Feed and Litter Carriers, Sanitary Water Bowls, Barn and Garage Door Hangers, Ventilators, Cupolas—'Everything for the Barn.' Also get our 112-page Barn Plan Book. Both books sent postpaid, no charge or obligation.

The Loudon Machinery Company
1912 Court Street (Established 1867) Fairfield, Iowa

Louden Senior Hay Carrier takes a 1500 pound load right up to the peak of the roof, drags it over beams—stores tons more hay in the same space. Always works smoothly.

Louden Power Hoist elevates load, draws it into mow, brings back empty carrier. Saves work of man and team. Takes up all slack rope, prevents wear. A boy can operate it.



Specifications in Brief

Four-cylinder models have powerful long stroke Elcar Lycoming motor, developing 37½ horsepower at 2100 r. p. m. Six cylinder models have Red Seal Continental 34x44 inch engine. Developing 40 horsepower at 2100 r. p. m. Two unit electrical system. 116 inch wheel base. Road clearance 10½ inches. Full floating rear axle with spiral bevel driving gears. Timken roller bearings front and rear. Double universal drive; tubular propeller shaft; copper cellular radiator. Easy-riding; semi-elliptic spring suspension. Roomy and comfortable bodies of beautiful design and durable finish; new "Cathedral Pipe" upholstery. Equipment complete even to Motometer on radiator.

5-Pass. Touring Car, 4 cyl. engine \$1175
5-Pass. Touring Car, 6 cyl. engine 1275
4-Pass. Roadster, 4 cyl. engine 1175
4-Pass. Roadster, 6 cyl. engine 1375
5-Pass. Sedan, 4 cyl. engine 1625
5-Pass. Sedan, 6 cyl. engine 1725
4-Pass. Sportster, 4 cyl. engine 1175
4-Pass. Sportster, 6 cyl. engine 1375



Never Before Such Value in Cars at Elcar Prices

THE Elcar satisfies the most particular buyer. A prettier car never was built. The high-class finish insures lasting beauty despite country roads.

Driving the Elcar is real pleasure. It is easily handled, responsive, flexible. The motor gives abundant power for hills, sand, mud, and all hard going, with ample speed. You like comfort, and you'll find it in the Elcar. It's roomy. Has wonderful springs. Ride all day and you won't feel cramped.

Solid worth is built into the Elcar. Every part is 150% strong. It gives dependable service for years. Elcar upkeep runs small. 18 to 20 miles are usually averaged to the gallon of gasoline—1000 miles to the gallon of oil.

Don't think of choosing your new car until you've seen the Elcar. It will just suit you in every way. Ask for name of our nearest dealer, if you don't know him.

Write for catalog illustrating and describing the eight 1919 Elcar models. We gladly mail it to anyone interested. FREE upon request.

Elkhart Carriage and Motor Car Co.
714 Beardsley Ave. Elkhart, Indiana

Double Your Milk and Beef Profits!



WHEN you multiply your milk and beef profits in this time of high prices, you are in a way to make more money than you have ever made before.

Mortgages are being lifted, bank balances are climbing, on the 60,000 farms where cattle are fed on sweet, succulent and tasty silage from the

INDIANA SILO

Every year the silo makes enough additional profit to pay its original cost.

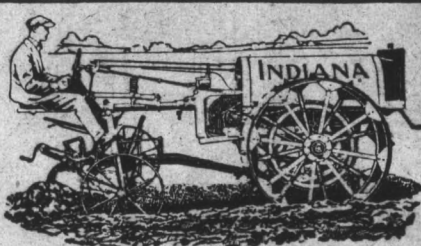
Winter work is lighter. Does away with hauling from the fields.

More Indiana Silos are used than any other kind because they make better silage, costless in proportion to their earning capacity. Ask the Indiana Silo owners.

Write for our easy payment plan and descriptive booklet.

THE INDIANA SILO CO.

826 Union Building... Anderson, Ind.
826 Silo Building... Kansas City, Mo.
826 Indiana Building... Des Moines, Ia.
826 Live Stock Exch... Ft. Worth, Tex.



This is the tractor you have been waiting for—one man operates it riding on the implement. Does the work of four horses and saves 60 percent of the cost. Uses the horse implements you already have without expensive hitches. Cuts time spent on chores; requires no resting time; easy on the driver.

Replaces horses at all kinds of farm work on any size farm. Weighs no more than one large horse. That's why it really replaces horses, and really saves money for the farmer. It's a tractor that will plow, harrow, drag, drill, cultivate, mow and pull a binder. Gives you all the power you want but wastes none.

Write for the folder that tells what it can do for you.

INDIANA
ALL-ROUND
TRACTOR
The World's Tractor

Bull Clubs Improve Herds

THE history of cooperative bull associations shows that they are especially adapted to small herds, where a valuable bull for each herd would constitute too large a part of the total investment. Through these associations farmers or dairymen who have only a few cattle can have joint ownership, use and exchange of pure-bred bulls. The cash purchase and cost of maintenance of the bulls belonging to the members of the association is distributed according to the number of cows owned by each member, thereby giving the farmer an opportunity to build up his herd at a minimum of expense.

The typical cooperative bull association, as organized in this country, is composed of from fifteen to thirty farmers who jointly own five bulls. Its territory is divided into five "breeding blocks," one bull being assigned to each block. As many as fifty or sixty cows may belong to the farmers in each block and the bull in the block should be kept on a farm conveniently situated. To prevent inbreeding each bull is moved to the next block every two years. If all the bulls live and if all are kept until each has made one complete circuit no new bulls need be purchased for ten years. In this way each member of the association has the use of good pure-bred bulls for many years at a cost of only a small part of the purchase price of one bull.

Low Cost of Cooperation.

That the need of pure-bred bulls is urgent in many parts of the country is evident from the facts brought out by a study of eight districts in the states of Iowa, Minnesota and Massachusetts in which there were no associations. In this survey information was obtained regarding 1,219 farmers owning 817 bulls whose average value was \$76. Had the owners of these cheap bulls been properly organized the same investment would have purchased the necessary bulls of an average value of \$283. On the farms mentioned nearly four times as many bulls were used as would have been required under proper organization. The farmers were, therefore, feeding four bulls when they should have been feeding only one.

Actual first cost figures from other cooperative bull associations are more encouraging. In one association having more than one hundred members the original cost to each member was only \$23. The members already have had the use of good pure-bred bulls for four years and probably will have their use six years longer without additional cost other than maintenance. Another association with more than fifty members has had the use of good pure-bred bulls for more than seven years at an average investment of less than \$25 a member, with prospects of being able to use them for three or four years more.

When questioned regarding the value of cooperative bull associations, one hundred and fifty farmers in Maryland, Michigan and Minnesota estimated that the use of bulls belonging to the organization increased the value of the offspring in the first generation from thirty to eighty per cent, with an average of sixty-five per cent. Usually in business transactions in which there is a probability of great gain there is a possibility of heavy loss, but in the bull associations the chances of profit are excellent, with little probability of loss. The investment is so small and the chance for herd improvement so great that the net returns greatly exceed the small original investment.

The cooperative bull association helps its members to market dairy stock and dairy products, to fight contagious diseases of cattle intelligently and in many other ways assist in improving the dairy industry.

How to Organize a Bull Association.

Success in the operation of a cooperative bull association depends a great deal on the care that is used in its organization. Those interested write to their state agricultural college, which will be glad to give advice and assistance. It is advisable, if possible, to visit some near-by bull association in order to study the methods of operating, for the more information that is available the better will be the prospects for a well organized and successful association.

BIG EXPORT TRADE IN CANNED GOODS.

EXPORT sales of canned fruit, aggregating fully \$10,000,000 have been made within the last few weeks, according to estimates made by eastern brokers. The sales through New York alone have exceeded \$2,000,000 within the last fortnight, although the bulk of the business was done in Chicago and other middle western cities. In a way, this enormous demand for fruit of all kinds, for it has included dried fruit as well, the sales of which cannot be very accurately estimated, is one of the most spectacular features of the lifting of the export ban. Both England and France, and particularly the former, appeared to be ravenous for fruit after the privations of four years of war with the question of the food supply itself sometimes being in a doubtful position.

It had been a rather serious matter to provide for the necessities, let alone anything in the shape of luxuries, and when it was finally found that tonnage could be spared for the shipment of food of this character across the water there was a rush for it that simply overwhelmed the American trade.

The situation has presented many curious features. When the buying frenzy hit the American markets, for it has been little short of that, there was an apparent scarcity of supplies, and it seemed doubtful that there would ever be any chance of meeting the demand. But it became so insistent and the matter of price of such secondary importance that gradually the goods began to appear on the market, slowly at first, but afterward with a rush which kept up in a steady stream which, however, seemed in no wise to diminish the demand, which continues, although the supply has decreased.

A little idea of the situation can be gained from the fact that canned peaches, for instance, which have been held at thirty cents a can in the American markets, and which have proved slow of sale because of the high prices asked, have sold at six shillings a can, or, roughly, \$1.50, in London, and at ten francs, or about \$1.80 a can in Paris.

At the same time this extraordinary foreign demand has been met only at the expense of the American supply, and dealers say that if the American public becomes hungry for canned fruit before the next pack they may be compelled to pay prices Londoners have been willing to pay. As matters stand now coast packers have nothing further to offer and the resale offers by speculators and others have begun to diminish, so that very shortly there will be nothing available for either the domestic or foreign trade.



The World's Record Separator

Time has not changed the fact that the United States Separator in open competition set the World's record for close skimming—in the most thorough test ever conducted.

Time has changed the United States Separator. During the war while the great plant was making millions of shells for our allies and later for our government, the inventors and designers of the United States Separator were making the World's Record Separator a better Separator.

Seven exclusive patents have been granted on the United States Disc Separator in the past two years.

People owning a United States Disc Separator say—but why not see the United States Disc Separator yourself?

UNITED STATES
DISC SEPARATOR

Vermont Farm Machine Company
BELLOWS FALLS, VERMONT
CHICAGO PORTLAND, ORE. SALT LAKE CITY

Watch your newspaper for this advertisement telling where you can see the United States Separator. Agents and dealers wanted in some localities



Potato Wart Disease

IT is stated that wart, one of the most dangerous diseases of potatoes, has made its appearance in a limited section of Pennsylvania.

The infested territory embraces twenty-seven comparatively small mining towns, the latest statement says, but experts of the Agricultural Department have given warning that the infection may have reached other sections in the same way that it reached these towns and vigilance is urged to discover and report it, if it does exist elsewhere, as well as to guard against a possible spread of infestation. It was only last year, however, that the disease was discovered, and the department officials say it is possible that it may be present in other sections, but not yet recognized.

Wart disease is caused by a parasitic fungus and manifests itself by a warty outgrowths on the underground portions of the plant. The warts vary in size, and sometimes the entire tuber is converted into a spongy, warty mass. Many of the warted potatoes rot in the ground, but if the warts are small and the season favorable, the diseased tissues may dry down and the tubers keep through the winter.

Damage resulting from wart varies, but it is always severe, and in some cases no edible potatoes at all can be grown. This was true in many of the Pennsylvania gardens last year. The fungus is carried over from year to year, not only in the potato but in the soil. If the same ground is planted to potatoes year after year, the infestation becomes so severe that the growing of potatoes is rendered impossible. Where long-time rotation is practiced, comparatively little damage is done.

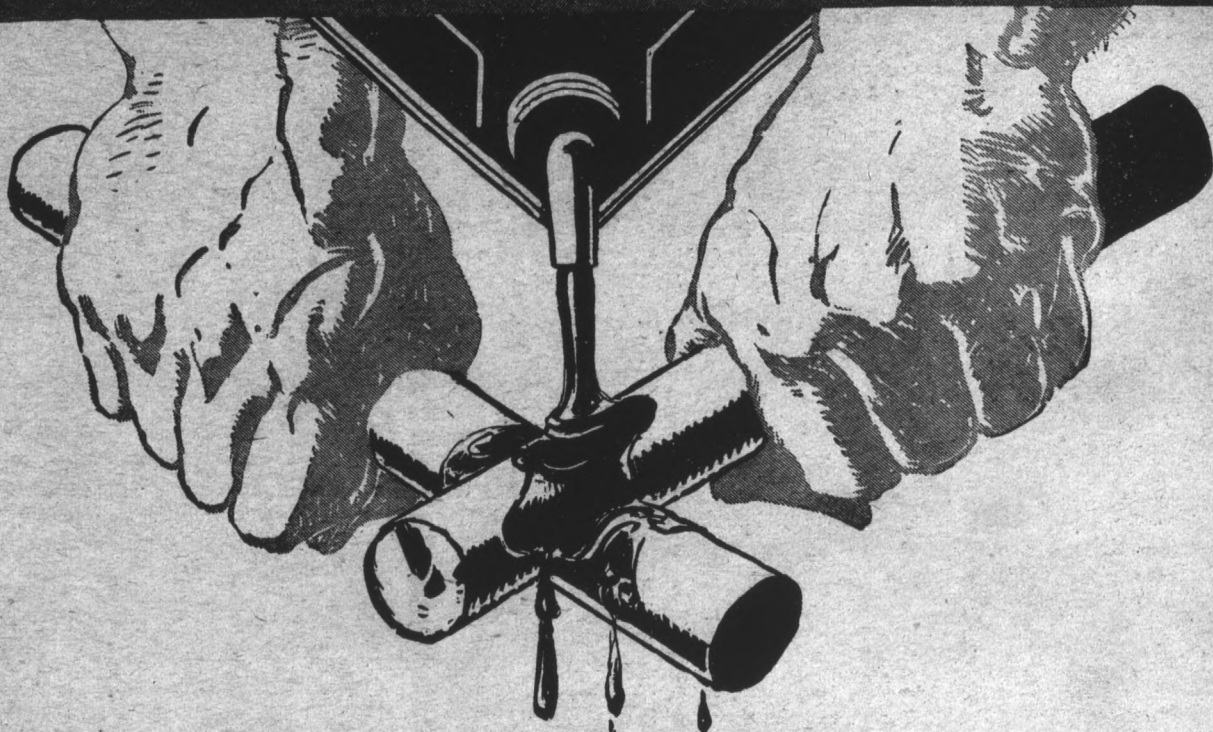
Once the fungus is established in the soil, there is no means of eradicating it except by preventing the growth of potatoes on the infested ground, and it is known to be able to retain its vitality through a period of at least eight years.

Potatoes can be successfully grown on badly infested soil only by the use of resistant varieties. While nothing has been done in this country toward the development of such varieties, some of the European countries which have been ravaged by the disease were forced to undertake it several years ago. A considerable measure of success has been attained, the English and Scotch authorities going so far as to refer to some of their varieties as immune. The English government last year contracted for the growing of one thousand acres of "immune" potatoes in Scotland, the seed from which will be available this spring.

Potato experts of the Department of Agriculture, however, are hopeful that it will not be necessary to resort to the use of resistant varieties in this country. It is not likely that they would be so productive as the varieties adapted and bred up to meet American conditions. It is regarded as probable that some of the standard varieties in this country would show resistant traits, but considerable time and effort would be necessary to determine this point.

If the disease is discovered, the warts and warty potatoes should be collected and destroyed. Diseased tubers should not be fed to stock without first being boiled. Soil known to be infested should be planted to other crops for at least eight years. No hope is held out for controlling the disease by treating infested soil with chemicals. Such attempts in other countries have not been successful.

If Steel Meets Steel in Your Tractor, Look Out!



HAVOLINE

REG. U.S. PAT. OFF.

"It makes a

TRACTOR OIL

difference"

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most expensive parts of your tractor are soon ground down into junk.

Havoline Tractor Oil is everything that honest, scientific refining can make it. Cylinder heat does not break Havoline Oil. There is a grade of Havoline that exactly and completely fills every tractor need, whatever the make, type, work, or length of time in service of your tractor. Just as there is a grade of Havoline that exactly fills every motor car requirement.

Your local dealer will tell you just what grade of Havoline your tractor requires. Ask him today. Then place your order for a barrel.

Havoline greases are compounded of Havoline Oil and pure, sweet tallow. Clean to handle and correct in body.

TRACTOR men may come to blows arguing whether or not the force-feed and splash system of oiling beats all other systems.

But you have never heard and never will hear a tractor man argue against the faithful use of a high-quality lubricating oil. There isn't any argument. Every tractor man agrees that you must use oil that cylinder heat will not break. Just such a lubricant is Havoline Tractor Oil.

All too many tractor repair bills can be charged up against inferior lubricants that break down under the tremendous pressure of the bearings. For, once your protecting film of oil breaks up, steel meets steel, and the



Indian Refining Company, New York
Incorporated

Producers and Refiners of Petroleum



HAVOLINE OIL

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"It makes a difference"

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Don't Be Bamboozled by Booze

EVERY farmer, and farmer's wife, in Michigan should do their duty at the coming April election to give the "booze barons" of the state such a jolt that they will not attempt to put over another wine and beer amendment. The state of Michigan has never been so clean as it has since the closing of the saloons. Our jails are no longer filled with drunks; our court calendars are generally free of cases caused by booze; our roads are safe to travel; and the laboring class are more contented to return to the country now that saloons are closed.

The contempt of state laws and the disgraceful scenes along the public roads between the cities of Michigan and the Ohio state line have been enough to show the people of this state the conditions which are likely to prevail throughout the state if these interests succeed in putting over this insidious amendment.

The women of other states are watching the women of Michigan to see how well they meet this critical test. The passing of this amendment will not only mean a blot upon the state but it will be a reflection upon the womanhood of Michigan. The issue is clear. Do your duty at the April election.

Below we give a careful analysis of the proposed wine and beer amendment and the probable results that are likely to follow its passage:

On April 7 next each voter will be handed a ballot whereon he or she is to vote yes or no on the so-called beer and wine amendment to Article XVI of the State Constitution.

The proposed amendment is intended to stand as section 12 of Article XVI and reads:

Section 12. "It shall be forever lawful in this state to import, transport, manufacture, use, buy, sell, keep for sale, give away, barter or furnish every kind of Cider, Wines, Beer, Ale, and Porter and to possess the same in a private residence. So much of Section 11, Article XVI of this constitution as prohibits the manufacture, sale, keeping for sale, giving away, bartering or furnishing of vinous, malt, brewed or fermented liquors, is hereby repealed. The legislature by general laws shall reasonably license and regulate the sale and keeping for sale of vinous, malt, brewed or fermented liquors: Provided, however, that the electors of each city, village, or township forever shall have the right to prohibit the manufacture, sale or keeping for sale of vinous, malt, brewed or fermented liquors within such city, village or township."

Before you go to the polls you should thoroughly understand its full significance. For your convenience this analysis is presented at this time:

1. If adopted the amendment will take effect May 7, 1919.
2. Saloons will be permitted for the sale and keeping for sale of beer, wine, ale, porter and fermented cider.
3. Breweries will be legal.
4. The local option law will be repealed.
5. The legislature cannot pass a new local option law giving a county a right to prohibit such liquors.
6. The people could not initiate such a law by petition.
7. The legislature cannot pass a

home rule act giving cities or villages the right, even upon popular vote, to prohibit the giving way, furnishing, importing or transporting of such liquors.

8. The people can not initiate such amendment. The state of Michigan a home rule act by petition.

9. The present state-wide prohibition amendment (Sec. 11, Art. XVI) will be repealed in so far as it prohibits the manufacture, sale, keeping for sale, giving away, bartering or furnishing of vinous, malt, brewed or fermented liquors.

10. Beer, wine, ale, porter and hard cider, fall within one or more of the classification, vinous, malt, brewed, or fermented liquors.

11. Such liquors could be imported and transported by the bottle or the earload.

12. The legislature shall reasonably license the manufacture of vinous, malt, brewed and fermented liquors.

13. And shall reasonably license and regulate the sale and keeping for sale of such liquors.

14. It is questionable under the proposed amendment the legislature can "regulate" the manufacture of such liquors by prohibiting the location of breweries near schools, churches, in residence districts or otherwise.

15. After the legislature has provided the necessary election machinery and the people have so voted, cities, villages or townships may prohibit the manufacture, sale or keeping for sale of such liquors.

16. The legislature cannot prohibit or regulate the giving away or use, importing or transporting of such liquors except in places having a license (breweries and saloons).

17. Nor can cities, villages or townships prohibit or regulate such gift, use, importing or transporting.

18. The people could not initiate laws or ordinances for the purposes mentioned in the last two paragraphs.

19. Any person may therefore give by the drink or by the barrel any or all of such liquors at any place, public or private (except licensed saloons or breweries), to any boy or girl, jitney driver, locomotive engineer, electric motorman, member of fire department on duty, habitual drunkard, postulated person, inmate of county poor houses, prisoner inside of jail or prison, policeman on his beat, inmates of insane asylums or anyone else.

20. And such giving could not be stopped by punishing the user, for the use is made forever lawful by the proposed amendment.

21. Neither the legislature nor any municipal council, nor the people by any initiated state law or local ordinance could punish any person no matter what his employment, age or condition for accepting and using any amount of any of the named liquors at any time or place except in saloons and breweries.

22. It will be lawful—no one can prevent or punish—to place kegs of beer, ale, wine, porter or hard cider where anyone may get it on Sundays, holidays and election days.

23. The giving away of such liquors on trains, interurbans and at depots will be lawful.

24. No city or village could impose (Continued on page 389).

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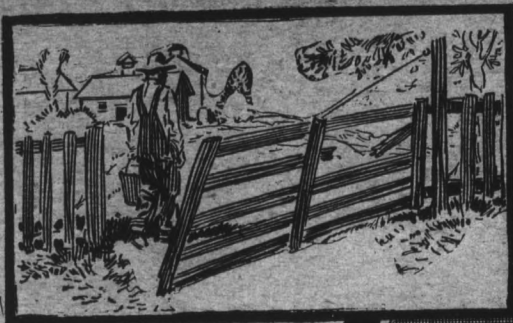
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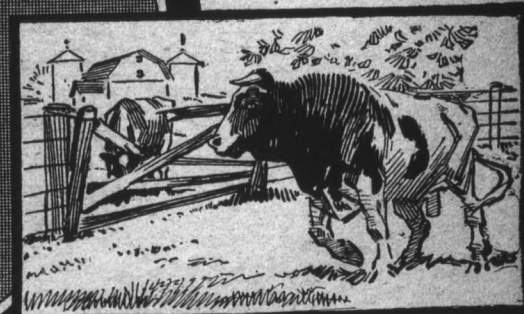
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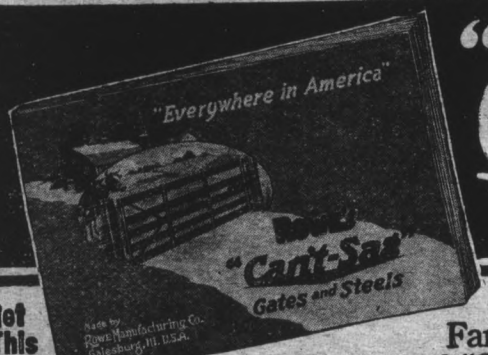


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NOW IS THE TIME TO HAUL IT



A Community Church

By J. H. Brown

ONE of the most noted rural community churches in the country at the present time is in the village of Augusta, Kalamazoo county, Michigan. The village is located right at the west entrance to Camp Custer. In fact, the camp stretches to the east and south of the village in plain sight for several miles.

When Camp Custer was building the farmers and village members of the old Methodist Church of Augusta got together and worked out a plan to build a structure that could be utilized along the "community" idea. There had been three churches in the place since the Civil War time, with but a few hundred inhabitants. These church societies had hard work to support pastors and keep going. Only for a few hours on Sundays, and for an occasional funeral, were the churches open. The great majority of the farmers and some of the villagers never saw the inside of one of these three buildings from one year's end to another.

The community idea took a strong hold in the minds of the leaders of the old Methodist church before the soldier boys began to gather at the camp. At the annual Michigan Conference of the M. E. Church it was arranged to send a preacher to Augusta whom it was thought would fill the bill. The preacher, Rev. W. H. Smith, proved to be an all-around man. He is a young man and we are informed was a circus expert before he took to the ministry. We imagine the circus boys all called him Bill. And he has filled it, all right.

Rev. Mr. Smith and his good wife struck the village in time for him to preach two good sermons the Sunday after the close of Conference. That evening soon after pronouncing the benediction he put on his working clothes and hardly had time to take them off for the next few months. He worked night and day, traveled over

the state in the interest of his plan to build up a community church at the entrance of Camp Custer and provide a club room and other features for the comfort and cheer of the young soldier boys, many of whom were leaving home for the first time. The members of the old church society, and the farmers and villagers generally, joined in the scheme. Two of the leaders in the membership are Stewart and Murray Ogden, prominent farmers of the community, whose parents were charter members of the old church organization.

The accompanying pictures show what has been accomplished in Augusta village along rural community lines. The old Methodist Church was built a few years after the Civil War closed, but it was in prime condition inside and out. It was moved nearly four blocks over a circuitous route and finally planted on a large and vacant lot at the intersection of the two main streets. Of course, there were some snags to bother occasionally. One villager refused to allow the old church to sail over a two-rod-wide patch of potatoes and sweet corn that was in an incipient stage of growth and cultivation on a back lot that was vacant, and furnished plenty of room without injury to trees in reaching the new church lot site. Not five cents worth of damage was done to the corn and potato plants, but the owner insisted on damages and we are told that fifty dollars was paid for the trip across. Then the community church folks got up steam and sailed the old meeting house over the narrow open patch without leaving a trace of damage. In fact, we have an idea that that portion of the garden will produce better next season because of the falling of dust and dirt from the old church on the way across.

The first picture shows the new com-



These Sunday School Pupils Helped to Entertain the Soldiers.

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a 62 page book by Dr. H. J. Wheeler, formerly Director of the Rhode Island Experiment Station. It contains information concerning all phases of corn culture, including varieties, seed testing and selection, soils adapted to its growth, methods of planting and cultivating, fertilization, crop rotations, liming, harvesting and storing, and many other essential features. Every farmer who grows corn should have this book. It can be secured by addressing any of the offices named below.

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munity church completed. On a recent Sunday morning we drove our car over to Augusta and stopped in front of the church just as the bell was calling the opening and morning service. The pastor, official board and members of the church and Sunday school were delighted to take part in these still movie pictures for an illustrated story in the Michigan Farmer. At the right of the church in the background is the new and fine parsonage.

Isn't it a pretty sight for a winter scene in a rural community? This new community church and parsonage is as fine as can be found anywhere in the entire country. There are no wealthy members in the church membership, as the soil around the village is mostly a sandy loam. The farms are small and over a thousand acres within three miles have been taken into Camp Custer, probably never to be used for farming purposes again.

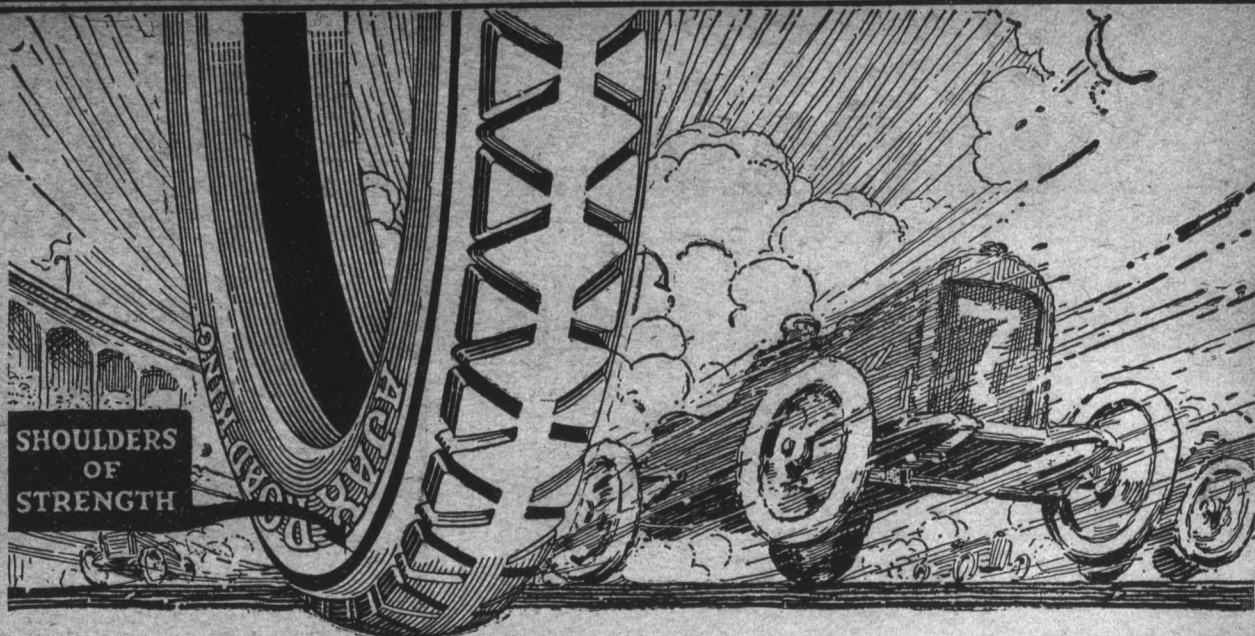
The community idea has been well tested in this new structure. Aside from building up the village and rural membership the church folks have planned to do all they can to make an ideal homey place for the boys in Camp Custer. The pictures of one corner of the interior of the club room looks very attractive and there are hundreds of the army boys who have spent some days and nights in the barracks on the west side of the camp who visit Augusta community church and club room one or more nights each week. Many of these boys have gone back home to the old farms and will see these pictures in the Michigan Farmer.

The club room is open every day and evening throughout the week. The average attendance since dedication has been over seventy-five soldiers each evening. We attended one evening when over four hundred and fifty were present from the camp. The entire church was open and both club room and auditorium full to overflowing. The two rooms are separated by folding doors that reach from floor to ceiling. The women and girls of the society were on hand and furnished apples and popcorn for that particular evening. Community singing was the principal thing on the program. An orchestra came from the camp and included a slide trombone player who could make his horn do anything he ordered it to render. He was the hit of the evening. Some of the soldier boys sitting in the pews during the singing of camp songs forgot where they were and jumped out into the aisles and started jigs, and other antic preliminaries. Then some of their chums would jump up and whisper in the dancer's ear and he would sink down in his seat with his face slightly flushed. And how the staid old church members would laugh at these antics. It did them good. In fact, they are for the first time in their lives finding that practical religion is a jolly good stuff to have and to hold and is a forerunner of the good times they will have when they get to heaven.

If Stewart and Murray Ogden's father and mother could come back to earth again and ride from the old farm in an automobile to this new community church and attend one of these evening sessions of singing, playing, eating and visiting, of course they would be astonished, at first. For nearly a half century they attended and worked in the old church at whatever their hands could find to do in any good cause. Both died before the plan of a community church ever was mentioned, but we know they would quickly catch up with the idea and endorse it. Just one evening's attendance at this new idea church with its way of entertaining the soldiers convinced us that no better work was ever done in the interest of looking after and providing for the farmer boys who entered Camp Custer, and were possibly for the first time away from home.

There are two pianos, an organ, a

(Continued on page 386).



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Growing Good Tomatoes

By L. H. Cobb

THE tomato is not a hard crop to grow, and yet there are some years when we have had trouble with them, and there are some things about their growth that makes for more certainty that are not as generally known as might be. There is one fallacy that has kept many from having the best success, and that is that tomatoes will not bear on rich soil. It is natural that such an idea should be formed when certain methods have been followed, but the fault was with the methods and not the rich soil.

The fruit of tomatoes calls for an abundance of phosphate and potash, and any lack of these elements will result in smaller fruit and less of it, while an excess of nitrogen will produce a heavy vine growth. This does not indicate that the soil should not be rich in nitrogen, but that a corresponding amount of the other elements should be provided also. For many crops, this would not be so essential, but it is with tomatoes. Then the use of fresh manure the same year that the tomatoes are set will produce a very rank soft growth. Nor should any nitrogen manure be added late in the season, for the vine growth should be encouraged at the beginning of the season before fruit begins to ripen.

There are several types of tomatoes and each has its advocates for home use, but only two are much grown. The dwarf type is represented by the Dwarf Champion and Vaughan's Model, the latter a thick wide-leaved variety much like potato leaves. These both are favorites with many people and when we grow plants for sale they sell best of all because they grow strong and stocky. As they sold right along year after year to the same parties they gave satisfaction. I have found them better yielders some years, but in the main I prefer the large vine sorts. Of these I would plant freely of Earliana for early use, and any of the large main crop sorts for general use. The Earliana is one of the most certain sorts to set, even during the hot weather, but the fruits are not large as some after the first fruits ripen. Stone is an old standby, and Ponder-

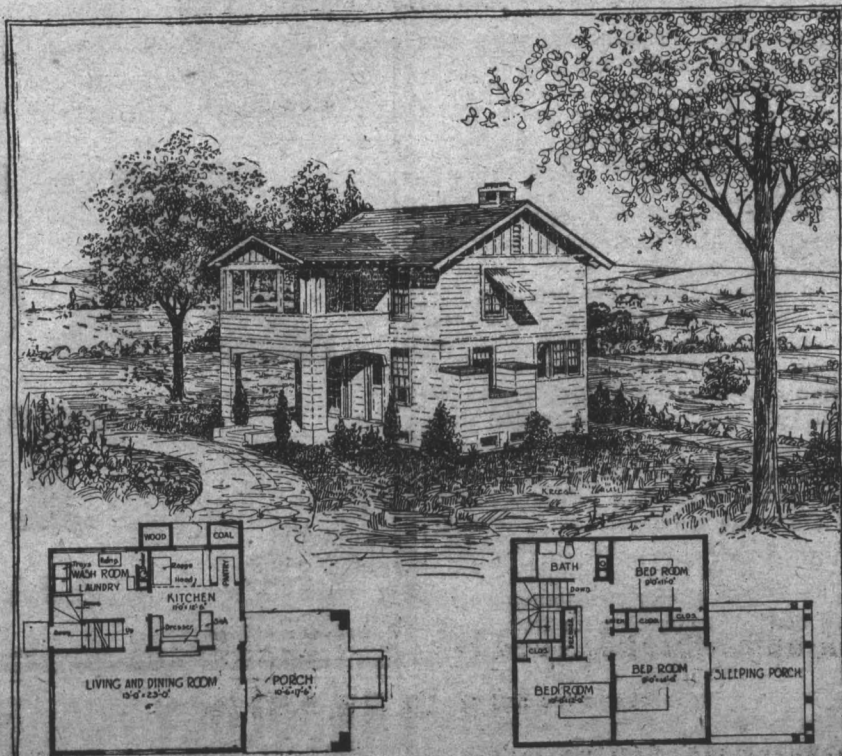
osa has many friends. Buckeye State was my choice for years, and I never grew a better variety.

Staking and pruning will make the fruits better and earlier, but it is up to the grower to decide whether it will pay to do it. It takes lots of time and does not increase the yield very greatly. To do it select two or three main canes and keep all the side branches cut out, not allowing them to grow beyond where one bunch of bloom sets. The canes are kept tied up to the stake, and in good soil will grow to five or six feet in height.

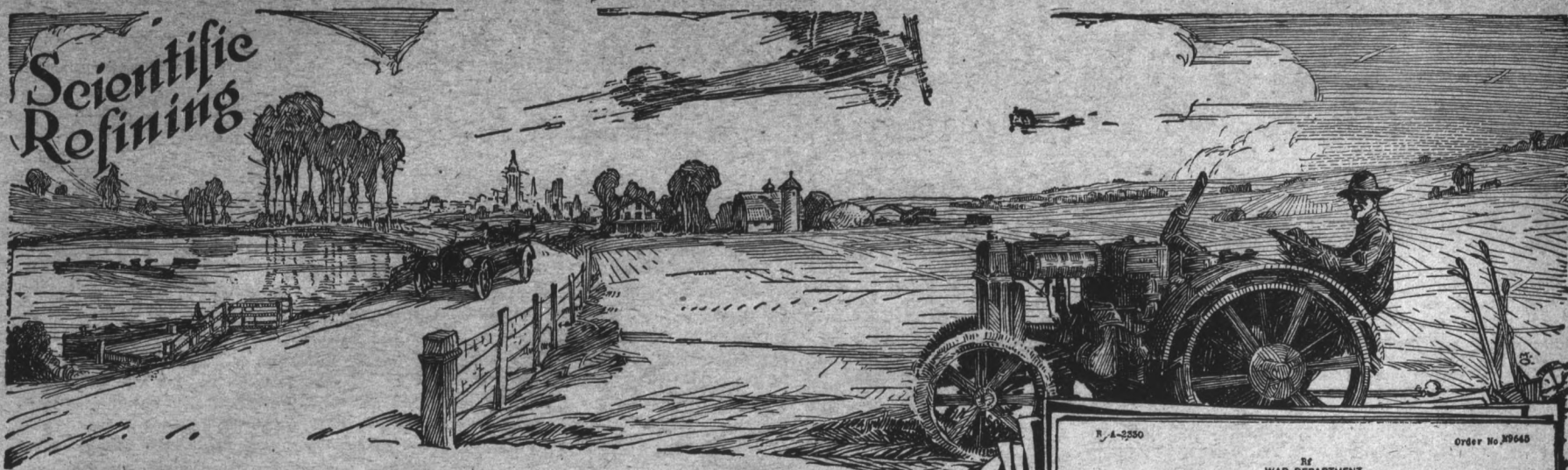
LOW-HEADED APPLE TREES.

OLD apple trees frequently grow skyward until they reach a height that makes them difficult to harvest. Apple pickers cannot afford to waste their time trying to gather fruit from small limbs which shoot far beyond them when working from the last safe round of the ladder. It pays to dehorn many trees of this type. At least they should be headed back so that all of the fruit can be reached without excessive effort. Then the strength of the trees will be conserved for the lower limbs and they will produce more fruit and fruit of better quality.

The open-center is of value in the old apple tree to allow the sunshine to enter and color up the fruit. Trees which have a brush-like center are difficult to spray and harvest and the fruit may be dull and green because of a lack of sunshine. Many old apple orchards have reached a stage where most of the trees cannot be made profitable even with the best of care. It will pay to cut down such trees and plant a new orchard or use the land for another purpose. It is good to recommend the proper care of old orchards but some of them have reached a stage where they cannot profitably compete with new commercial orchards, and farmers cannot afford to waste time caring for half-dead trees. When the trees are good enough to rejuvenate the low-head and open-center should be emphasized in training them.—G. K.



A Modern Two-story Tenant House. This Type of House has Many Advantages on Farms where the Tenant Needs Extra Rooms for Hired Help.



Power Your Tractor, Automobile and Other Motors With En-ar-co National Motor Oil

THE service rendered by En-ar-co petroleum products in aeroplanes and other motors of war can be duplicated in *your* tractor, automobile, gas engine or other power machinery. You can experience the same increased power, longer wear and smoothness of operation. You can benefit by nearly 40 years of experience in Scientific Refining.

Form 3350
Order No. 39640

WAR DEPARTMENT
OFFICE OF THE CHIEF SIGNAL OFFICER
WASHINGTON August 28, 1917.

From: Office Chief Signal Officer
To: National Refining Co., Cleveland, Ohio
Subject: Order for Oil

In accordance with verbal quotation given Major Martin by your Company (257), I am directed by the Chief Signal Officer of the Army to place order with you for the articles listed below.

Your Bill upon Form 330A and 29 inclosed herewith, observing same's Building.

SHIPPING INSTRUCTIONS AND MARKING
Marked "Order 70164 Aero"

aviation Concentration Station,
Minneapolis, L. I., marked for "Aviation Expeditionary Forces,
General B. D. Foulis,
France".

Item:
1 50,000 gal. Oil, heavy airplane, Enarco.
2 25,000 gal. Oil, extra heavy, Enarco.
3 25,000 gal. Oil, transmission, Enarco.
4 15,000 lbs. Grease, cup, Enarco, at

NOTE: Early shipment is urgent, therefore please apply for Government Bill of Lading in ample time to avoid any delay in delivery. A close observance of marking instructions and the enclosure of packer's lists is requested and will be appreciated.

The above to be delivered in export wooden barrels at the earliest possible moment.

ACT NO. 1821 WILL FOLLOW.
(1917)

A. C. Downey
Captain, Signal Corps

En-ar-co National Motor Oil

The Scientific Lubricant

Thousands of gallons of En-ar-co National Motor Oil have been used in aeroplanes here and overseas. The work a lubricant must do in these motors is far greater than will ever be required by your motors. But only the best is good enough. You cannot afford to take chances.

In wood barrels (average 50 gals.)	- - -	65c per gal.
In wood half-barrels (average 30 gals.)	- - -	70c per gal.
In steel drums (average 50 gals.)	- - -	68c per gal.
In steel half-drums (average 30 gals.)	- - -	73c per gal.

White Rose Gasoline has an unmatched record for high power and dependability. Its continued use brings utmost mileage and economy.

For oil powered tractors, National Light Oil is recommended by leaders and authorities. Also best for lamps, oil stoves, incubators, etc.

The need for several kinds of grease has been eliminated by En-ar-co Motor Grease. It gives perfect lubrication for all purposes around the tractor or motor car.

Black Beauty Axle Grease and other En-ar-co products are of equally high quality. The name En-ar-co identifies the dependable and guarantees quality.



Buy of Your Local Dealer

If He Has En-ar-co Products in Stock

If He Cannot Supply You, Mail Us Your Order Direct

Start the season right. Insist on En-ar-co Products. Ask the dealer nearest you. If he has not yet received his stock, send us your order on the attached coupon. Don't be satisfied with less than En-ar-co—the best.

The National Refining Co.

Branches in 78 Cities

General Offices : Cleveland, Ohio

Use
This Coupon
If Your Dealer
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You

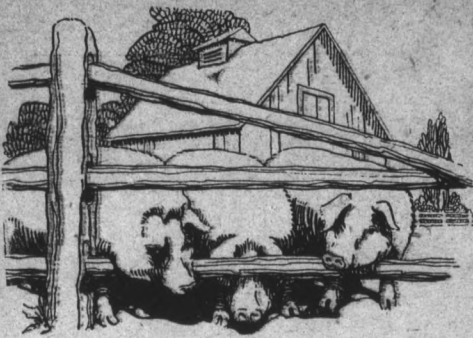
Send This Order Coupon Now!

THE NATIONAL REFINING COMPANY
1807 Rose Bldg., Cleveland, Ohio

My Dealer
located at
cannot supply me. Please ship the following from your
nearest branch. Check enclosed for \$

Gallons En-ar-co National Motor Oil
Gallons White Rose Gasoline
Gallons National Light Oil
Pounds En-ar-co Motor Grease
Pounds Black Beauty Axle Grease

My Name is
Street or R. F. D. No. Town
State Shipping Point



**How
could it
help being
fine for
pigs!**

DIAMOND HOG MEAL is a pure, straight, corn feed—made from the nutritious hearts of the corn kernels, which nature has filled full of protein, fat and carbohydrates in the highly nourishing forms she considers best for giving the corn plant its best start toward growth.

Diamond Hog Meal is guaranteed to contain not less than 18% protein and not less than 7% fat. Diamond Hog Meal is about twice as high in protein and fat as whole corn, and nearly as high in amount of carbohydrate material.

Compared with standard wheat middlings, Diamond Hog Meal runs much higher in everything.

Diamond Hog Meal makes the nicest slop of all feeds. Send today for a sample and printed matter. Please tell us who your dealer is.



**CORN PRODUCTS REFINING COMPANY
C. FRANCIS, 909 Ford Building, Detroit**



MOLINE LIME SOWER

If your soil is sour, and much land is, you can do more to increase your crops at less cost by spreading crushed lime stone than by any other method. You can't grow clover, alfalfa, soy beans, corn, peas and other legumes on acid soil. All crops do better on well limed soils.

The best way to spread crushed lime stone, rock phosphate, commercial fertilizer, ashes, etc., is with a Moline Lime Sower. It is very strong, has a wide, deep hopper capable of holding 800 lbs. of lime. It spreads evenly, quickly, without waste and can be quickly regulated to spread practically any desired quantity. Built in 8 foot widths and equipped with or without agitator which prevents lime from banking or caking.

Send for folder R. F. 42 which tells all about the Moline Lime Sower; also tells the value of lime stone and how to test your soil for acidity.

**MOLINE PLOW CO., Moline, Ill.
Manufacturers of Quality
Farm Implements Since 1865**



GEHL Ensilage Cutters

Hold the Record for Strength and Capacity

Gehl Cutters are *solidly built*. All steel frame and triple construction with five long well babbitted bearings on the main and blower shafts insure *great strength* and light running qualities. Records show that a Gehl Cutter will cut more silage with a given amount of power than any other cutter of its size on the market. You want a cutter that runs smoothly, can't clog and will stand up year after year under the terrific strain of ensilage cutting. You get all this—and more—in the Gehl Cutter.

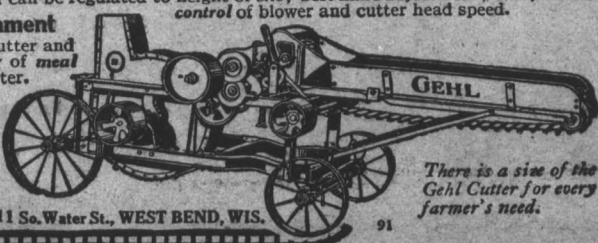
These big features put Gehl Cutters in the lead:

All steel frame; low feed table; triple construction; positive safety device; extra big, roomy throat; automatic feeding device—no man required at feed table of Gehl Cutters; six-arm blower that simply can't clog and can be regulated to height of silo; best knife adjustment; independent control of blower and cutter head speed.

Gehl Alfalfa Attachment
fits any Gehl Ensilage Cutter and produces a better quality of meal than any other alfalfa cutter.

Write for Catalog—showing all sizes of Gehl Cutters. It gives full details and explains how and why the Gehl is the best cutter money can buy. Get this catalog before you buy a cutter. **WRITE TODAY.**

GEHL BROS. MFG. CO., 111 So. Water St., WEST BEND, WIS.



There is a size of the Gehl Cutter for every farmer's need.

Does Alfalfa Pay?

By C. A. Spaulding

WE have passed through several matter some study, I selected two acres alfalfa revivals in Michigan and of soil at one end of a field in such a while perhaps each has had its way that in getting started it would converts, there have always been more not interfere with my rotation. This backsliders than successful converts. land was not as good soil as some on Perhaps the reason for this has been which I had seen alfalfa fail, nor was the question which has always loomed it as poor as some on which I had seen large in the mind of the prospective it succeed. It was good soil and I had alfalfa convert: "Does alfalfa pay in made up my mind if I followed the Michigan?" compared with clover hay most approved methods and was care- or other comparable feed? It is, of ful to give each step the best of atten- course, true that a rotation different tion, I could get a good catch. from the one already in use must be "In the fall of 1913 I put on twelve practiced on many farms if alfalfa is loads of manure per acre. This I plow- to be raised. Nor is this the only dis- ed under in the spring of 1914. After advantage. The practical farmer who rolling and dragging down twice, I put is thinking some of starting alfalfa im- on three and a half tons per acre of mediately sees that to summer fallow medium ground limestone. This was and work the prospective piece clean dragged in and the piece kept free of weeds is a loss of one year's crop, from weeds throughout the summer by and since the original expenses, the means of the spring-tooth harrow. In things he can see himself paying out all I dragged the piece six times with money for before he even gets his al- the spring-tooth and three times with falfa seeded—the loss of one year's use the spike-tooth—following with a roller of the land, the lime, the fertilizer, the each time to firm the seed bed as much culture—all these things loom very as possible. I seeded the piece at the large before him. These are things he rate of fifteen pounds per acre the first is sure of. The income from the crop week of August, 1914, using inoculat- itself is in doubt. He has never raised ed dirt instead of pure culture. This any alfalfa and he is not sure it is go- dirt I applied at the rate of two hun- ing to be a success. To be sure, he dred and fifty pounds per acre. has heard of successful catches in T could not find a tool that suited Michigan. At the college perhaps, or me thoroughly for working the alfalfa in some distant county. The writer so I took an old spring-tooth harrow and sharpened the teeth beginning four firmly believes in alfalfa as a crop and inches back and sharpening straight to as a feed, and he also firmly believes that if a large number of successful a point. In the spring of 1915 I disked pieces of alfalfa could be scattered and dragged the seeding once with the across the state, could be seen and the drag mentioned. I cut the piece three cost of starting them could be known, times, getting three and a half tons compared with the income—much per acre the first cutting; two and a more alfalfa would be raised in the half tons the second, and about one state of Michigan. and a half tons the third.

The following account is taken from the books of a Michigan farmer. It been given to the alfalfa has been to might be well to add that this farmer disk and drag it after every cutting and to give one application of manure was a young city attorney who was and to give one application of manure handicapped in the beginning by lack to it each year, and although now four of previous experience. On the other years old it is as free from June grass as it was the first year. hand, he was unhampered by any prej- "My experience has convinced me udices or doubts. He had seen alfalfa that all of the steps followed are nec- raised very successfully in Illinois and essary for success. I used perhaps a it could be raised. He simply studied little more lime than would ordinarily the best methods of getting started be necessary, but this was due to the with alfalfa and resolved not to slight fact that when the litmus test was ap- a single step in the process. The first plied a distinct acid reaction was ob- start was with two acres in 1914. (The tained. name of this farmer may be obtained "My efforts with alfalfa, both in the on request by writing to the editor of growing and feeding it, have been en- this paper). The following is a brief tirely successful. Anyone who is consid- account of the operations in as nearly ering getting a start with alfalfa may the exact words of the farmer as answer the question, "Does Alfalfa Pay possible: in Michigan?" to his entire satisfac- tion by looking over my figures or by "After having determined to make a start with alfalfa and having given the visiting my farm."

Figures on One Acre Taken Directly From the Actual Farm Account.

Year.	Item.	Expense.	Receipt.
1913	Manure, twelve loads.....	\$12.00	
1914	Plowing, one acre.....	2.00	
	Labor, hauling and applying lime.....	6.00	
	Three and a half tons limestone.....	10.50	
	Labor, hauling and spreading inoculated dirt.....	1.00	
	Dragging, spring-tooth six times, spike-tooth 3 times.....	6.00	
	Fifteen pounds alfalfa seed at \$12 per bushel.....	3.00	
	Labor, sowing seed.....	.50	
	Interest on land 6% \$100 valuation.....	6.00	
1915	Disking and dragging, half day.....	2.00	
	Mowing, raking, cocking and moving hay.....	2.50	
	Interest on investment at 6%.....	6.00	
	Manure, six loads.....	6.00	
	By 7½ tons of alfalfa at \$14 per ton.....		\$105.00
1916	Disking and dragging a half day.....	2.00	
	Mowing, raking, cocking and moving hay.....	2.50	
	Manure, six loads.....	7.50	
	Interest on \$100 at 6%.....	6.00	
	By seven tons of alfalfa at \$12 per ton.....		\$ 84.00
1917	Disking and dragging a half day.....	2.50	
	Mowing, raking and moving hay.....	2.50	
	Manure, six loads.....	9.00	
	Interest on \$100.....	6.00	
	By seven tons of alfalfa at \$20 per ton.....		\$140.00
1918	Disking and dragging a half day.....	2.50	
	Mowing, raking and moving hay.....	2.50	
	Manure, six loads.....	9.00	
	Interest on investment.....	6.00	
	By six and a half tons of prime alfalfa hay at \$30....		\$195.00
(Note.—Owing to bad weather the third cutting was a little short of normal, causing the total yield to be about half a ton shy.)			
	Total, four years cost and interest.....	\$121.50	
	Total, four years receipts.....		\$524.00
	Profits on this acre for four years, to say nothing of the beneficial effects on the soil itself, amount to....		\$402.50



To Control Wheat Market

A BILL carrying an appropriation of one billion two hundred and fifty million dollars and giving the President powers over wheat and food stocks, more drastic than the existing war time agencies, has been sent to congress by the administration as its plan of meeting the government guarantee of \$2.26 a bushel for wheat, both for the 1918 and 1919 crops. So general and sweeping are the provisions of the bill that members of congress said at once it would have to be radically changed before there was any chance of its passage.

The proposed measure turns over to the President the huge sum of one and a quarter billion dollars and tells him to go ahead and work it out as he sees fit, giving him every conceivable sort of control over mills, storage, elevators, transportation and the like. Congress, it was stated, will insist that a specific plan and agency be created to work out the problem and handle it.

Faces Loss on Wheat.

With a surplus of several hundred million bushels from this year's crop and a prospect of four hundred million bushels surplus out of the 1919 crop, provided the crop conditions remain good, the government at the best, faces a huge loss in meeting the wheat guarantee. If the crop should go beyond a billion bushels this year, it would present a difficult problem in the actual storing of the wheat, the country lacking sufficient elevator capacity to take care of it. The fight in congress over the measure promises to be one of the most bitter since the war. There is no disposition on the part of anyone to dodge the government guarantee—everyone agrees that the pledge made to the farmers must be kept. The disagreement is over how it shall be handled.

Bill Summed Up.

Summed up, the administration bill provides:

1. An appropriation of one billion two hundred and fifty million dollars to be available at once.
2. President Wilson is authorized to carry out guarantees for 1918 and 1919 with such agents or agencies as he may desire to create or utilize any department or agency of the government.
3. The President is not only authorized to buy and sell wheat and wheat products but "foods and food stuffs," and is given absolute control over the dealers, millers, elevators, exchanges and all others having anything to do with the distribution, by means of a license system.
4. The President is given complete control of all exports and imports of "wheat, wheat products and other food stuffs and foods" and to dispose of the American surplus of wheat, he is empowered to enter foreign markets.

DESTROY GRASSHOPPERS.

Winter wheat and clover cannot be grown, with any success, in fields overrun with grasshoppers. Cows cannot give any quantity of milk if most of their food is devoured by these pests. Bread is dependent on grain, but grain is not plentiful where the hoppers abound. Improved varieties of farm produce taste just as good to these insects as do the common varieties. No community can prosper when the farmer, the foundation of prosperity, is nearly "eaten out of house and home." The grasshopper is truly a limiting factor in the northern part of the state and it must be eliminated.

"The Only Answer is—Bushels"

Upon the efficiency with which the seed bed is prepared depends the size of the harvest.

And upon the size of the harvest depends the entire compensation of the farm owner—his reward for all his months of labor in plowing, disk-ing, seeding, cultivating, reaping, to say nothing of his money investment in land, implements, seed, etc.

The only answer to the entire year's effort is—bushels.

The best preparation, as a matter of course, depends upon using the best farm implements.

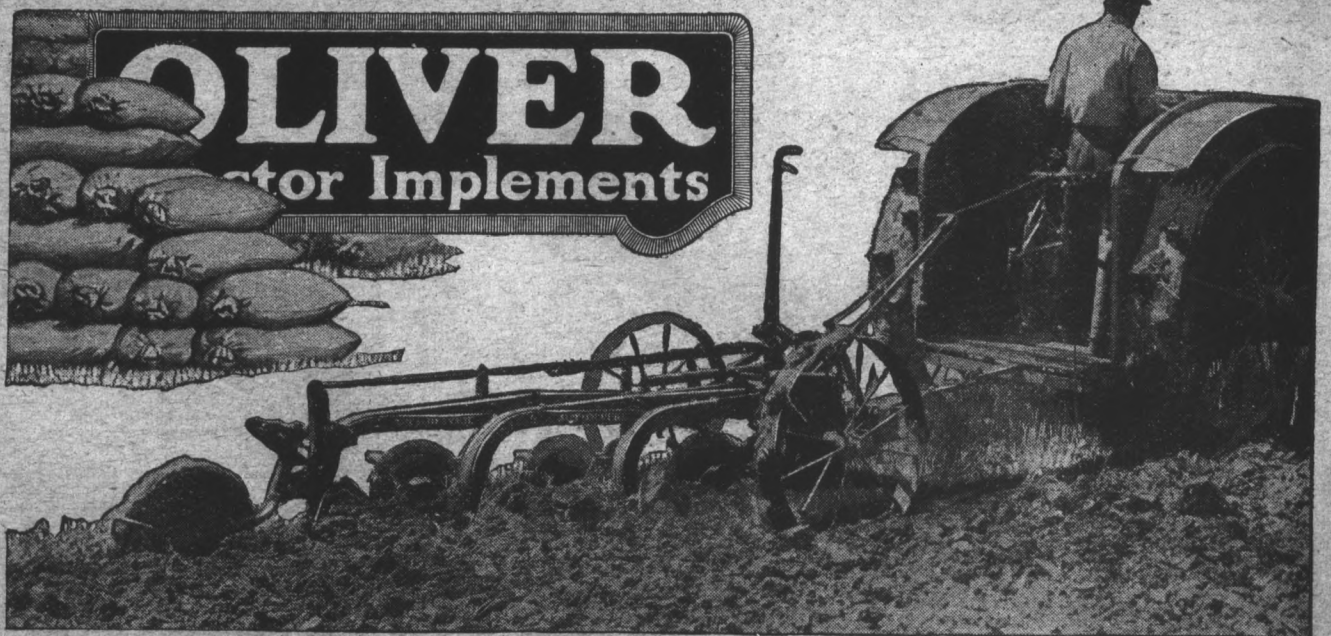
Farm owners using Oliver Tractor Implements get the greatest possible yield per acre. A single, actual instance—one out of thousands of similar cases—may be cited.

In the fall of 1917, J. B. Grinnell, Secretary of the Nebraska Farmers' Congress, plowed twenty acres of dry hard ground for winter wheat with Oliver plows. This is what he says in regard to their performance:—

"This field of wheat made an average of 35 bushels per acre. Neighboring fields, turned with other plows, averaged only from 15 to 25 bushels. When I saw this large yield I was convinced beyond a doubt of Oliver's superiority. The Oliver plows had paid for themselves several times over on this one crop of wheat."

Thousands of other farm owners—all Oliver users—have had the same results from Oliver tools. Oliver plowed lands give farm owners their answer in bushels—more bushels per acre.

Oliver Chilled Plow Works
South Bend, Indiana



"Oliver Plowed Fields
Bring Greatest Yields"

FIELD SEEDS AT WHOLESALE PRICES

We save you money on your Seed Bill. Write for our Special Money-Saving Price List and get our reduced prices on Best Quality Guaranteed Seed. You should know about our low prices. Write at once and be convinced. Everything guaranteed equal to samples or money refunded. Don't pay double profits on Grass Seed. Our seeds are sold subject to government test. Have low prices on Seed Corn, Oats, Wheat, Speltz, Barley, Cane, Millet, Cowpeas, Rape, Vetch, Sudan Grass, Potatoes, and all Farm and Garden Seeds. Don't order until you write for big 116-page catalog. Free samples and special low prices on seeds you require. Will send free 60-page book on Growing Alfalfa to those who ask for it. Write at once, as we can save you money.

A. A. BERRY SEED CO.

Box 231 Clarinda, Iowa



BEE SUPPLIES

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

BERRY BASKETS

Standard qt. wood berry baskets, and wax-lined paper baskets, 16 qt. crates in flat. Send for price sheet.

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YOU can do it yourself—a first class job, in any temperature, if you use

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The Liquid Wax Paint

This practical paint spreads twice as far as the best linseed paint, waterproofs the wood, prevents decay and lasts as long as the building. Won't crack or peel. Brushes on as fast as whitewash. No brush marks. Flat, even finish.

Made in four colors—Red, Maroon, Dark Brown, Natural Brown (clear). Large sample can mailed for 50 cents.

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Turn Stump Land Into Money

Clear your stump land cheaply—no digging, no expense for teams and powder. One man with a K can rip out any stump that can be pulled with the best inch steel cable.

Works by leverage—same principle as a jack. 100 pound pull on the lever gives a 48-ton pull on the stump. Made of the finest steel—guaranteed against breakage. Endorsed by U. S. Government experts.



Write today for special offer and free booklet on Land Clearing.

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No Stump Too Big

Top Dress with Nitrate of Soda

It does not Sour the Soil

Nitrate of Soda leaves no mineral acid residue behind to injure your soil. It makes bigger crops—and keeps the land sweet.

Nitrate of Soda

Top dress 100 lbs. per acre for seeded crops; 200 lbs. cultivated in thoroughly for cultivated crops. These light dressings, evenly spread over an acre, will work for your profit.

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Chilean Nitrate Committee
25 Madison Ave. New York

SEED OATS

Pedigreed M. A. C. test College Success Oats. Test field weight 33 lb. per bu. Weeds none. 98% germination. Worthy Oats. 35 lb. per bu. Weeds none. 95.5% germination. Prices 1-5 bu. \$1.40; 5-24 bu. \$1.40; 25-24 bu. \$1.30; over \$1.20. Stocks furnished free.

THE JENNINGS FARMS, Bailey, Mich.



The Small Farmer's Outlook

THE gradual return to peace conditions is causing much discussion among farmers and the opinions are varied. It happens that a large part of the talking about farming conditions after the war is done by actual farmers. Many of the men who have the most definite opinions about the future do not live on farms nor own farms. The majority of the real farmers are too busy to worry to a great extent but most of them are thinking of the future and trying to adapt their plans to meet conditions.

Some farmers feel that the return of the soldiers will place a large area of new land under cultivation and this will lead to low prices. They mention the conditions after the Civil War and quote the prices that soon resulted from the large production of the west. However, conditions are different now. The quality of the land which can be opened up for the soldiers is not the kind of soil that was available for distribution after the Civil War.

Not many of the soldiers have returned home as yet, but those that the writer has seen have no desire to start farming unless they were farmers before the war or now have a chance to farm land owned by their family in a settled region. Most of the soldiers seem to return to their old jobs and in a few weeks they again become accustomed to the old routine of civil life. In most cases the war does not seem to have weaned men from their old trades. Rather they have learned to appreciate the advantages of their own business. The broadened outlook of the world which they have obtained in the service frequently gives them a renewed strength and enthusiasm for their old trade or business.

Very few practical farmers seem to be worrying about the competition of the returned soldiers who go on the farm. Many farmers are looking with pleasure to the day when the son or hired man will return to the farm to help ease the burdens which in some cases have rested heavily on the shoulders of men too old to bear them.

One feature of the plan of developing new land should not be overlooked. Possibly the capital used in developing new land will bring no returns until European agriculture is rejuvenated and prices go down and then the soldiers who farm such land will find that all of their hard work will bring a comparatively small reward. It is hard to believe that much of this poor land can compete to good advantage with the fertile fields now tilled by experienced men. It will not be fair to place an inexperienced returned soldier on land of such uncertain value that he may waste the best years of his life in a discouraging effort to obtain a home and business of his own.

Some writers remember the fertile fields of Russia and predict that some time a stable government will exist there. Their transportation will be improved and modern farm machinery will be sold there in large quantities. Then a large excess of food will be produced there and shipped into the other countries of Europe. Such a change in Russian agriculture will reduce the amount of food which America must produce for Europe.

The release of much tonnage formerly used in war is now free to carry grain from South America and Australia. This must eventually come into competition with American grain and the law of supply and demand is quite important during peace times. A few

(Continued on page 385)

Here's the Way to Buy Field Seeds

THE Michigan farmer who wants the maximum yield per acre will buy his field seeds on a basis of quality. He won't be led into buying cheap seeds at bargain prices. He will select that brand of field seeds that has proved its worth—seeds that are exactly suited to Michigan soil and climate.

For over 25 years Apex Brand Field Seeds have been the choice of thousands of successful farmers in Michigan because Apex Brand Seeds are—all northern grown—re-cleaned and tested by seed experts—always the same high quality—backed by the largest exclusive field seed house in Michigan.

Apex Brand Field Seeds are all the brand name implies—the highest quality it is possible to produce.

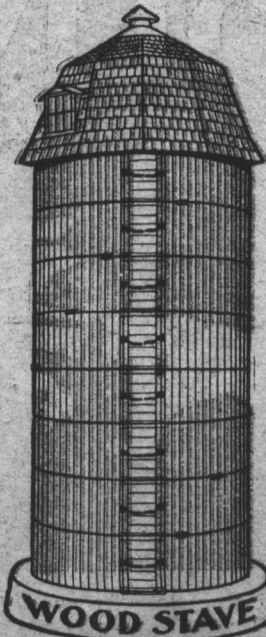
Write us today for samples and for the name of the dealer nearest you who handles Apex Brand Seeds.

Caughey-Jossman Co.
Detroit - - Michigan

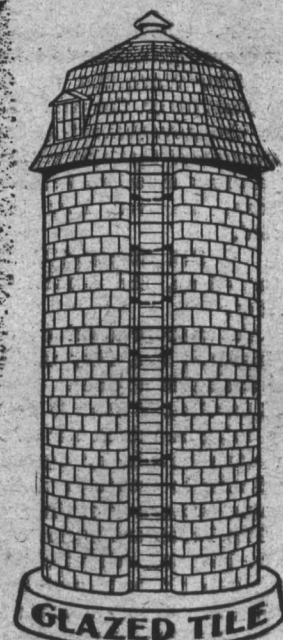
Apex Brand Field Seeds

1939 Look Ahead 20 Years

Will the silo you build today still be giving satisfaction then? That's the question for you to decide now. To avoid all future regrets decide on the



WOOD STAVE



GLAZED TILE

Kalamazoo TILE and WOOD SILOS

"The World's Standard"

Those of the first built—over 28 years ago—are now "on the job" and still good for untold years of service. Although there are over fifty thousand of these good silos in use, it is our ambition to see one or more Kalamazoo Silos on every farm in the United States.

Glazed Tile Silos—fire-proof, frost-proof, storm-proof, sun-proof, rot-proof, vermin-proof. "Permanent as the Pyramids." Require no painting or repairs.

Wood Stave Silos—reasonably priced, time-defying, easy to erect. Made with Galvanized Steel Door Frames and Continuous Doors—our guarantee goes with every one.

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Bargains In Threshing Machinery

16 H.P. Huber rebuilt outfit, 18 H.P. Huber outfit, 20 H.P. Reeves engine, 30.40 Farquhar separator two years old, and a 30.40 Port Huron separator. Detailed descriptions and prices sent on request.

HUBER MFG. CO.
LANSING, MICH.

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F. S. Burch & Co. 145 W. Huron St. Chicago

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NO FARM SURPLUS SOON.

THE immediate future holds no likelihood of either an over-production of farm products or of plentiful farm labor at low prices, Clarence Ousley, assistant secretary of agriculture, said in an address before the recent meeting in Baltimore of state extension directors.

Mr. Ousley impressed the necessity of state cooperation with the Department of Agriculture in order that federal patronage without corresponding state and local sustenance may not usurp the field. He declared also that farmers should look no longer to the federal government for the continuing exercise of extraordinary powers in behalf of agriculture or any other element.

"The farmer," said Mr. Ousley, "should be the last man to surrender his personal rights of property, as they are represented in the price of his commodities, to the control of government, for there are more consumers than producers and the government reflects the selfish interest of the majority."

He spoke against guaranteed prices for farm products as a permanent policy because "we would come to a wholly artificial system that would break down with a mighty crash."

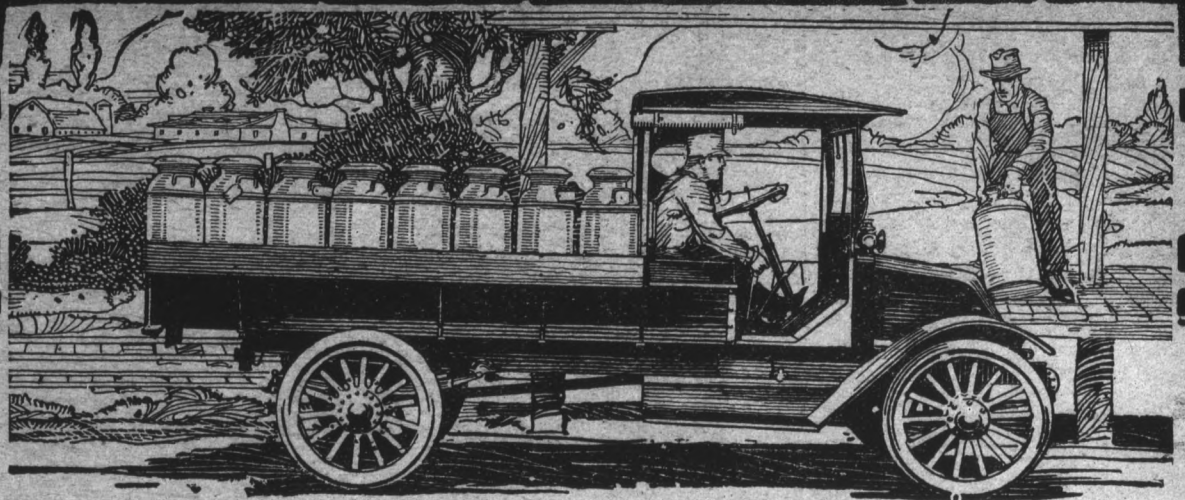
"It is most difficult now to foresee what the demand for farm products will be when the harvests of 1919 are gathered," he said. "I think there never was a time when farmers ought to study more carefully the foreign news of the day. They have a profound interest in the political, economic and social developments in Europe, because upon these developments will depend the ability of the European countries both to produce and to buy. Upon what they may be able to produce in 1919 and upon what they may be able to buy from the crop of 1919 depends the prosperity of the American farmer."

"Generally speaking, there is assured prospect that Europe will need continuing large American supplies of live stock products. It appears reasonable also, to assume that, Europe cannot, within the year or within the producing part of the year, restore pre-war farming operations."

SUGAR COMPANY'S BIG RUN.

THE Mt. Clemens Sugar Company's campaign continued 111 days, during which time they sliced 57,312 tons of beets. The beets produced 15,219, 157 pounds of granulated sugar, 2,845 tons of dried pulp for cattle feed, and 3,006 tons of molasses. They have their own cooper shop and make all their barrels. They employ about eight coopers, to make the barrels and for the campaign just completed made 20,075 barrels. These barrels were all packed with sugar averaging 350 pounds of sugar to the barrel. They also packed 50,000 bags of sugar containing 100 pounds each and 57,000 bags of dried pulp, containing 100 pounds each, for cattle feed. They used 12,000 tons of coal to run the factory through the entire campaign, also 500 tons of coke. One hundred and twenty thousand pounds of seed was shipped out to the farmers, which produced the above mentioned tonnage.

The company have shipped a little better than 10,000,000 pounds of sugar and have about 5,000,000 pounds in storage which they are shipping out every day. The pulp was all contracted for by Max Hottelet, of Milwaukee, Wis., and it has been all shipped east with the exception of about twenty carloads which went to Jacksonville, Fla. It is considered the finest pulp for cattle feed that has been made.



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OF ALL the motor trucks offered for farmers' use, the International should be, and we believe is, the most satisfactory.

This Company knows the country—roads, farms, and all. Farmers know our standards of quality and service. When we offer a motor truck for farmers' use, it is understood that the truck will do the work expected of it at a cost farmers can afford.

The International Motor Truck is built for carrying capacity loads on country roads. It gives satisfactory everyday service, the kind that farmers must have. When an emergency comes—a tough piece of road, a steep hill, a rush trip, a bad day—the International has the re-

serve power, speed, and endurance to carry it through.

Mr. L. C. Henry of Utica, Minn., purchased an International Motor Truck to haul his live stock and farm produce to market—and to bring return loads from town. He says, "We use the truck for nearly every kind of hauling. It saves more time than any other machine in our farm service." Five of Mr. Henry's neighbors bought International Motor Trucks when they learned, from his experience, what a useful economical farm machine he had.

There are four sizes of International Motor Trucks—1,500, 2,000, 3,000 and 4,000 pounds capacity, with bodies suitable for every kind of hauling. We have a dealer, a branch house, or a service station somewhere near you, where the line can be seen, or we will send full information promptly if you will write us.

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Disk Harrows Cultivators
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and Stackers
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Bunchers

Belt Machines

Ensilage Cutters
Husk and Shredders
Corn Shellers Threshers
Hay Presses
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Belt Machines—Cont.

Cream Separators
Feed Grinders

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Corn Machines

Planters Cultivators Drills
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International Harvester Company of America

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They are designed so practically and built so scientifically that every forward motion saves time, decreases labor, and yields a bigger return on your crop-money. Planet Jr. tools are the result of over forty-five years of actual farming and manufacturing experience, and are fully guaranteed.

No. 72 Planet Jr. 2-row, 2-horse Pivot-wheel Cultivator

saves a man, a team, and a cultivator every day it is used. Cultivates two rows of corn, potatoes, beans, etc., at one passage, even if rows are crooked or of irregular width. In check-rows and listed corn it also beats any other tool. Has spring lift and plant shields. Can be equipped with spring-trip standards, discs, sweeps, hoe steels and furrowing shovels. Our specially hardened steels add 50 per cent to wear.

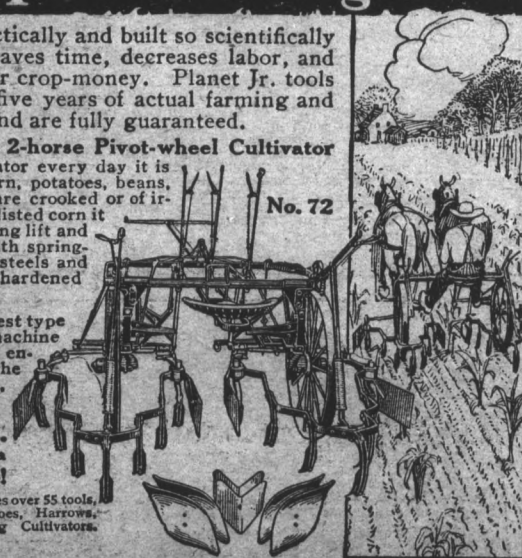
No. 17 Planet Jr. is the highest type of single-wheel hoe made. A hand-machine whose light durable construction enables a man, woman or boy to do the cultivation in a garden in the easiest, quickest and best way.

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Buy Hardy, High-Grade Trees and Ornamentals Direct from Nursery. Save agent's commission. Big, new, handsome 1919 Catalog describes the best stock grown. Many specialties. All Guaranteed. Start an Orchard this year. Order early for spring planting. To be sure of spring supply write today—a postal will do. Catalog FREE.

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PEDIGREED OATS
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For names of growers write to the Sec'y, Michigan Crop Improvement Ass'n.

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SCOTT'S RED CLOVER

We are trying to furnish Red Clover entirely free from weed seeds and dead grains. The seed will go farther than ordinary seed besides adding greatly to the production. Ask for samples of Red and other seeds and catalogue telling "How to Know Good Seed".

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SEED CORN FOR SALE

Golden Dent long grown and acclimated in Michigan. Deep kernels, large ear and stalk. A heavy cropper. In ear 70 lbs. \$5.00 Shelled per bu. \$4.00. O. B. COOK, R. I. Owosso, Mich.

SEED CORN

Early Yellow Dent, field selected. Early Amber, cane seed and Regenerated Swedish select oats. Sample and price for stamp. Square deal. WOODBRIDGE FARM, Camden, Mich.

Farmers Need Credit

ASSISTANT Secretary of Agriculture Clarence Ousley, advocated the establishment of agricultural credit as a part of the credit system of financing commerce, manufacturing industry, mining, transportation and other vocations and industries before the agricultural conference of bankers, recently held at Washington. In outlining the need of credit by agriculturists for the production of crops, Mr. Ousley declared that assistance of this sort was as essential to maximum food production as it is essential to American industry and commerce generally.

"For these reasons," Mr. Ousley said, "I hold that agricultural credit properly applied is the soundest credit, and yet agricultural credit has received the least thought of financiers. I trust this is a sufficient basis for the suggestion that agricultural credit offers an attractive field for constructive thinking and acting by experts of finance and that money wisely invested in agricultural credit will be safely and profitably returned.

"While our new system of land credit is affording much relief to those who have farm property to improve and those who have some capital with which to buy, it should be understood that the great class of tenant producers are without property or capital. Their need is operating credit in order that they may produce economically and in order that they may acquire something to purchase farms. If we are to help the landless to acquire land, we must provide a better system of operating agricultural credit for the intelligent and the industrious.

"The only hope of a reinforced and abundant agriculture is profitable agriculture which young men will seek as they seek other vocations that promise substantial reward, and as the day of cheap land has passed the prime necessity for multiplying farm home ownership is financial accommodation and sound business practice for worthy young men in order that they may acquire the initial capital for farm purchases. There is no greater public service that can be rendered to the United States and to the general welfare of all the people than the mastery of this problem and the leadership in this activity."

A LIVE FARM BUREAU.

FARM Bureaus are destined to form a great clearing house for handling the business of agriculture. There are now more than 2,400 counties in this country having these organizations and hiring county agents who give their entire time to the problems confronting the farmers of their counties. One of the most important functions of these organizations is that of standardizing farm products and eliminating wastes of the old system of marketing.

The plan of the Shiawassee County Farm Bureau to combine in one big organization all of the small cooperative associations and other farmers' organizations in the county is a move in the direction of better service. The Farm Bureau and its county agent will thus be in a position to render more valuable service to every agricultural interest and community in the county. The joining together of associations and farmers organizations will mean more business and tend to hold more interest in county problems. A live county farm bureau so closely related with more than 2,400 similar organizations is sure to prove a big factor in reflecting the conditions of agriculture in the different states. Every farmer interested in the great problems now confronting the country should become a member of his County Farm Bureau.

W. J. B.

How Mohawks Ride on Clay Roads

Mohawk, Keaton or Non-Skid treads are excellent clay road tires.

Their big sturdy projections have the faculty of digging down into the slipperiest kind of a road, holding the car safe.

Right from the beginning we have built Mohawk tires, both the treads that show and the parts underneath that don't show, so that they will give the right sort of service, on clay roads, rocky roads, paved roads, or any other kind of roads, and give a lot of it.

We don't believe that Mohawk users want to pick their roads or spend any great amount of time babying their tires.

We have held to the idea that to give Mohawk users the kind of service they want, we must build a tire that is so extra strong it will always give good big mileage and mighty little trouble no matter where the user may choose to drive.

There is nothing mysterious about the way we accomplish it—just the sensible method of using the finest grade of rubber and fabric in the world, building a reasonable quantity of tires so that we can watch each one carefully, allowing the builders plenty of time to do their work right.

We have kept our company on a very efficient basis—haven't a dollar's worth of watered stock or bonded indebtedness and we are satisfied with a reasonable profit. In this way, we have been able to use these expensive materials—more of them than the average tire maker seems to think he can, and have still been able to sell Mohawks at competitive prices.

That's all there is to it.

As far as we know, almost any maker could have done the same thing if he had been organized the same way we have—had the same ideals and had been able to keep away from the temptation of making bigger profits by using cheaper materials and methods.

The point is that most of them haven't done so.

And that is why Mohawks have stood out from among the great variety of tires on the market and have gained such a reputation for consistent high quality.

The best proof of this is that our records prove that 85% of car owners who buy their first Mohawk tires become permanent Mohawk users.

MOHAWK RUBBER COMPANY
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Mohawk Tires—either Mohawk, Keaton or Non-Skid treads—hold a car safe on clay roads. But there are altogether too many of these bad roads in this country. It is estimated that 20 per cent of our roads carry from 80 to 90 per cent of our traffic. In other words, while we have over 2,000,000 miles of roads, if 400,000 miles were permanently and properly constructed in the right place, they would practically complete our necessary highways.



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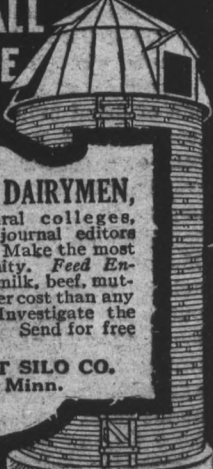
DePUY'S SEEDS FIRST AID TO GOOD CROPS

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SUCCESSFUL DAIRYMEN, farmers, agricultural colleges, banks and farm journal editors endorse the silo. Make the most of your opportunity. Feed *Ensilage*. Produces milk, beef, mutton, pork at a lower cost than any other feed. Investigate the Triple Wall Silo. Send for free booklet today.

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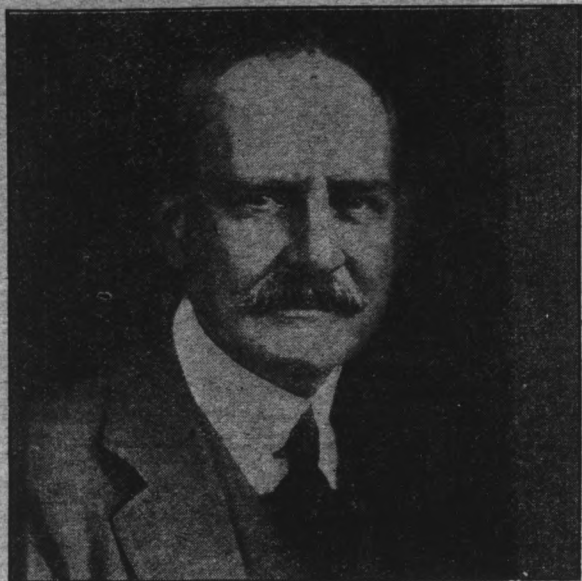
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and their 25 points of superior merit, such as our Perfect Splice, Storm Proof Anchors, Hip Roof that gives more room, safe and sane ladder, galvanized doors, etc. If you want to know more about the most durable and economical wood silos made, get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

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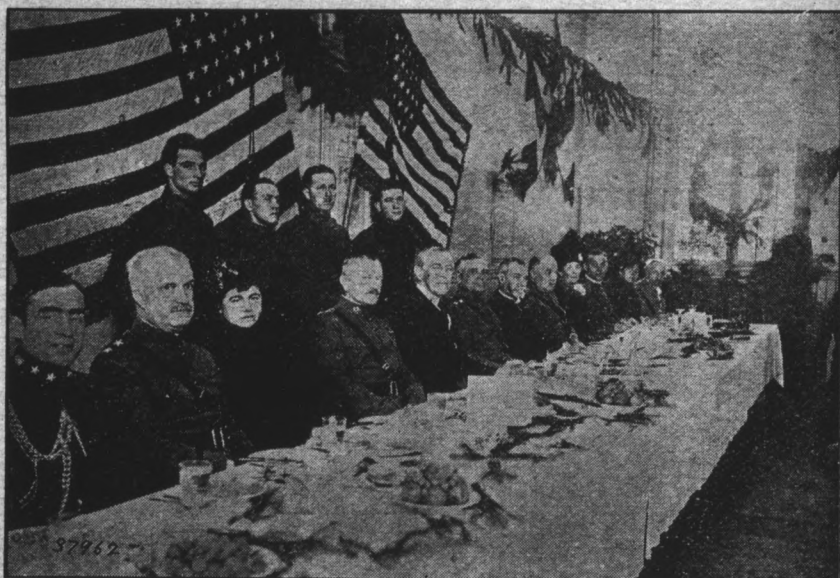
Knight of 1919 Inspects Armor of Crusaders of Eleventh Century.



Thirteen-year-old Czecho-Slovak Warrior Fought Huns on Five Fronts.



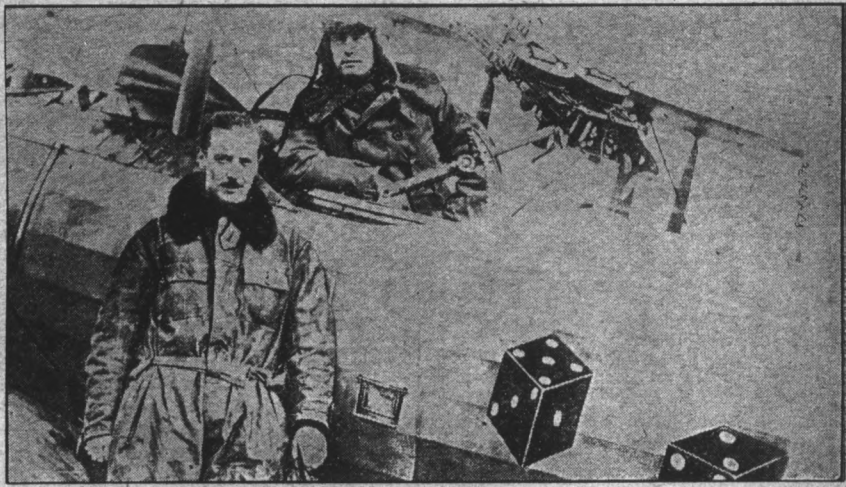
Delegates at the Peace Conference in Session in the Ministry of Foreign Affairs at Quai D'Orsay, Paris. Directly Underneath the Clock are President Wilson and President Poincaré.



President Wilson, Mrs. Wilson, General Pershing, and Other Notables Dining with American Army Officers in Paris.



Members of Commission for International Legislation on Labor in Paris.



American Aviators whose Machine, "Pair-o'-dice," Proved Unlucky to Huns.



Entrance to a Hall in Moscow where the Bolsheviks Meet for Conference.



Four American Doughboys Wearing Wooden French "Caterpillars" in Mud.



One Bottle in the Barn is Worth a Dozen in the Store

SUPPOSE one of your valuable horses should suddenly cut or calk itself badly.

What would you do? Patch it up the best you could, then drive to the store and lose much important time?

Or just step to the barn and get your bottle of Hanford's Balsam of Myrrh—used by breeders and owners for over seventy years.

A few drops of Hanford's Balsam makes a wound clean and antiseptic. And covers the exposed flesh with a film that keeps out dirt and dust.

In lameness, sprains or strains—any of a horse's many skin and muscular ailments—apply Hanford's Balsam and rub it in thoroughly. Puts most such troubles out of business in a hurry.

Don't wait for something to happen to your horses. Get your bottle of Hanford's Balsam now.

That you may know its merits for yourself, present this advertisement at your dealer's and buy a bottle (in any of three sizes). And—

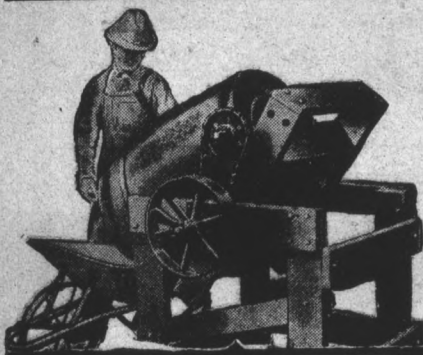
Test It At Our Risk!

If not completely satisfied, take empty bottle to dealer and get your money back. No questions asked!

Made only by

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Balsam of Myrrh



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You can save many times the cost of a Sheldon Farm Concrete Mixer on a few small jobs. What is more, you can do the work when you please, in otherwise idle time. It is made especially for farm use, and will handle large jobs as well as small. With a

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You save fuel, time and trouble by using the CHAMPION EVAPORATOR. It MAKES THE BEST SYRUP

Order Evaporator and all Sugar Makers Supplies NOW, and be ready for business.

Champion Evaporator Company,



Hudson, Ohio

Preparing for the Spring Drive

By C. A. Spaulding

THE month of January, 1919, has been an unusually open one and has permitted much outside work about the farm which could not ordinarily be accomplished. And as March is likely to be a regular winter month, plans should be made to clean up many of the little odd jobs with which every farm abounds.

Whether a man is kept around the farm to help in doing chores, or whether the owner does all of his own work, there will always be some time free to do some of the many little tasks that accumulate throughout the entire busy farm season. Every farmer knows what the tasks are, but he is apt to overlook or neglect some of them unless he makes a note of them. The writer has found it a good plan to jot down on a separate sheet in his farm account book the so-called odd jobs as they accumulate throughout the year. It is astonishing the list of interesting details of work to be done before spring that has accumulated in my note book. It is with the hope that some of them may serve as suggestions or reminders to other farmers, that I shall attempt to enumerate some of the so-called "odd jobs" that I have already accomplished and some that I still have to do.

I have during the open weather cleaned up a pile of old fence posts—buzzing up the ones which were good for nothing but fuel, sorting out the better ones and sawing off the bad end which still left enough for a good post on which to put dewberry wires. The piles of old fence boards, rubbish, apple tree limbs, etc., were all gone

through and the good boards saved and all the rest buzzed up for wood.

I have found it possible to build a new tank cover and paint it—ordinarily impossible in January. My tools have all been inspected and some details of repair added to the items made in my book at the time the tools were last used. I find I need a new casting for the mower, several new slats must be put into my hay loader and the whole apron overhauled somewhat. My side-delivery rake is in need of several new teeth and a new casting for one of the castor wheels. My mower and binder knives are both to be sharpened, oiled and put away. New boxes are to be put in the disk harrow, a new bar in the cylinder of the manure spreader and several new links in the main chain of the potato digger.

One of the double harnesses has some minor repair work that can be done at home, while the other will need to visit the harness shop for overhauling.

I have built over my wheel-barrow, trimmed my home orchard, and raspberry bushes. I have taken my wagon apart and am repainting it in the little shop room I have rigged up in my granary. I have been obliged to practically build over my wagon box, also as four of the irons were broken. I have the material for half a dozen new gates and will build them this month. I have several new pig troughs to build as well as a couple of feeders for the chicken coop.

At the present high price of grain sacks it is a matter of considerable importance to see that all old sacks are

mended and rendered serviceable. It does not pay to take any chances with poor sacks at threshing time, or at the time for hauling grain to market. Now is the time to sort out all sacks and have them ready for mending on stormy days when it is more comfortable to work indoors. Another odd job of this type is the repairing of any one-bushel crates about the place that need fixing. I have these all sorted and some extra slats ready to use in repairing them at the first good opportunity.

I am convinced that I could not remember all of the many items that I have to do if I did not make a note of them. The farm may be regarded as a factory which begins its regular run when spring opens up. No good factory manager would allow the time for opening to come without seeing that every bit of equipment was in readiness for operation. And so it is; or should be with the farm. No better time can be found to make note of what any machine or tool needs than when you are through using that tool. You are familiar with every part of it at that time and you know if any part needs attention before next year's work. A broken casting overlooked or a repair neglected until time for the machine to be used will many times mean a considerable waste of valuable time.

The "odd jobs" should be attended to during the winter months. This will insure that things run as smoothly as possible throughout the busy season. It will insure that barring accidents, there will be no avoidable loss of time.

The Automobile in Cold Weather

By E. J. Farrington

WHILE the city man may jack up his car and take out the battery when cold weather comes, most farmers find it necessary to keep their machines going all the year round. There are few farmers, however, who have a heated garage or stable. Consequently considerable trouble is experienced with cold motors. Also there is danger of frozen radiators even on the road, if the cars are left standing very long when the weather is extremely cold. Indeed, it is not an unusual thing for the water in the lower part of the system to freeze even while the car is running. Of course, covering the radiator will help to keep the water warm when a car is standing, and many drivers make a practice of drawing out the water when the machine is put up for the night. Ford drivers like this plan because starting is made easier in the morning when the radiator is filled with hot water. After the water is drawn out, the engine should be started up and run for two or three minutes, to dry out the system.

After all, though, the average farmer likes some plan which will do away with the trouble of draining the radiator every night. Consequently, various anti-freezing mixtures, and more commonly denatured alcohol, are depended upon. A newer plan, and one which is recommended by many automobile men, is to fill the radiator wholly with kerosene. Kerosene does not freeze readily, and does not boil so quickly as water heavily charged with alcohol. Moreover, it does not evaporate like alcohol. Drivers who kept it in their radiators all last winter say that they very much prefer the use of kerosene to that of alcohol. There is only one possible bad effect. The kerosene may eat out the hose connections to some extent, but that is a

small matter compared with a frozen radiator or cylinder.

If you prefer alcohol, be sure that you keep the radiator filled. Alcohol evaporates rapidly, and causes the water to boil quickly. Drain a quarter of the water from your cooling system, and then fill to the top with denatured alcohol. This gives a mixture which will not freeze until the temperature touches zero. More alcohol must be used in colder weather. A mixture of forty per cent alcohol and sixty per cent water will not freeze until the temperature reaches twenty degrees below zero. You must always anticipate evaporation and put in more alcohol occasionally. It is safest to have a device for testing the solution to make sure you are safe. And remember that the more alcohol you have, the quicker the water will boil.

An engine never runs well in cold weather until it has become heated. Most drivers know this, and many of them race the engine when they first start it. This is really a poor plan, though, because while the engine has been idle the oil has fallen to the lowest part of the system. It is better to run the motor quietly for a few moments, until the oil has been thoroughly distributed. Then the machinery will not suffer. In order to get the engine to run smoothly, it is a good plan to put a piece of cardboard or wallboard across the bottom or up and down one side of the radiator. Something depends on the make. If the protector is placed back of the radiator, it will not show much. Do not wire it to the radiator itself, but to the supports, for the wires might wear through the thin walls. Merely disconnecting the belt of the fly wheel will often be sufficient to keep the engine running well.

Hard starting is one trouble which

confronts most drivers who have to keep their machines in a cold barn. It is a foolish plan to tax the starter too severely in an effort to get the engine going. The wise motorist will extend a little help. If he is obliged to crank by hand, he will be even more likely to use whatever methods he may be familiar with to help make the starting easier. For one thing, the carburetor should be adjusted for winter running. Oftentimes it may be best to give a rich mixture until the motor has warmed up, and then cut down to a leaner mixture for running on the road. This is a good plan for a Ford man. Oftentimes a Ford car bothers about starting because the timer is gummed up with oil. The timer should be kept clean, and a light oil used liberally but not too freely. Pouring hot water on the timer will often thin the oil and facilitate starting. Hot water may also be used to great advantage on the carburetor and manifold. Indeed, the use of a teakettle of hot water may mean the difference between laborious cranking. If hot water is not plentiful, it is economical to soak rags and wrap them around the carburetor.

Various choking devices are used on automobiles, and help to make the machine start readily. It is always well, though, to have on hand a little bottle containing half high test gasoline and half ether. Administer a few drops of this mixture through the priming plugs or if your car is without primers, remove the spark plugs and drop the mixture through the openings. In this way the burden on the starting system can be greatly lightened. Be sure that your batteries are kept fully charged. You need to have them tested occasionally. When a battery is kept charged properly, it will not freeze, even in very cold weather. Otherwise frozen

batteries are liable to give much trouble.

It's an excellent plan to drain out all the oil at least once a month in cold weather. Steam is likely to get past the piston rings and becoming condensed, mix with the oil. This water in the oil greatly reduces its efficiency. After draining out the oil, pour in a pint or two of kerosene and turn draw out the kerosene and refill with fresh oil. If this is done it will help you to keep the motor running well and there will be less wear on the machinery.

The farmer who drives his car in winter is sure to encounter a good many deep ruts in the road. Driving in a frozen rut is very hard on the tires because the elastic side walls are not designed to receive wear of this kind. Keep your tires fully inflated, and if you find they are becoming worn on the sides, turn them around before they get very bad. This will increase their life. Tires which have been made somewhat ragged by driving in ruts can be repaired without great expense but the matter should not be neglected. If you have some partly worn tires, this is a good time to use them. You can get more mileage by fitting them with good reliners. Store your best tires in a cool cellar out of light. Do not be persuaded to use reliners in new tires. They will do more harm than good. If you are going to put your car up for a week or so, by all means put jacks under the wheels so that there will be no weight on the tires.

It is inevitable that more attention should be demanded by the automobile in cold weather, but there is no reason why the farmer should not drive at all times when the ground is not covered with deep snow or the roads heavy with mud.

LIME ON THE GARDEN.

MUCH has been said about the use of lime as a field treatment, but for the small garden little attention has been given to the lime needs. The garden is more intensively cropped than the fields and its sour soil troubles should be looked after as well as those of the larger areas.

Garden crops as a whole are injured by soils which are sour, or short in their lime supply. This is especially true of the legumes, such as beans and peas, of the vegetable crops, such as lettuce, spinach and celery, and of the cabbage and root crops, such as cauliflower, cabbage, kohlrabi, carrots and turnips. Soils deficient in lime fail to supply this needed plant food fast enough for these garden crops which grow rapidly and make heavy demands on the soil. The addition of lime to the garden satisfies the plant's need for this element and indirectly hastens the decay of the manure and other soil materials to make them available for the growing vegetables.

For some garden crops lime is not needed, and may even cause harm. This is the case with the strawberry and the watermelon which do better on slightly sour soils. Outside of a few crops, liming the garden can do no harm, and more often it is beneficial.

Where very heavy applications of manure are made the needs for lime tend to offset, for though the lime in the soil is low the manure starts the plants off rapidly and they withstand the injury caused by the sourness of the soil. With plenty of manure a sour soil may make a good garden, but the use of lime will improve it and cut down the manure needed.

Lime can be applied on the plowed garden in the winter and worked into the soil in the spring. Crushed limestone and airslaked lime are preferable forms. Twenty pounds per square rod is sufficient for most garden soils.

Quality is more important than size in selecting the breeding stock.



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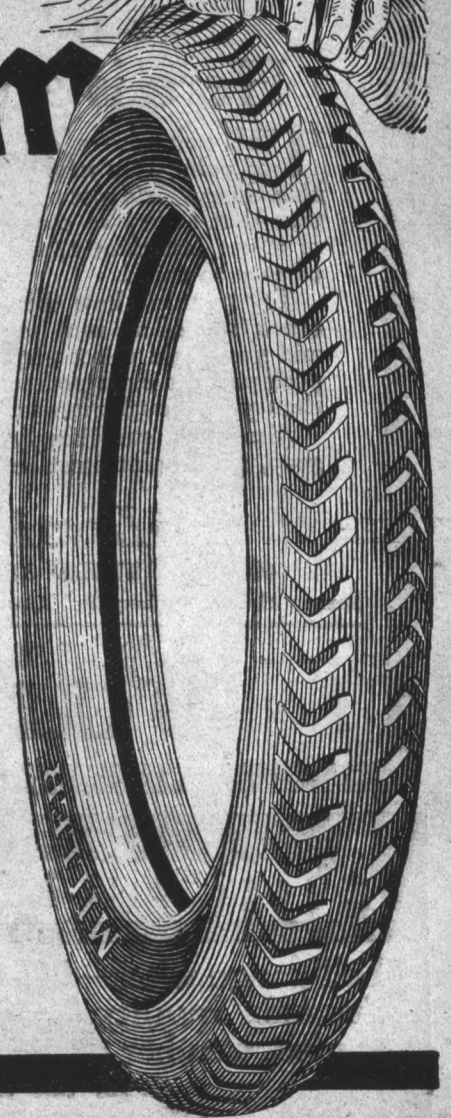
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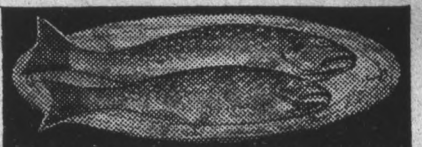
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"Beyond the Frontier"

Yet, dark and drear as the day was, we had no true warning of the approaching storm, for the vapor clinging to the water concealed from our sight the clouds above. When it came it burst upon us with mad ferocity, the wind whirling to the north, and striking us with all the force of three hundred miles of open sea. The mist was swept away with that first fierce gust, and we were struggling for life in a wild turmoil of waters. I had but a glimpse of it—a glimpse of wild, raging sea; of black scurrying clouds, so close above I could almost reach out and touch them; of dimly revealed canoes flung about like chips, driving before the blast.

Our own was hurled forward like an arrow, the Indian paddlers working like mad to keep stern to the wind, their long hair whipping about. The soldiers crouched in the bottom, clinging grimly to any support, their white faces exhibiting the abasement of fear. The sergeant alone spoke, yelling his orders, as he wielded steering paddle, his hat blown from his head, his face ghastly with sudden terror. It was but the glimpse of an instant; then a paddle broke, the canoe swung sideways, balanced on the crest of a wave and went over.

I was conscious of cries, instantly smothered, and then I sank, struggling hard to keep above water, yet borne down by the weight of the canoe. I came up again, choking and half strangled, and sought to grip the boat as it whirled past. My fingers found nothing to cling to, slipping along the wet keel, until I went down again, but this time holding my breath. My water-soaked garments, and heavy shoes made swimming almost impossible, yet I struggled to keep face above water. Two men had reached the canoe, and had somehow found hold. One of these was an Indian, but they were already too far away to aid me, and in another moment had vanished in the white crested waves. Not another of our boat's crew was visible, nor could I be sure of where the shore lay.

Twice I went down, waves breaking over me, and flinging me about like a cork. Yet I was conscious, though strangely dazed and hopeless, I struggled, but more as if in a dream than in reality. Something black, shapeless, seemed to sweep past me through the water; it was borne high on a wave, and I flung up my hands in protection; I felt myself gripped, lifted partially, then the grasp failed, and I dropped back into the churning water. The canoe, or whatever else it was, was gone, swept remorselessly past by the raging wind, but as I came to the surface a hand grasped me, drew me close until I had a grip on a broad shoulder.

CHAPTER XVIII.

Alone with De Artigny.

BEYOND this I knew nothing; with the coming of help, the sense that I was no longer struggling unaided for life in those treacherous waters, all strength and consciousness left me. When I again awoke, dazed, trembling, a strange blur before my eyes, I was lying upon a sandy beach, with a cliff towering above me, its crest tree-lined, and I could hear the dash of waves breaking not far distant. I endeavored to raise myself to look about, but sank back helpless, fairly struggling for breath. An arm lifted my head from the sand, and I stared into a face bending above me, at first without recollection.

"Lie still a moment," said a voice gently. "You will breathe easier shortly, and regain strength."

I knew my fingers closed on the man's hand convulsively, but the water yet blinded my eyes. He must have perceived this for he wiped my face with a cloth, and it was then I perceived his face clearly, and remembered.

"The Sieur de Artigny!" I exclaimed.

"Of course," he answered. "Who else should it be, Madame? Please do not regret my privilege."

"Your privilege; 'tis a strange word you choose, Monsieur," I faltered, not yet having control of myself. "Surely I have granted none."

"Perchance not, as there was small chance," he answered, evidently attempting to speak lightly. "Nor could I wait to ask your leave; yet surely I may esteem it a privilege to bring you ashore alive."

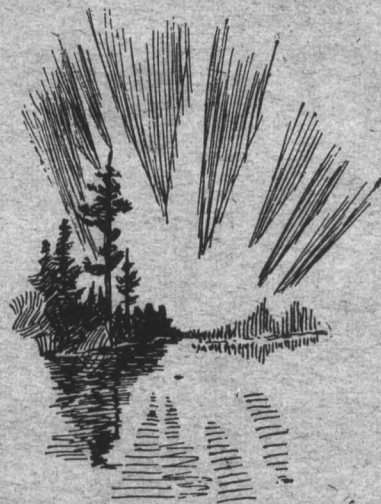
"It was you, then who saved me? I scarcely understood, Monsieur; I lost consciousness, and am dazed in mind. You leaped into the water from the canoe?"

"Yes; there was no other course left me. My boat was beyond yours, a few yards farther out in the lake, when the storm struck. We were partially prepared, for I felt assured there would be trouble."

"You told Monsieur Cassion so," I interrupted, my mind clearing. "It was to bring him warning you returned?"

"I urged him to land until we could be assured of good weather. My Indians agreed with me."

"And he refused to listen; then you



permitted your canoe to fall behind; you endeavored to keep close to the boat I was in—was that not true, Monsieur?"

He laughed, but very softly, and the grave look did not desert his eyes.

"You noted me then! Faith, I had not thought you so much as glanced toward us. Well, and why should I not? Is it not a man's duty to seek to guard your safety in such an hour? Monsieur Cassion did not realize the peril, for he knows naught of the treachery of this lake, while I have witnessed its sudden storms before, and learned to fear them. So I deemed it best to be near at hand. For that you cannot chide me, you know."

"No, no, Monsieur," and I managed to sit up, and escape the pressure of his arm. "To do that would be the height of ingratitude. Surely I should have died but for your help, yet I hardly know now what occurred—you sprang from the canoe?"

"Ay, when I found all else useless. Never did I feel more deadly blast; no craft such as ours could face it. We were to your left and rear when your canoe capsized, and I bore down toward where you struggled in the water. An Indian got grip upon you as we swept by, but the craft dipped so that he let go, and then I jumped, for we could never come back, and that was the only chance. This is the whole story, Madame, except that by God's help I got you ashore."

I looked into his face, impressed by the seriousness with which he spoke.

"I—I thank you, Monsieur," I said, and held out my hand. "It was most gallant. Are we alone here? Where are the others?"

"I do not know, Madame," he answered, his tone now that of formal courtesy. "'Tis but a short time since we reached this spot, and the storm yet rages. May I help you to stand, so

you may perceive better our situation."

He lifted me to my feet, and I stood erect, my clothes dripping wet, and my limbs trembling so that I grasped his arm for support, and glanced anxiously about. We were on a narrow sandy beach, at the edge of a small cove, so protected the waters were comparatively calm, although the trees above bowed to the blast, and out beyond the headland I could see huge waves, whitened with foam, and perceive the clouds of spray flung up by the rocks. It was a wild scene, the roar of the breakers loud and continuous, and the black clouds flying above with dizzy rapidity. All the horror which I had just passed through seemed typified in the scene, and I covered my face with my hands.

"You—you think they—they are all gone?" I asked, forcing the words from me.

"Oh, no!" he answered eagerly, and his hand touched me. "Do not give way to that thought. I doubt if any in your canoe made shore, but the others need not be in great danger. They could run before the storm until they found some opening in the coast line to yield protection. The sergeant was no voyageur, and when one of the paddles broke he steered wrong. With an Indian there you would have floated."

"Then what can we do?"

"There is naught that I see, but to wait. Monsieur Cassion will be blown south, but will return when the storm subsides to seek you. No doubt he will think you dead, yet will scarcely leave without search. See, the sky grows lighter already, and the wind is less fierce. It would be my thought to attain the woods yonder, and build a fire to dry our clothes; the air chills."

I looked where he pointed, up a narrow rift in the rocks, yet scarcely felt strength or courage to attempt the ascent. He must have read this in my face, and seen my form shiver as the wind struck my wet garments, for he made instant decision.

"Ah, I have better thought than that, for you are too weak to attempt the climb. Here, lie down, Madame, and I will cover you with the sand. It is warm and dry. Then I will clamber up yonder, and fling wood down; 'twill be but a short time until we have a cheerful blaze here."

I shook my head, but he would listen to no negative, and so, at last, I yielded to his insistence and he piled the white sand over me until all but my face was covered. To me the position was ridiculous enough, yet I appreciated the warmth and protection, and he toiled with enthusiasm, his tongue as busy as his hands in effort to make me comfortable.

"'Tis the best thing possible; the warmth of your body will dry your clothes. Ah, it is turning out a worthy adventure, but will soon be over with. The storm is done already, although the waves still beat the shore fiercely. 'Tis my thought Monsieur Cassion will be back along this way ere dusk, and a canoe can scarce go past without being seen while daylight lasts, and at night we will keep a fire. There, is that better? You begin to feel warm?"

"Yes, Monsieur."

"Then lie still, and do not worry. All will come out right in a few hours more. Now I will go above, and throw down some dry wood. I shall not be out of sight more than a few minutes."

From where I lay, my head on a hummock of sand, my body completely buried, I could watch him scale the rocks, making use of the rift in the face of the cliff, and finding no great difficulty. At the top he looked back, waved his hand, and then disappeared among the trees. All was silent about me, except for the dash of distant waves, and the rustle of branches far overhead. I gazed up at the sky, where the clouds were thinning, giving glimpses of faintest blue; and began to collect my own thoughts, and realize my situation. (Continued on next page).



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Mammy's Lullaby—Waltz
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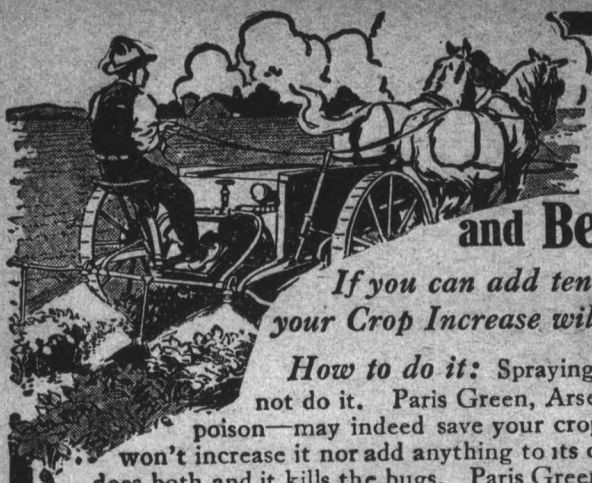
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If you can add ten days of growth, your Crop Increase will be worth while

How to do it: Spraying for bugs alone will not do it. Paris Green, Arsenate of Lead—any poison—may indeed save your crop from bugs, but it won't increase it nor add anything to its quality value. Pyrox does both and it kills the bugs. Paris Green, as is well known, often stunts the vines and shortens the crop.

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"Beyond the Frontier"

(Continued from preceding page.)

In spite of my promise to Cassion I was here alone with De Artigny, helpless to escape his presence, or to be indifferent for the service he had rendered me. Nor had I slightest wish to escape. Even though it should be proven that the man was the murderer of my uncle, I could not break the influence he had over me, and now, when it was not proven, I simply must struggle to believe that he could be the perpetrator of the deed. All that I seemed truly conscious of was a relief at being free from the companionship of Cassion. I wanted to be alone, relieved from his attentions, and the fear of what he might attempt next. Beyond this my mind did not go, for I felt weak from the struggle in the water, and a mere desire to lie quiet and rest took possession of all my faculties.

De Artigny appeared at the edge of the cliff, and called to reassure me of his presence. He had his arms filled with broken bits of wood which were tossed to the sand, and a moment later he descended the rift in the wall, and paused beside me.

"No sign of anyone up there," he said, and I felt not regretfully. "The canoes must have been blown some distance down the coast."

"Were you able to see far?"

"Ay, several leagues, for we are up-

"As to that, I did no more than any man might be expected to do," he protested. "But you have avoided me for weeks past, and it can scarcely be pleasant now to be alone with me here."

"Avoided you! Rather should I affirm it was your own choice, Monsieur. If I recall aright I gave you my confidence once, long ago on the Ottawa, and you refused my request of assistance. Since then you have scarcely been of our party."

He hesitated, as though doubtful of what he had best say.

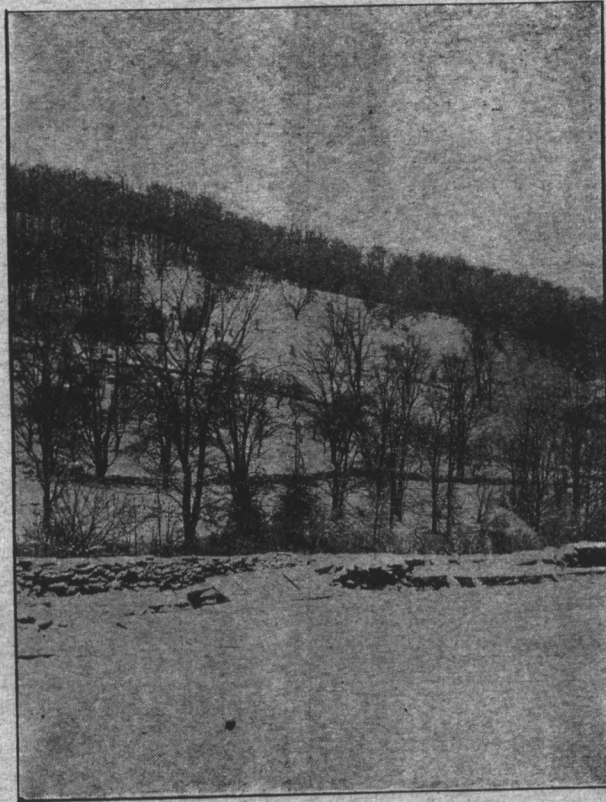
"It was never through indifference as to your welfare," he answered at last, "but obedience to orders. I am but an employe on this expedition."

My eyes met his.

"Did Monsieur Cassion command that you keep in advance?" I asked, "and make your night camps beyond those of the main company?"

"Those were his special orders, for which I saw no need, except possibly his desire to keep us separated. Yet I did not know his reason, nor was it my privilege to ask. Had Monsieur Cassion occasion to distrust me?"

"I know not as to occasion, Monsieur but he left Quebec disliking you because of our conference there, and some words La Barre spoke gave him



on a headland, and there is a wide sweep of bay below. The shore line is abrupt, and the waves still high. Indeed I saw no spot in all that distance where a boat might make safe landing. Are you becoming dry?"

"I am at least warm, and already feel much stronger. Would it not be best, Monsieur, for us to scale the cliff and wait our rescuers there, where we can keep lookout?"

"If you feel able to climb the rocks, although the passage is not difficult. A boat might pass us by here and never be seen, or know of our presence, unless we keep up a fire."

I held out my hand to him, and he helped me to my feet. The warmth of the sand while it had not entirely dried my clothing, had given me fresh vigor, and I stood erect, requiring no assistance. With this knowledge a new assurance seemed to take possession of me and I looked about, and smiled.

"I am glad to know you can laugh," he said eagerly. "I have felt that our being thus shipwrecked together was not altogether to your liking."

"And why?" I asked, pretending surprise. "Being shipwrecked, of course, could scarcely appeal to me, but I am surely not ungrateful to you for saving my life."

fresh suspicion that you and I were friends, and should be watched. I do not altogether blame the man for he learned early that I thought little of him, and held it no honor to be his wife. Yet that distrust would have died, no doubt, had it not been fanned into flame by accident.

"I was kept in his boat, and every instant guarded by either himself, or Pere Allouez, his faithful servitor, until long after we passed Montreal, and entered the wilderness. That day I met you on the bluff was the first opportunity I had found to be alone. Your crew were beyond the rapids, and Cassion felt there could be no danger in yielding me liberty, although, had the pere not been ill, 'tis doubtful if I had been permitted to disappear alone."

"But he knew naught of our meeting."

"You mistake, Monsieur. Scarcely had you gone when he appeared, and, by chance, noted your footprints, and traced them to where you descended the cliff. Of course he had no proof, and I admitted nothing, yet he knew the truth, and sought to pledge me not to speak with you again."

"And you made such pledge?"

"No; I permitted him to believe that I did, for otherwise there would have

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been an open quarrel. From then until now we have never met."

"No," he burst forth, "but I have been oftentimes nearer you than you thought. I could not forget what you said to me at that last meeting, or the appeal you made for my assistance. I realize the position you are in Madame, married by force to a man you despise, a wife in name only, and endeavoring to protect yourself by wit alone. I could not forget all this, nor be indifferent. I have been in your camp at night—ay, more than once—dreaming I might be of some aid to you, and to assure myself of your safety."

(Continued next week).

THE SMALL FARMER'S OUTLOOK.

(Continued from page 376).

writers predict that America, being strong industrially, will become a manufacturing nation. Our machines will then be carried by our merchant marine to all parts of the world and on the home trip they will carry large quantities of agriculture products for our home markets. This will naturally tend to lower prices unless certain protection is given to the farmers of this country.

On the other side of the question we have our own rapidly increasing population. They have to be fed and if they are earning good wages in the factories, they will be large buyers of the quality goods produced on the farm.

The small farmer located near a good market has many opportunities for producing food stuffs that cannot be shipped into the country to the best advantage. A prosperous city population will use large quantities of poultry and eggs and as more modern methods are adopted in managing farm flocks, the poultry business on the farm will be carried on with less risk than ever before.

Small fruit is in good demand and it cannot be shipped a large distance. Berries and grapes are profitable when they can be sold on a local market and their quality can be so good that they will crowd out the competition from distant growers.

TO FIGHT FREIGHT RATES.

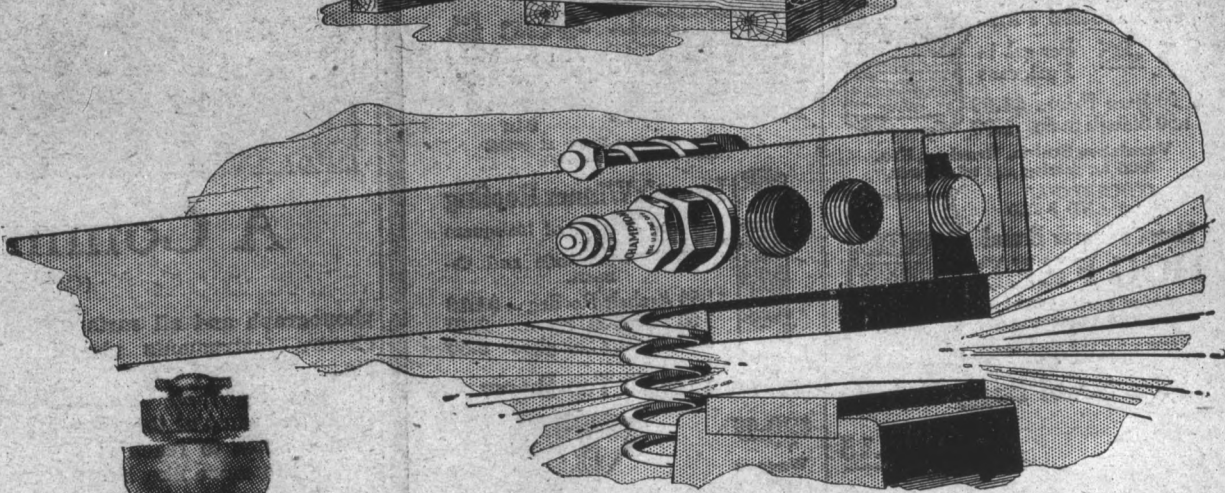
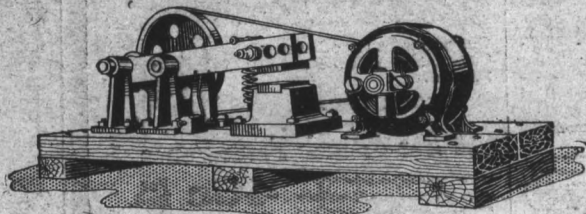
HALF a million dollars is the stake for which the fruit growers, fruit shippers and business men of the Wenatchee district are preparing to wage the battle of their lives before the Interstate Commerce Commission at Washington this spring. Joining in this contest will be all the other fruit districts of the Pacific Northwest as well as the Public Service Commission of the four northwestern states, Washington, Oregon, Idaho and California. These forces will combine for the purpose of opposing the proposed increase in the United States Railroad Administration's freight tariff on fruit, also the greatly advanced charges for heating and icing fruit in transit. The freight rate increase is already in effect, having been temporarily suspended by the Interstate Commerce Commission last October until May 31. The other increases have been promised but have not yet gone into effect. Under the new schedules the charges for icing and heating will be raised fifty per cent in some instances.

The Wenatchee district alone will have to pay \$500,000 more to have next year's fruit crop shipped to the market if these advance charges are not defeated or suspended. Altogether the fruit industry of the west will pay an additional toll of several million dollars annually so that the stake in the coming battle will be one of princely proportions.

Wenatchee fruit shippers took the initiative in opposing the first increase in freight rates on fruit two years ago. At that time the advance only amounted to fifteen per cent of from \$1 to \$1.15 per cwt. from here to Mississippi River points.



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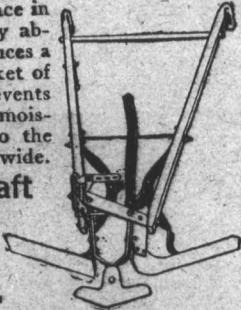
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Champion Spark Plug Co., of Canada, Limited, Windsor, Ontario

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Percherons, Holsteins, Angus, Shropshires, Durocs

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A Community Church

(Continued from page 371).

phonograph and all sorts of band or-
chestra instruments played in that
structure almost every night. The sol-
diers bring their instruments with
them, and some of them walk from two
to five miles to reach this place that
seems the most like home since they
bid their mothers good-bye on the old
farm somewhere in Michigan.

As we write these lines it looks as
though Camp Custer would stand as a
military contonment for a long time to
come. And as long as it does, and
farmer boys come to train their minds
and muscles along the various ways
that make them better and healthier
citizens and soldiers for whatever may
come in their after lives; so long will
this rural community church and its
organization labor to the uttermost to
do them good.

The third picture shows the pastor
and older members of the church on
the front steps. It would be hard work
to pick out the farmer members from
the villagers, judging from their attire
and attitude. The military camp near
by has made its impression on even the
old members and they stand erect with
shoulders thrown back waiting for the
order to salute.

The boys and girls in the Sunday
school wanted their picture taken after
they saw the older members line up
and make such a good appearance. So
we bunched them up, with Rev. Mr.
Smith standing at the extreme right
of the front as captain and chief magi-
cian of the community idea in full op-
eration on the front line trenches.

There are other rural communities
that can take courage from this experi-
ment and go and do likewise. There
is no need to have a military camp
near by to make a start. This trans-
formation at Augusta cost over twelve
thousand dollars, but a community or-
ganization can be effected and put in
good working order for less than a house.

thousand dollars in hundreds of locali-
ties where the farmers are progressive
and already have a good house or rural
church that can be remodeled or an ad-
dition made for a club room and a
kitchen.

The Augusta rural community church
as shown in the picture of the exterior,
provides a club room and kitchen on
one side of the old church. The old
church is in the rear and back of the
tower, from the picture point of view,
and stands at a right angle to the club
room. The corner lot location puts
the club room on one street and the
auditorium (old church) on the other.
The kitchen is built in between the
tower and club room. A high base-
ment runs underneath the entire struc-
ture. The old seats of the church
were retained. In fact, the old church
interior is very much the same as it
was many years ago, except that it
has been refinished.

The community idea prevails and
beats the old style country church pro-
gram all to pieces. The farmer mem-
bers and villagers gather now any day
or evening for all sorts of doings. Any
soldier, or even the temporary stranger
within the gates of the neighborhood,
can visit this church and sit down and
write a letter, read the latest periodi-
cals and books, play and sing, visit,
pray, and have a good old time while
waiting for something else to turn up,
or the next train to come along. The
boys and girls meet there under proper
supervision and good influences and
enjoy themselves, and it beats dances
and buzzing bees any time. For a good
religious atmosphere that makes one
think of home, and wonder how heaven
looks and feels; that instills a desire
for a church that has more good times
to the square inch for the man, woman
and child on the way to that home over
there, give us such a church as the
Augusta rural community meeting



Club Room with Folding Doors Opening Into Auditorium.

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produces bigger crops by protecting the root
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vice is valuable; we tell you how and furnish
the tools to do it. Write for our booklet, "Rea-
sonable Reasons Why." Be sure when you buy
that the name TOWER is on the cultivator tongue.

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37th Street, Mendota, Illinois
(Original Manufacturers of Surface Cultivators)

Woman and Her Needs

Preparing Material and Fitting Made-Over Garments

THERE are a few rules to follow in the preparation of materials. If you can see any possibilities in the old garment which will call for less ripping, do not take it all apart. Otherwise, rip every seam on general principles. If material is inclined to ravel, overcast the edges.

Soiled garments should be washed in warm, not hot, suds, made of a good white soap and soft water if possible. Rinse thoroughly in at least three waters. Press the goods lightly between the hands and hang up to dry. Squeezing or wringing the water from the material will make deep wrinkles which cannot be successfully ironed out. While still damp iron each piece on the wrong side, taking care not to stretch it out of shape. Avoid scorching by using a warm iron instead of a hot one. Strong pressure and plenty of patience will make the material look like new. Whether the garments are to be washed or not they should be well brushed after ripping to remove every particle of dust from the seams.

Some garments will do well with a light sponging with ammonia water and the consequent careful pressing. Under such treatment unpromising looking materials take on new lease of life and inspire one to greater efforts. Old coat linings make good foundation waists, cuff linings and facings. Old canvas may be rejuvenated by dampening and pressing with a hot iron.

Proper Fitting and Hanging Essential.

As a usual thing, it is not only unnecessary but impossible to use a new pattern in making a new garment from the old one. Begin with the skirt. Pin your belt in place. Then, standing in front of the mirror, pin the gores of the old skirt to the belt. You may turn them upside down or from front to back if they fit better that way, but remember, each piece must hang straight (with the thread of the goods) from the belt or the seams will pucker. When you have pinned the pieces together, baste where your seams will come, and try on again. Continue this process of pinning, basting and trying on until the skirt fits and hangs properly, always keeping in mind the lines you wish to follow. After the seams are stitched, press them carefully. This will reveal any uneven places in the stitching which should be ripped and done over before garment is finished.

In fitting a waist or coat, baste the shoulder seams first and pin the other pieces in place after you have it on. In any garment, skirt, coat or waist, be sure that the corresponding pieces on either side are exactly alike. Use the tape measure freely. Be slow in cutting, until you are sure about it. In made-over garments it is often necessary to re-cut the sleeves and in so doing there will be no notches to match in fitting them to the arm-hole. To insure a well-fitted sleeve, hang the coat or waist over your knee, so that the top of the shoulder comes on top. Pin the top of the sleeve in place so that the sleeve hangs perfectly straight from your knee. Then carefully stick pins in where the underarm seams will come. Baste the sleeve and try on. One or two trials will make you proficient and prove to you that this is an infallible rule. If the sleeve wrinkles under the arm it is too long there. Pull out your bastings except across the top. Hang over the knee as before. If the sleeve hangs perfectly flat and the

underarm appears above the arm-hole, that much may be safely cut off.

Do not think that your work will not look right unless you follow a pattern with exactness. With ingenuity and a little practice you can get satisfactory results by using what you have on hand, following lines which are becoming to your figure.

A dress-form on a standard would be a wonderful help to every woman who sews. The average farm home does not include this convenience in its equipment, so we use various makeshifts. In working on a jacket it is a good plan to lay it flat on the dining-table. When pinning the lining in place, hang the jacket inside out over the back of a chair. Set the chair on a box, or even the couch, to bring it to the right height for working. One woman who had no one to make her skirt even around the bottom, set piles of books in a circle on the floor in front of her long mirror. Revolving slowly within the circle she could see the uneven places and easily remedy them. If you have no long mirror, set a smaller one on the floor.

The Importance of Careful Finishing.

The success of any garment depends largely on the care exercised in the finishing. "Sew with an iron" is a good rule to follow. Press every seam. Wherever there are several thicknesses of material, dampen and then pound the spot with a warm iron. I have seen a tailor use a hammer on seams of thick material. The seams of a skirt should be pressed both before and after the hem is in. Press the sleeve seams apart. If you have no sleeve board, use a broom handle. Press a coat before and after sewing the lining in. Be sure that your lining fits well and is not too short, or the coat will be drawn out of shape.

Points to Remember.

1. Rip, clean and press you material with care.
2. Be slow to cut, and plentiful in pins.
3. Follow becoming lines.
4. Press with a moderate iron, carefully and often.
5. Do not hesitate to use for dresses or trimming, materials originally intended for other purposes.
6. You will feel more than repaid for the time and labor spent in making everything just right.
7. Make up in patience what you lack in experience, and your results should be highly satisfactory.

TO CLEAN AN OILED MOP.

Dustless mops lose their efficiency when they become too dirty and caked with dust. They may be washed in strong hot suds, but this can be done much better if the mop is first washed in gasoline to cut the oil. Gasoline which has been used for cleaning should be saved for this purpose. After the mop is well washed in gasoline let it dry, then wash in suds. When thoroughly dry, oil it again and it is as good as ever. The best way to apply the oil is to pour a little in the tin box the mop comes in, and put the mop with the strings down into the can and let it remain for a few days to evenly absorb the oil.

If your stove blacking becomes hard add a little turpentine to soften it.—M. A. P.

Home!

And the savory fragrance of real home-cooking calls to him that mother's in the kitchen.

Her kitchen is every home-making woman's delight, and the woman who owns a modern Majestic range knows how wholly delightful a kitchen can be.

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Four Hemming Stitches

SEWING is of two kinds, plain and useful, or ornamental and doubly useful, just as the seamstress wishes to make it. Of course, it seems better to busy women to do it in the quickest possible manner, but after all it doesn't take so much more time to do a little ornamental stitching. And the small girl whose mother will spend those few extra moments beautifying her simple wash dresses feels that the result more than makes up for the time, when she compares her own tasteful frock with the plain, ugly one of her less fortunate playmate.

The various kinds of basting and running stitches were considered in a previous article. In this, hems of many sorts will be taken up.

There is the plain hem (Fig. 1),

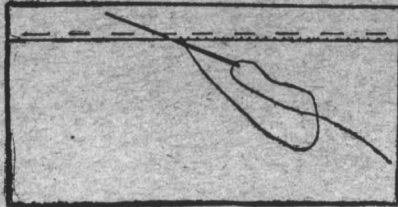


Fig. 1.—Plain Hemming.

which everyone thinks she can do, but many never do well because they are not careful. To make a neat hem it is necessary first to trim the edges evenly. Then turn back the raw edge one-eighth of an inch, taking care that no loose threads are sticking out. Lay the hem the required depth, using a bit of paper as a gauge and baste the hem in place. Slant the needle towards the left when taking the stitch, and use care to take small, even stitch-

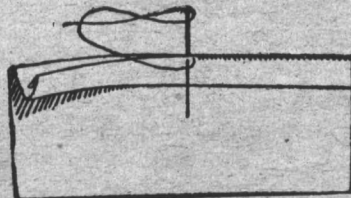


Fig. 2.—Method of Hemming Table Linen.

es. In silks and woollens the distance between the stitches may be greater than when working in cotton.

This plain hem, which is used on

garments, bed linen, towels, etc., should never be used on table linen. Nor should one ever be guilty of hemming table linen with the sewing machine. The napery hem is laid like the plain hem, then the hem is folded back on itself and the edges caught with an overhand stitch. Figure 2 shows both

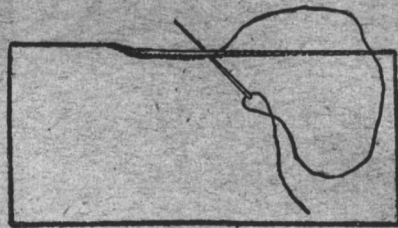


Fig. 3.—Rolled Hem for Sheer Materials.

the fold and the stitch. Never hem table linen in any other way if you wish the best results.

In hemming sheer materials, fine linen, muslin, organdies, etc., use the rolled hem (Fig. 3). Trim the edges evenly, then hold the wrong side of the cloth towards you and roll the edge tightly between the thumb and forefinger of your left hand. Take a small, even hemming stitch under and over the roll. This hem should always be used on fine materials where you

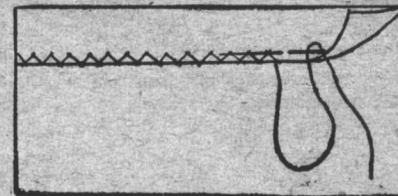


Fig. 4.—Hemming Infants' Garments. are going to sew on lace or set in insertion.

In hemming flannel the raw edge is not turned in. The hem is laid the desired depth and caught on the underside with a simple cross stitch. To do this take a small stitch from right to left an eighth of an inch above the hem. Then drawing the thread diagonally to the right, take a similar stitch just below the raw edge. Continue this across the hem as shown in Figure 4.

Where are We At?

Household Editor.—With all due respect to food specialists, extension agents, chemical analysts, et al, don't they sometimes get you all up in the air and leave you sort of wondering if after all—well, not exactly if they know what they are talking about, but if they don't sometimes make statements rather hastily and without due proof of the pudding before praising it?

At the Farmers' Week, for instance, which was filled with good and helpful things, I had one or two hard shocks. There was the matter of raw egg white. For years we were told that raw egg white was more easily digested than cooked. Tubercular patients were at one time urged to consume several raw eggs a day, and egg nog and albumen water, made of uncooked white, were a regular part of the sick-room diet. What was my surprise to be told at a demonstration that raw egg white is positively injurious, and should never be eaten! Sort of left me gasping and wondering how I'd lived all these years.

Then there was baking powder. When I went to cooking school we had to use a high-priced cream of tartar baking powder. We were told that it was the purest and best, and that the goblins or something else would get us if we didn't watch out for the other kinds. At the demonstration we were told that cream of tartar sorts leave an undesirable substance in the system, and advised to use a phosphate. And a particular brand of phosphate powder at that.

Sort of leaves you wondering if anyone is sure of anything, doesn't it?

Then, there is the matter of babies. When my first one came I was told to feed her every two hours. Her little "tummy" could only hold an ounce of so and she must be fed frequently and in small amounts. Ten years later when her brother arrived, he had to be fed every four hours, and about two or three times the amount his sister got. Don't know whether his stomach was larger or the idea was that being a boy it would stretch out of all proportion in due time and we might as well begin early. The strange thing about it all is, that both youngsters thrived in spite of the fact that one of them must have been handled wrongly, and ought, by all the rules of the game, to have died of malnutrition.

Seems a miracle, doesn't it, that the human race has survived all these years, when every decade we discover that it has all been done wrong?

This may sound like a knock at our food specialists, but I don't mean it as such. They are doing a great work and we need them. But it sometimes seems as though they lack either a sense of humor or a chance to practice their theories on a real family before they offer them to the public.—A Plain Farmer's Wife.

When chopping suet for mince pies or puddings sprinkle suet with a little flour and you will find that it chops much better.—Mrs. A. D. P.

DON'T BE BAMBOOZLED BY BOOZE

(Continued from page 368).

any regulation upon saloons, for the legislature only may pass laws upon such subject and its laws must be general—applying to the whole state.

25. A city or village could not by ordinance nor even by vote of the people collect any local saloon license fee.

26. Or regulate saloon closing hours.

27. Or the number of saloons.

28. Or the district wherein they could operate.

29. Or the use of saloon screens.

30. Or the custom of treating in saloons.

31. Or the cashing of pay checks in saloons.

32. Or the employment of girls therein.

33. Or the exclusion of dance halls in connection with saloons.

34. Inasmuch as the amendment provides no method of carrying into effect the last clause of the amendment to ascertain the will of the people in cities, villages and townships upon prohibiting the manufacture, sale and keeping for sale of vinous, malt, brewed or fermented liquors within such city, village or township, such clause will be ineffective until the legislature passes a law for holding such election.

35. If the legislature does not pass and put into effect a law licensing and regulating saloons by May 7, 1919, then anybody and everybody may sell such liquors at any time or place (Sunday, holidays and election days included), until such laws become operative.

36. Should such an interval occur, Michigan would be absolutely without any restriction or regulation on the sale or use of beer, wine, ale, porter and hard cider—the state would be wide open on those liquors in the widest sense of the word.

37. Before such law could be passed and put into operation, saloons could probably be established anywhere in the state, without any license or regulations.

38. Such liquors could be possessed in any quantity in private residences.

39. The manufacture, sale, keeping for sale, giving away, bartering, or furnishing of spirituous liquors will still be forbidden.

40. At the election April 7 every registered elector, men and women may vote on the amendment.

HOW WE DO IT.

For the Birthday Cake.—In placing candles on a birthday cake try heating the point of a hatpin very hot and push it into the base of the candle about a half-inch; pull out pin and insert a toothpick. The wax will harden about the toothpick, the other end of which may be inserted into the top of the cake, and the candles will have a secure foundation.—Mrs. R. M. D.

One of the handiest devices for the housewife is a bread or cake cooler. I purchased a piece of fine meshed heavy wire fencing. I turned down about four inches in each end and had the hardware man bind it with tin. This made the side pieces for the cooler to stand on, and when finished it was one of the most inexpensive articles I possessed.—Mrs. M. B. G.

A quick method of separating the whites and yolks of eggs is to take a small funnel and break the egg into it; the white will run through the small end and the yolk remain in the funnel.—Mrs. L. M. T.

To cook onions so that the odor will not be noticeable, place a small dish of vinegar on the stove and let it simmer while the onions are cooking.—Mrs. C. W. D.

When making noodles add a pinch of baking powder and they will be light and digestible.—Mrs. L. L. G.

If you are in a hurry for potatoes to bake, let them stand in boiling water a few minutes before putting them into the oven.—M. F.

Feed Your Family Healthy Nutritious Food

If you want to avoid doctor bills, illness, inefficiency and all the disagreeable things that go with them.

Medical Science says most ailments are traceable either directly or indirectly to improper eating.

It is an undisputed fact that most people eat too much and not properly balanced food.

Sour pickles and sweet milk are a poor combination to put into a healthy stomach to say nothing of a sensitive one, but that combination has nothing on sour, soggy, indigestible bread and heavy, sticky pastries when it comes to destroying health.

Look well to the flour you use when baking for flour is really the foundation of cookery, and the use of good flour will prove just as gratifying as the use of poor flour will be disappointing.

One thing is certain, if you always insist on having

Lily White

"The flour the best cooks use"

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Only the very choicest wheat is used in the manufacture of LILY WHITE.

This wheat is all cleaned three times, scoured three times, and actually washed once before going onto the rolls for the first break.

The result is a perfectly pure clean flour.

That is not all. Flour must be more than pure and clean to bake good biscuits and breads. It must be properly ground.

Every woman knows it is necessary to have the pieces of potato of equal size to insure thoroughly uniform cooking.

The same principle applies to flour. The granulation must be absolutely uniform to insure uniformity in baking and without this uniformity good baking results are impossible.

Why take chances when you can get LILY WHITE FLOUR and be positively assured of having the very best.

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No. 2712—A Comfortable Neglige. Cut in four sizes: Small 32-34; medium 36-38; large 40-42; and extra large 44-46 inches bust measure. Size medium requires $6\frac{1}{2}$ yards of 36-inch material. Price 10 cents.



No. 2558—Ladies' Apron and Cap. Cut in four sizes: Small 32-34; medium 36-38; large 40-42; and extra large 44-46 inches bust measure. Size medium requires $3\frac{1}{4}$ yards of 36-inch material for the apron and $\frac{7}{8}$ -yard for the cap. Price 10 cents.

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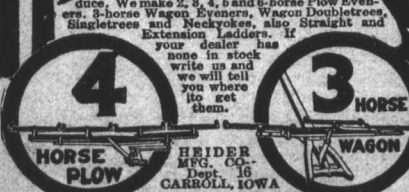


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Our Boys' and Girls' Page

Playing the Game

By E. L. Vincent

SOMETIMES we hear boys tell about some fellow that did not play fair in the game which had been in progress, and if anything-hits-us hard it is to feel that we have been cheated by underhanded methods. In the hearts of us all, there is that which calls for fair play. But listen a minute, boys. Which is worse, to play the game unfairly or to play an unfair game?

On our farm we have a Collie dog. He is like other dogs of the kind, bright, quick to learn, a great help on the farm, and especially keen to resent anything that seems like favoritism to other animals, particularly the cats. He cannot bear to have a word of commendation said for the cats.

As a rule Ted is to be found at home every day. But last summer he fell in with bad companions, and one morning he came home with blood running out of a number of buckshot wounds in the back part of his body. Who did it or why we never knew. Ted crept under the back steps and there he lay for a long time. We could not get him out to eat, and he had no more ambition to help about getting the cows from the pasture. He seemed to know that he had been where he had no business to be. He had been caught in a bad game. Shot, but in the back! Playing a bad game and suffering the consequences!

Our Laddie came home from school one day. Mother knew from his actions that something had gone wrong, but for some time could not find out just what the trouble was. But Laddie's conscience was not easy and after a while he told mother all about it. It was a thing that caused mother a great deal of pain and she told Laddie how sorry she was that her little boy should have so far forgotten himself as to descend to an unmanly thing. "Then let's not think about it, mamma!" he begged. "Let's forget all about it!"

The trouble about such things is, however, we cannot forget them. God won't let us forget them. He knows

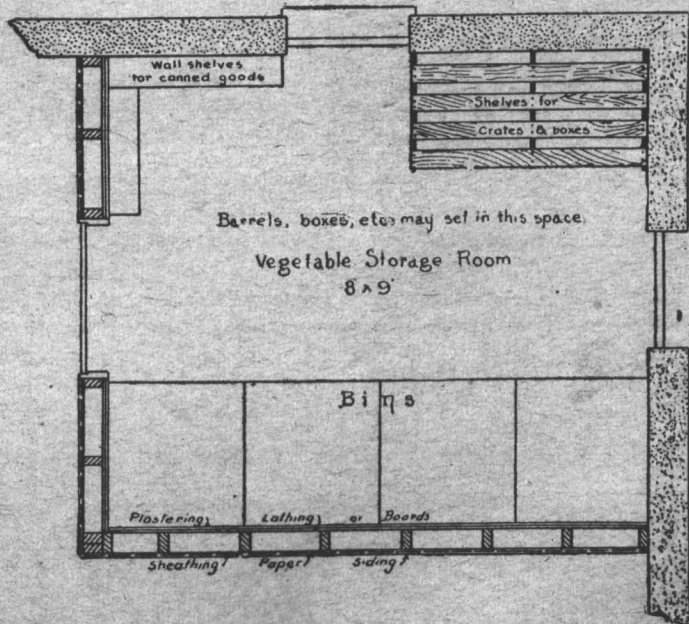
that it is better that we should always remember, so that we may steer clear of all such things in the future. The bad game we have played never fails to bring us wounds, and always somewhere save in the breast. And how we do hate to be shot in the back! No soldier boy likes to come home and say, "I was shot in the back." The scars in his breast, no matter how close to the heart they may be, are the wounds he is proud of.

So, it is a fine thing for us all to stop and ask ourselves, "What kind of a game am I playing in this world? Am I putting up a good, square fight, so that if I get hurt, my scars will be in front and not in my back?" For, man or boy, a good, fair game brings with it a consciousness of success, of victory, of worthiness to wear the cross of gold.

Where shall we begin in this matter of playing the fair game? Just where we are. No use to say, "I'll have a chance to get into a new game when I am a man. If I am a little bit tricky now, if I do shirk once in a while, if when father gives me a thing to do I slip over it, nobody will ever know the difference, and by and by I will get right down to a different way. Then I'll be good and kind, and true and thorough in everything I do!"

No, boys; you won't do it! If you are ever honest and manly, if you ever play a fair game and play it fairly, you will play it now. Because just now, today and every day, you are making that thing we call character. It is a queer thing, is character. It is made up of all the little things a fellow does; the big ones do not count a bit more than the small ones. We cannot do a bad thing today and think, "Now I can do a lot of good ones to make up for that!" The mean thing stands out bigger than all the rest and hurts far more than the good ones help. Our Collie lost something that day when he came home shot where he no business to have been shot that he never will

Boys Can Fix Up a Root Cellar



THIS drawing shows how any boy a room in one corner, or the end of the may convert a corner of the cellar, an even temperature may be lar into a storage plant for keeping had by means of outside windows. One window is necessary, and two are better, supplying both ventilation and light. Where the cellar is built on the ell plan, as in many older houses, either the ell or upright cellar room may be partitioned off into a very service-able storage room.—E. W. G.

outgrow by any good conduct of the future.

Keeping straight is a thousand times better than getting straight. All right to play the game fair, but play a fair game.

A HOME-MADE COOKER.

MANY people would cook cull beans and other farm waste if patent cookers and kettles were not so expensive. For years I used one as described below. A man handy with tools can make one at an expense of about six dollars for material. One with dimensions as given holds approximately one hundred and twenty gallons. From fourteen-inch plank build a box twenty-six inches by seven feet, outside measurement. Over the bottom, and one inch up the sides, nail a sheet of heavy galvanized steel 28x96 inches and cover up one end of the box. Make a concrete foundation eighteen inches high and six inches thick for both sides of box and leave one end open. In the other end build a concrete elbow for No. 9 stove pipe. At one-third and two-thirds of distance from end of foundation, place iron bars across. The box rests upon these, and they prevent the steel from sagging. A concrete chimney may be built, or use ordinary stove pipe braced. At the open end where fuel is put in, be sure to cover the plank well with sheet steel; otherwise there is danger of the flames catching it.

Of half-inch stuff make a double cover in two sections, long and short. This makes it easier to handle. When watching the feed. If possible, build your cooker near enough to the well so that the water may be pumped into it, and you have a cheap and convenient cooker, which is really nothing but a box with bottom covered with sheet steel, resting on a concrete foundation.—B. B. Lincoln.

TO DESTROY SOOT IN CHIMNEY.

DURING these days of increased use of soft coal, chimneys and flues become quickly clogged with soot which very often results in the burning up of the building.

The old remedy to remove the soot as a fire preventative measure was to throw salt on the fire. No doubt this helped matters, but the best way to get rid of soot-clogged flues and chimneys is to burn your old wornout dry cell batteries.

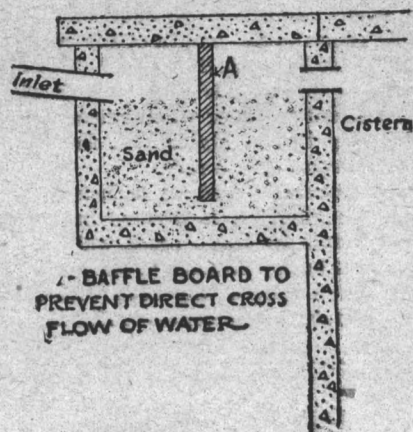
This is an easy matter and very efficient. Merely get a good hot fire going, knock the pitch out of the top of the batteries, as it may make a clinker, then throw the old batteries on the fire, open the lower draft, and the damper in the chimney. This causes the batteries to burn quickly and the

zinc and other ingredients used in the cells, having a chemical affinity for carbon dioxide (soot), quickly converts it into gas.

If this is done whenever batteries are changed on the gas engine, tractor, motor car or telephone, the chimney and pies of the stove or furnace, will be kept practically sootless, and at no expense, since batteries that are worn out are worthless for any other purpose, but of value in this respect—if only as a fire preventative.

A FILTER FOR THE CISTERN.

FARMERS who complain of their cisterns becoming muddy or sooty from dust or cinders, will find the filter described a means of removing this. The filter is built next to the cistern well, either of brick or concrete. The walls should be four inches thick,



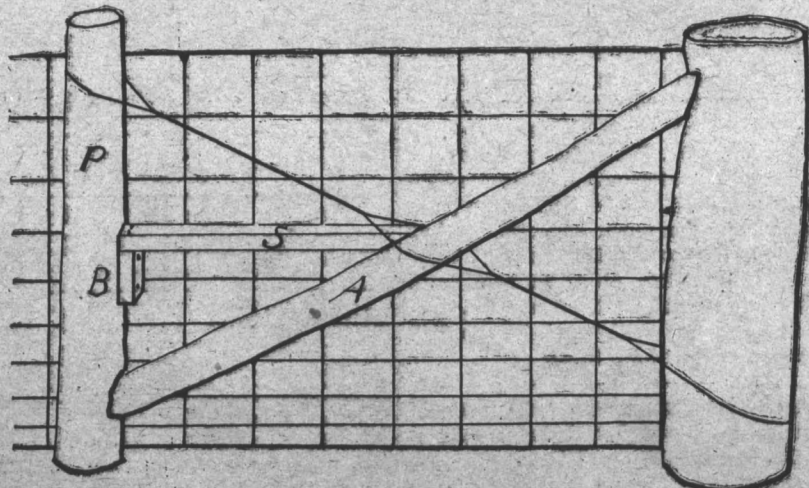
inside dimensions in comparison with amount of water poured in, the usual size being two feet wide, deep and long. The larger the filter the less often it will be necessary to put in new sand to filter. Sand is used in the filter. This should be coarse and clean, with grains down to one-eighth of an inch. Filtering is accomplished by the reduction of the velocity of the flow of water, the rain water impurities being held in the sand bed instead of being permitted to enter the cistern.—E. W. G.

BIG GAIN IN SHEEP.

The February number of the Monthly Crop Reporter, published by authority of the Secretary of Agriculture, states that 193,000 sheep were added to the flocks of Michigan in 1918. This increase is greater than is shown by any other state in the union.

In 1918 Michigan raised 108,000 acres more of oats than in 1917, an increase exceeded by Oklahoma only. Michigan's increase in barley was 135,000 acres; and only South Dakota exceeded this increase. In yield per acre in 1918, Michigan surpassed both Oklahoma and South Dakota in both oats and barley. The figures are taken from the government crop report for December, 1918.

Fence Made Easy to Climb



SOMETIMES in the corner of a field, B, spiked to the brace post P, as shown where there is no gate, one has to climb the fence frequently. A step, made of a piece of two by four and fastened to the brace A and the block times, very convenient.—L. B. A.



Day after day, the same endless, eternal task—pumping water for stock, for dishes, for bathing, for washing clothes, for dairy uses, etc. The time that is spent in pumping water on a farm is absolute waste, and time is a most important factor on the farm these days.

Leader

Farm Water System

will do all the water pumping for you. It can be made to operate entirely automatically so that a positive pressure is always maintained with no attention beyond occasional lubrication.

Leader Systems can be operated either by an electric motor, by gasoline engine, or from a line shaft. They are simple, sturdy, and efficient—there is nothing complicated about them to get out of order and cause trouble.

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Fine laying strain of prize birds

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Get order in early and send check with it. Send for free booklet and instructions.

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

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\$10.95 Buys 140-Egg Champion Belle City Incubator

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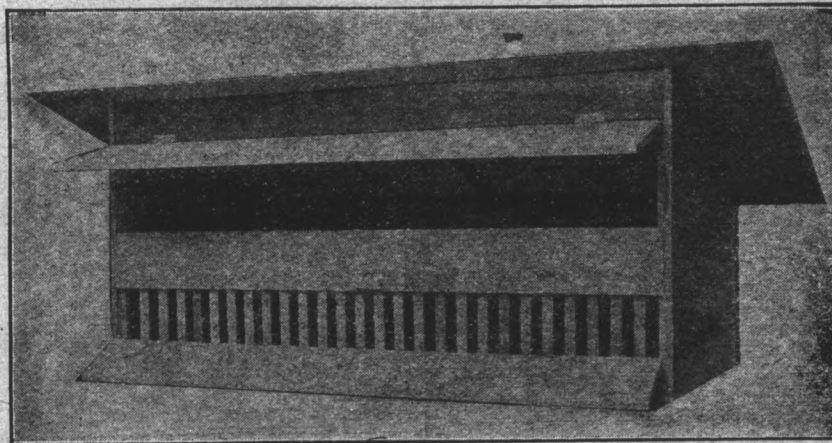
Brood Coop for Chicks

By C. A. Spaulding

THE farm flock is receiving considerable attention from the agricultural press and from agricultural extension workers. In fact, it is receiving considerable attention from the farmers themselves and their wives who, in many cases manage the farm flock. This attention is making it a paying proposition. We are learning that a few good hens—well-kept—pay a much greater dividend than a larger flock without such good care. We are learning to cull out the star boarder and to give our attention to the producers. One farmer of my acquaintance recently visited a culling demonstration carried on at a neighboring farm by the extension workers from the Agricultural College, and upon his returning home, culled his flock of eighty birds according to the instructions given. He culled out fifty of

behind. It has a door eight inches wide running the entire length of the back, so as to permit easy access to the hen. The four openings of the front are covered with slats. By placing an eight-inch board along the front, hinged at the bottom, a runway is provided for the chicks to enter upon and when this door is closed at night, the coop is made rat-proof. A door one foot wide runs the full length of the coop in front just beneath the eaves. The opening of this door is covered with wire screen and the door when raised lights the coop thoroughly and at the same time keeps out the rain.

This house is used for both hatching and brooding. It is divided into four apartments by three cross walls composed of burlap frames. Four hens are set in the back of the coop with food and water placed conveniently in the



An Easily Made and Convenient Brood Coop for the Farm Flock.

the hens which he judged to be non-producers and was gratified to find, after keeping them shut up by themselves for three days that he received just as many eggs from the thirty hens he had saved as he had been receiving from the entire flock. This same farmer has been getting an average of twelve eggs per day throughout January, from twenty-six hens. This small flock is now in a way to make a profit for its owner if given proper care. But upon this farm as upon many others like it, only the most meager equipment is available.

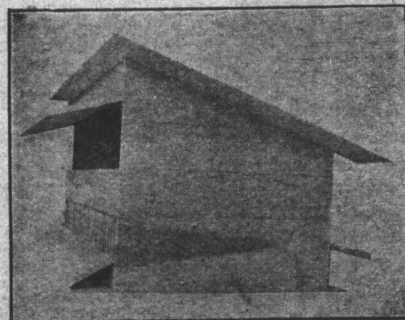
The equipment for the farm flock can not, as a rule, be very elaborate,

runways in front. The top is not nailed on but is set on with cleats on the under side.

When the chicks are hatched two liters are given to each of the two hens that seem to be the best mothers and two of the burlap frames are removed leaving the house divided into two apartments. Later when the chicks are weaned the middle frame is removed and the house is used for the young stock during remainder of the season.

This coop makes hen hatching easier and facilitates more efficient brooding. It does away with the old A-shaped coops with their attendant toll of rats and rain. It is rain and rat proof and is especially adapted to the work of boys' and girls' poultry clubs and farm poultry work.

The house can be easily made and easily moved about during the season. A few chicks from a high egg-laying strain lost, due to rain or rats, would soon come to more than the cost of this combined coop. This coop was designed by Mr. H. L. Kempster, of the University of Missouri Poultry Department, and used on the university poultry farms with much success. It has gained wide popularity among boys' and girls' poultry clubs in this state and could, with profit, be made a part of the general equipment for poultry production on every farm.



Side View of Above Coop.

but to be economic it must be of a kind that will hatch, brood and raise a high percentage of chicks successfully. Many farmers now use incubators for their hatching but there are still many probably the majority, in fact, who depend upon hen hatching. For this class a valuable addition to their farm flock equipment will be the combined hatching and brooding coop described below.

This combination house or coop is six feet long, three feet wide, three feet high in front and two feet high

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for 1919, sent safely everywhere by mail or express. Single Comb White and Brown Leghorns and S. O. Anconas. Grand laying strains. Strong, vigorous, hatched right kind. Tenth season. Satisfaction guaranteed. Order now for spring delivery. Prices right. Free catalogue. W. Van Appledorn, R. 7, Holland, Mich.

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Baby Chicks: S. C. White and Brown Leghorns. Good laying strains of large white eggs. Guaranteed to reach you in first class condition by parcel. Catalogue with price list free. WOLVERINE HATCHERY, R. 2, Zeeland, Mich.

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BABY CHICKS and Eggs. Barron English White Leghorns, "The Big Kind," 248 to 308. Egg stock. Write Mrs. E. L. GARLOCK, R. 7, Howell, Mich.

Baby Chix Barron Strain S. C. White Leghorns. Large healthy vigorous stock farm raised, bred to lay. Aim satisfaction. Bruce W. Brown, R. 3, Mayville, Mich.

Barred Plymouth Rock Cockerels, fullblood, each, prize winners for 17 years. J. A. BARNUM, Union City, Mich.

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Cockerels of great size and superior breeding. Barred right, bred right, built right. Even better than last year. \$4.00 and \$5.00. WESLEY HILE, R. 6, Ionia, Mich.

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Fifteen dozen eggs incubated and chicks boxed and shipped \$8.50. Less than full compartment 50c per dozen. Order April chicks now. Many varieties send for circulars. Crescent Egg Company, Allegan, Mich.

Buff Leghorns and White Leghorns. Cockerels, hens, pens, and eggs. 500 April chicks of each breed. Place your order now. Prices reasonable. Dr. William Smith, Petersburg, Mich.

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Rose and Single Comb B. I. Reds. Barred Plymouth Rocks. Pure bred stock. Farm raised and of superior quality. Write for catalog. INTERLAKES FARM, Box 39, Lawrence, Mich.

Chicks Barron Strain White Leghorns. Pay a little more and get a good start next season. Early hatched chicks are always the best. My cockerels come from hens with an egg record of over 250 eggs their pullet year. March \$16, April \$15, May \$14 per 100. Circular free. Folly Cove Farms, R. 1, Holland, Mich.



MARCH POULTRY REMINDERS.

WHEN hatching chicks remember that the capacity of the brooding equipment is important and chicks that are crowded will not be profitable. It is always better to hatch five hundred chicks and raise most of them, than to hatch one thousand and have a constant mortality rate throughout the season which is due to lack of equipment. Many failures with poultry are due to the excessive enthusiasm in the spring which brings out many hundred chicks, followed by the rapidly diminishing interest which allows those chicks to die from lack of care, or grow into stunted inferior birds.

Young chicks need green food and in bad weather this must be supplied. Sprouted oats are fine for the chicks. They have a strong liking for fine chopped onion. Clover sods placed in the brooder will give the chicks green food and exercise. The clover chaff from the barn floor can be placed in the brooder and this will give the chicks many bits of healthful green food.

If day-old chicks are ordered, always have the brooder ready when they arrive as they must be removed from the box as soon as possible and placed under more natural conditions. Often fifty or one hundred day-old chicks can be divided up among old setting hens and they will brood them carefully. If the chicks are left to crowd in the box for warmth they will lose in vigor and be difficult to develop into a profitable flock.

Study Marketing Problems.

Practical poultrymen are studying their marketing problems more than ever before and not blindly producing broilers and eggs without knowing how to sell them. The poultryman can get plenty of information upon production from the many advisers who are hired to disseminate it, but when it comes to marketing, he must work out his own problems. The breeding and selling of pure-bred poultry is one of the surest methods of increasing poultry profits. Then the buyer cannot tell the producer how much the price is going to be. The producer studies the quality of his product and says, "I will take so much for birds of that quality and so much for birds of this quality." The buyer takes the birds or leaves them at the producer's price. It makes the producer feel more like a business man when he can sell goods at the price that he puts upon them himself.

Much of the loss in the poultry business is due to the system of marketing birds raised on the farm. The farmer stops at the mill and buys beef scrap, oyster shell and mill feeds and pays the price asked. He goes down to the local market with a couple of crates of broilers and accepts the price offered. Only goods raised on a farm could be sold in that way without the producer being starved out of business. The fact that so much of the poultry is produced on the farms where the cost of production is not known, helps to keep down the market price of poultry. Even the experiment stations do not publish the cost of the feed they use each year for all their birds and compare it with the entire return from eggs and stock sold. Maybe some of them publish such figures but the tendency is to emphasize the results of a few unusually good layers and neglect the figures that are not so promising.

The month of March is a good time to plan on raising better poultry. Hatching eggs from good flocks are for sale and it presents an opportunity to obtain a start in pure-bred poultry at a small price.

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ABSORBINE, JR., the antiseptic liniment for mankind, reduces Strained, Torn Ligaments, Swollen Glands, Veins or Muscles; Heals Cuts, Sores, Ulcers, Allays pain. Price \$1.25 a bottle at dealers or delivered. Book "Evidence" free.

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After a long delay our new illustrated catalog is ready. In it we explain the development of the Homestead Farms work.

Pure Bred Practical Poultry

Every farmer, poultryman and poultrywoman in the State should have a copy of this catalog; it explains pure bred poultry stock that is practical for the farmer. If you are interested in poultry, send for a copy.

Day Old Chicks

Everything indicates that there will be more orders for Chicks this year than can be filled. Orders are already booked for future delivery; those who want to be sure of Chicks should order now and have them shipped later when you will want them. Our Breeds are:

Barred, White and Buff Plymouth Rocks.
Rose Comb and Single Comb Rhode Island Reds.
White and Silver Laced Wyandottes.
Black and White Orpingtons.
Single Comb Black Minorcas.
Single Comb and Rose Comb White Leghorns.
Single Comb and Rose Comb Brown Leghorns.
Single Comb Buff Leghorns.
Single Comb Anconas.
White Pekin Ducks.
Guineas.

Eggs for Hatching

Eggs from any of the foregoing breeds for settings or in quantities for incubators. Special price for 500 to 1000 eggs during season; and for eggs for early broilers.

Eggs from White Pekin Ducks, Gray Toulouse and Embden White Geese.

Pullets—A few Pullets now laying are offered: 5 White Wyandottes; 4 S. C. Black Minorcas; 16 Barred Rocks; 15 White Rocks; 20 White Leghorns.

Special in Cockerels—We have about 30 Barred Rocks of special breeding that, if taken at once, we will sell at \$2.50 to \$3.50 each; about 20 S. C. and 1 R. C. White Leghorns at \$2.00 to \$3.00 each; a few high class R. C. and Rhode Island Reds; Black Minorcas; White and Buff Rocks; White Wyandottes and Anconas.

Hares—Belgians and Flemish Giants.

If you really want poultry stock this season, especially Day Old Chicks, you should order now; stock can be shipped later.

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By Parcel Post Prepaid. Delivered To Your Door. Guarantee Live Delivery.

Strong chicks from pure bred farm stock that are hatched right. Have chicks of Utility and Exhibition quality. Bred to Lay. S. C. White and Brown Leghorns \$12.00 and \$14.00 a 100; Barred Rocks, \$15.00 and \$17.00 a 100; Rose and Single Comb Reds and White Wyandottes, \$15.00 and \$18.00 a 100; S. C. Anconas, \$14.00 and \$17.00 a 100; S. C. Buff Orpingtons, \$18.00 and \$21.00 a 100; S. C. Black Minorcas, \$18.00 a 100; Odds and Ends, \$12.00 a 100. Eggs for hatching, \$7.00 to \$8.00 a 100. Combination orders on chicks, broilers and brooder stove. Give us your order and we will make you a satisfied customer the same as hundreds of others. Before ordering elsewhere get our free illustrated catalog. Get your order in early.

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V. A. MORSE, Ionia, Mich.

Pine Crest White Orpington greatest egg producers—hens and young stock buy now for next winter. Mrs. WILLIS HUGH, Pine Crest, Royal Oak, Mich.

S. C. Anconas, W. Leghorns. Book orders now for free. Day Old Chicks and Hatching eggs. Circular free. Elmhurst Poultry Farm, Brighton, Mich.

Silver, Golden and White Wyandottes. Plenty of Good Golden and White cockerels \$4.50. Few Silver pullets \$3 each. C. W. Browning, Portland, Mich.

Fenton Chicken Hatchery, Fenton, Mich. F. M. Milliken, Proprietor. The toughest Day Old Chicks, 25 for \$5.50; 50 for \$10.00; 100 for \$18.00. Single Comb W. Leghorns Tom Barron English Strain. White, Buff and Barred Plymouth Rocks, Buff Orpingtons, Anconas, W. Wyandottes, R. I. Reds, B. Leghorns.

R. C. Br. Leghorn eggs \$1.50 per 15, \$3 per 100. Pekin duck, \$1.50 for 8. W. Chinese goose eggs 40 cents each. Mrs. CLAUDIA BETTS, Hillsdale, Mich.

Snowy White Rocks Fishel Strain, dandy layers. Eggs \$1.50-15; \$4.50; \$7-100 All prepaid. Mrs. Earl Dehnhoff, Vanburen, Ohio.

White Wyandottes Free range flock 80 Duston's Strain hens mated to 7 Martin's Regal Strain Cockerels, 15 eggs by Parcel Post \$2.00 by ex. \$3 per 100. VERN MOORE, Hartford, Mich.

White Wyandottes choice stock; cocks, hens, cockerels, and pullets. Send for 1918 circular. David Ray, 709 Norris St., Ypsilanti, Mich.

Pekin ducks, either sex, \$4.00 each. Mammoth Bronze turkeys, Toulouse geese, S. C. W. Leghorn cockerels, Berkshire gilts and sows. Chase Stock Farm, Marietta, Mich.

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Pekin ducks, either sex, \$4.00 each. Mammoth Bronze turkeys, Toulouse geese, S. C. W. Leghorn cockerels, Berkshire gilts and sows. Chase Stock Farm, Marietta, Mich.

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WHEAT
RYE
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Crops for Dairy Farms

THE milk producer must not forget that he is a farmer as well as a dairyman, and plan to bring every acre of his farm under a remunerative system of crop production. Possibilities of increasing profits along this line depend upon the amount of study and thought is put into the work. So long as one is satisfied with a yield of six tons of silage corn, thirty bushels of oats and one ton of hay to the acre the cost of his supply of feed will eat largely into the profits of the business. In the first place, a proper crop rotation must be selected and such a choice of crops, and methods of growing them, made as shall tend to place every acre of the farm in a productive crop, and give suitable variety for feeding.

In planning crop rotations it is safer to avoid growing crops of doubtful value that do not fit well into a fixed rotation. A few standard crops properly handled will prove more satisfactory than too wide a variety. Clover, alfalfa, corn and a small grain crop make an efficient and simple rotation. Some dairy farmers grow catch crops for soiling purposes, but the better way is to carry over silage for summer feeding and depend upon such field crops as oats, peas, green corn and alfalfa for soiling. If we can get the soil favorable for the growth of clover, alfalfa, corn and small grain crops, it is about all we can do toward producing a balanced ration for dairy cattle and building up the soil without resorting to outside sources of supply.

By growing corn, wheat, clover, or clover and timothy mixed, a four-year rotation, and seeding a part of the farm with alfalfa, we have a nearly ideal system of crop growing for a dairy farm. Some dairy farmers omit timothy and practice a three-year rotation, which is all right if they have a field of alfalfa to depend on in case the clover fails; but, as a general proposition it pays to allow the land to remain in grass two years. Clover is a more active soil builder, but the timothy thickens the sod and furnishes more humus. And, after all, one is on the safe side when he has a few acres of mixed meadow to depend upon in case the clover fails.

In harvesting and feeding these crops a large part of the corn crop should go into the silo and be fed out along with the clover or alfalfa hay. Such a roughage ration, supplemented with reasonable quantities of purchased concentrates, will produce milk at a minimum cost and maintain the breeding stock and young cattle in condition to breed regularly and command good prices. Whether one should grow the wheat crop or oats and peas in the rotation is a debatable question. It depends upon the conditions under which one is working and how far one has to haul the wheat to market. The cutting and harvesting of hay crops has a great deal to do with the feeding value. We may cut our clover, alfalfa or timothy too soon or too late to secure maximum feeding value. One of the advantages of seeding timothy with clover is that of properly curing the mixed hay. There is less trouble in cutting, curing and handling the clover crop if it contains one-fifth timothy.

The breeder who has good pasture land is fortunate, although it is possible to establish pasture by seeding

with a variety of good grasses that will yield feed throughout the season. Such a pasture will require several years to become well established. The weeds and undesirable growths must be kept down and grass seeds sown on wet and thin spots. Where the seeding is thin and run out in spots, lime and acid phosphate, thoroughly disked into the soil, will encourage some of the desirable grasses to make a good stand. It is usually cheaper and better to seed the grasses several times than to apply all of the seed at one time.

Alfalfa helps out wonderfully in balancing up the rations. It will succeed almost anywhere that red clover will. Lime, drainage and humus will overcome most of the troubles and put the land in good shape for alfalfa. With a few acres of alfalfa on his farm the dairy farmer has made a long step forward.

One should strive to improve the standard feed crops before he looks about for new crops to take their places in the rations and the crop rotations. There is as much difference in the quality and value of home-grown foods as in the feeds of commerce, and it should be his aim to grow, harvest and feed these crops in the best condition. The crops should be grown on the farm to produce a class of feed to balance up the ration are the very ones needed to build soil fertility. In short, we must provide some kind of succulent food, reduce protein costs and increase the fertility of the soil. If we are to build up the soil and improve the rations we must grow better clover, alfalfa, corn, small grain and grasses.

This brings up another question. Our home-grown feeds are too bulky to produce the best results. There is a limit to the capacity of an animal to digest and assimilate bulky feeds. If we choke the machine we cut down its capacity. To reach the maximum digestive and assimilative capacity of the cows they must be furnished with proper quantities of fats, carbohydrates and protein and in about the proper proportions. The excessive amount of dry matter contained in all the standard feed crops renders it impossible without the use of protein concentrates, like cottonseed meal, linseed oil meal and gluten feeds, to reach the digestive and assimilative capacity of the cows and enable them to produce a maximum flow of milk.

On breeding farms where cows are fed for advanced registry records it is desirable to grow root crops, such as mangels, carrots and sugar beets, to furnish succulence and variety to the rations. Experienced feeders prize these crops highly because they act as a stimulant to the cow's digestive system and make it possible for her to consume more grain feed than is the case when her ration contains too much dry matter. A small plot of ground will suffice to produce all the roots needed for feeding for advanced registry records, and save trouble and expense of buying roots to feed when needed.

C. B. Ford.

Get a farm, young man, and raise good hogs.

The cattle are as quick about sizing up the driving qualities of the dog as is the small boy in testing the mettle of the young teacher. If they find that they can drive it the canine will have a sorry time of it.



EUROPE BUYS CONDENSED MILK.

HEAVY foreign orders for condensed milk have been placed in the New York market during the past week, and the entire trade has been one vast hum of industry ever since the removal of the export embargo two weeks ago. During the first week following the raising of the ban, export orders totalled more than 500,000 cases, valued at nearly \$4,000,000, and the sales during the week are said to have been nearly as large, making a total of 1,000,000 cases for the two weeks.

So far the demand has been chiefly for sweetened milk, but there is also some demand for the unsweetened. France has been the principal buyer, but England is taking some, and other countries in Continental Europe have also entered the field for supplies. Spot stocks of sweetened milk have been practically cleaned up, and most of the business booked in this commodity last week was on contract, for factories being sold up for several months ahead. Evaporated milk is meeting with a strong demand in cases where buyers cannot locate the sweetened. Prices have advanced sharply as the buying boom progressed.

KILLING OUR EXPORT BACON TRADE.

FOOD Controller G. H. Roberts, of Great Britain, is preparing a memorandum on the operations of the American packers in Britain for presentation to the economic section of the League of Nations committee at Paris.

The British Food Controller bases his action upon the report of the Federal Trade Commission submitted to congress last July. The allegations contained in that report apply to Britain as well, according to C. A. McCurdy, Parliamentary Secretary of the Food Ministry, in an interview.

In making his announcement before the London Labor Conference of the measures he is taking to protect British consumers, Mr. Roberts declared he proposed to release bacon from the Food Ministry's control so as to force the packers' prices down. A representative of Swift & Co. said:

"I do not see why Roberts is slamming the American meat producers for their bacon prices, when they were fixed by a joint allied commission and Mr. Hoover in Washington, a long time ago.

"The packers have been imposing only prices which Mr. Hoover himself determined, and which the Allies agreed to. When Mr. Hoover fixes a lower price the packers will abide by it."

Secretary McCurdy, speaking on behalf of Controller Roberts, who could not be reached, said:

"The British Controller, has just received from America the report of your Federal Trade Commission on the meat packing industry. The real question is, 'what answer are the trusts making to these allegations, for they include British as well as Americans.'"

Secretary McCurdy pointed out in the report the underlined passage:

"Blame should attach to them for operations abroad," and other specific references to foreign trade manipulation.

We not only need to develop a good working stomach on a calf, but a good eating heart. This cannot be done without pure air, sunlight and plenty of exercise.

SCHUMACHER SELF FEEDER

FEEDING BROOD SOWS FOR

Bigger, Stronger Litters and Bigger, Faster Growing Shoats

The care and feed given the sow from the time she is bred until she farrows and then, both sow and litter until weaning time, has much to do with the profits you make from your hogs. If your sows are fed and handled right, bigger, stronger litters are sure to come. The pigs will thrive better, grow vigorously right up to weaning time. Then, if given the proper growing feed, pasture and exercise, bigger frames, heavier bone and better finish, with bigger profits, will result.

SCHUMACHER FEED

and the SCHUMACHER SELF-FEEDING PLAN have proven to thousands of hog men and farmers to be an ideal way of raising hogs. First, SCHUMACHER FEED, fed in self-feeders with tankage, puts brood sows in ideal farrowing condition. Second, it gives the little pigs the right start through the mother. Third, after weaning it develops bigger bone and frames, and with the addition of corn and tankage it will put on fat quicker and cheaper than anything you ever used.

Write for This Interesting Hog Book

We cannot tell you all about this famous hog feed in this space, but will gladly mail you a copy of our New Hog Book. It tells how we fed and raised the Pen of Champion Barrows which won at the International; also the National Swine Show, the Illinois State Fair and the Indiana Fair. Write for a copy today. It is full of valuable hog raising information. Ask your dealer about SCHUMACHER FEED. If he can't supply you, let us know.

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 Send me your book "Big Pigs and How to Raise Them."
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Blatchford's Calf Meal

In the United States alone more than 1,000,000 calves were raised on Blatchford's Calf Meal last year. It puts calves through to a healthy, vigorous, early maturity at less than one-half the cost of milk. Write for booklet: "How to Raise Calves on Little or No Milk." We'll send it free, also name of your nearest dealer.
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Also have four extra fine Angus bulls of serviceable age. "BEST OF BREEDING" and at a price to sell.
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 W. E. SCRIPPS, Prop. SIDNEY SMITH, Supt.

WOODCOTE ANGUS Established in 1900. IROJAN-ERICAS and BLACKBIRDS (Blackcaps). Breeders and feeders of many International winners. Choice Young Bulls For Sale
 WOODCOTE STOCK FARM, Ionia, Mich.

Registered Aberdeen Angus. Seven bulls from eight to twelve months old. Plenty of size best of breeding. Prices reasonable. Come and see them. Inquire F. J. WILBER, Ohio, Mich.
 Wanted One registered Aberdeen Angus bull calf two or four weeks old. State price. C. H. BETTES, R. 1, Sparta, Mich.

Cloverly Angus Bred cows, heifers and bull calves of good breeding.
 GEO. HATHAWAY & SON, Ovid, Mich.

Bull calf: he is a right good individual and well bred. Will sell for \$100; have him recorded in buyer's name.
 JOHN D. WILEY, Schoolcraft, Mich.

\$500 WILL BUY two Registered Guernsey Cows, \$50 one bull calf.
 GEO. N. CRAWFORD, Holton, Mich.

For Sale Registered Guernsey Bull Gov. Chene Golden Noble & May Rose breeding. Tubercular tested by state Halcyon Sequel born 1912. Great grand son of Gov. Chene sires and grand sires are all A. R. breeding. Price \$250 F.O.B. Avondales Hope born Mar. 25, 1917. Sire Halcyon Sequel Dam Gertrude of Halcyon. Farm price \$151 F.O.B. Luella's Duke of Avondale born Jan. 1, 1918 Sire Lord Sunrise Dam Luella's Maid. Prices \$100 F.O.B. Avondales Hero born Jan. 10, 1918. Sire Halcyon Sequel Dam Serena of Pittsfield. Price \$200 F.O.B. Avondales Joy born Feb. 8, 1918. Sire Halcyon Sequel Dam Wrinkle of Pittsfield. Price \$125 F.O.B. Avondales Mark born Apr. 9, 1918. Sire Lord Sunrise, Dam Popular Polly. Price \$100 F.O.B. Come and look our herd over.
 AVONDALE STOCK FARM, Wayne, Mich.

GET GUERNSEYS 1695 lbs. more milk and 93 lbs. more butterfat is the average production over dams of the first six heifers sired by a purebred Guernsey bull owned by a Maryland Bull Association. A Guernsey bull can likewise increase the production as well as the value of your herd. Write a postal now for our free booklet, "The Grade Guernsey."
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Additional Stock Ads. on Page 397

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And Equip It Complete

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STAR Service represents more than usual barn-plan service. The STAR Master Barn Designers give you not only the benefits of years of experience in barn building but the latest methods of construction.

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Every one knows that STAR Equipment is the incomparable quality line. STAR Equipment fits any barn in which stock is kept. It is built entirely independent of STAR Barn Plans. You can use any equipment in a STAR planned barn—you can use STAR Equipment with any barn plan. But you'll get better results by having your barn STAR Planned and STAR Equipped.

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We have just prepared a number of STAR Barn Plans based on the newest methods of barn construction. These are entirely new plans—not one of them over a few months old. Send us your name and let us mail them to you—FREE. STAR Barn-Plan Service is "different." It saves you money in building. It will give you the latest and best known labor-saving methods in barn work. It's free—yours for the asking. Write and let us tell you more about it.

Ask for Catalog No. 122

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Barn Equipment
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Door Hangers
Garage Equipment
Coaster Wagons
Tank Heaters and
Other Farm
Specialties

Poor Sires Cut Profits

(Continued from page 363).

so infirm that the owners would not call them grades were called scrubs.

The breeders in the county realized that they must back the move in every way possible if it was to succeed. They knew that they must make the owners of grade and scrub bulls feel that they were willing to meet them more than half way when it came to getting pure-bred bulls.

After much discussion and planning the breeders of pure-bred dairy cattle in the county decided to offer to trade pure-bred bull calves for grade and scrub bulls of breeding age. Every breeder in the county was solicited and asked to furnish one pure-bred bull calf over three months of age and take in exchange for him a grade or scrub of breeding age. Only two breeders refused to do this. The response was generally good. One breeder offered his entire calf crop of the season for these trades.

In addition to offering bulls for trades the breeders offered to sell bulls from ten to twenty-five dollars cheaper to men in the county than to men

conditions in the county and in the particular town in which the meeting was being held were shown. The offer to trade pure-breds for grades and scrubs was made and the names of all owners of grade and scrub bulls present obtained.

Following the holding of the meetings the county agent made visits to the farms of all owners of inferior bulls. The trade proposition was talked over and in many instances the men were referred to owners of pure-breds with whom trades could be made. In some cases the men were taken to see the pure-breds and the trade arranged for immediately.

Five weeks were spent at this work during the summer of 1918. During that time forty-three pure-bred bulls were placed in the county in three townships. Thirty-eight of these went into herds which never had a pure-bred before. The active campaign stopped then as the county agent went into army service.

The number of trades made was not large. Many men who refused to trade or even consider such a proposition sold their scrubs and bought pure-breds. The real value of the trading part of the work is its effect on the owner of a grade or scrub bull. Go to him with a straight offer of a pure-bred calf in exchange for his scrub with no difference to pay and he has no excuse for not owning a pure-bred. The opportunity has been given him and from then on he must get in the game and buy a pure-bred bull or voluntarily take his place as a scrub farmer. This latter most people refuse to do.

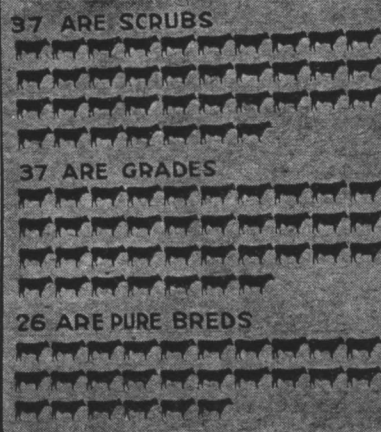
Only one condition is attached to the trade. This is that the man who gets him must agree to use him in his herd for at least two years. In case of necessity the men were allowed to keep the grade or scrub until the pure-bred was old enough for service.

How can you do it? This question is asked continually and along with it is another. What does the pure-bred breeder get out of it? The only thing that made it possible for us to make the offer was the fact that the breeders of pure-bred cattle were back of the campaign. The pure-bred breeder gets a scrub bull for his pure-bred calf. This he immediately sells for beef. In this way he gets something for his calf. He does not get what the calf is worth. He may get only half the real value of the calf. He has, however, placed one more pure-bred bull in his own community; he has started another man toward better cattle and bigger cream checks; he has furthered the interests of his favorite breed and he has laid the foundation for future sales of pure-bred stock. In brief he has helped his community and done some very good long-time advertising.

Fond du Lac county showed the way last year. Twenty Wisconsin counties are already organized for this work and others are rapidly falling into line. Many are busy taking a cattle census and are finding out just how they stand. It is a great campaign and will require time for its completing. It may take several years to entirely clean up a county but it will be worth all the time and effort that it costs.

The results of this work will not be felt immediately. Five years, ten years hence, then, is when the real results will begin to show. Who can doubt but what this great work will make Wisconsin what its promoters hope—the greatest dairy state in the Union.

The following illustration shows the percentages of pure bred, grade and scrub bulls used on the farms of Fond du Lac County, Wis.



from outside. They also offered to allow one year's time in which to pay for bulls.

The next problem was how to let the owners of grades and scrubs know about the generous offer they proposed to make. From the cattle census taken the names of more than one thousand one-hundred owners of inferior bulls were obtained. A letter was sent out to all of these in which the offer was made. Those interested were requested to write and they would be called on to talk over the proposition.

Just four answers were received from the eleven hundred sent out. It really looked as if the farmers did not want to own pure-bred bulls. The four men who showed enough interest to answer were attended to, however, and a start was made.

Meetings were next resorted to as a means of taking the message of better bulls to the farmers themselves. The plan followed was to concentrate the work on a single township at a time. Four meetings were held in different parts of the town on succeeding nights. School houses or halls in the smaller towns were found to be the best places to hold these meetings. The larger villages and cities were avoided. At these meetings the advantages to be gained from the use of pure-bred bulls were pointed out and explained. Maps and charts showing graphically the

With the Famous Ladder-Hinge Door

Don't be satisfied with any Silo that does not have the famous Ladder-Hinge Door. It is the only complete Ladder-Hinge Door made.

It Is Patented—No One Else Can Use It

The Ladder-Hinge Door patent has been upheld in the highest court and no other manufacturer can use it. It is the greatest invention ever applied to a silo.

Safe and easy—any child can operate. Door forms a perfect ladder, steps 15 inches apart. Door always in place—no lost doors. Lever Lock operated by one hand.

Keeps ensilage perfectly next to the door—no spoilage. Reduces freezing in winter and drying out in summer. Does not sag, bind or stick.

Lasco

Vitrified Tile Silo

Here you have the combination you have been waiting for—a beautiful, permanent tile silo, built of Lasco Tile and equipped with the original and only successful Ladder-Hinge Door.

Lasco Tile are made with dead air spaces that break every straight line between the tile, preventing frost from getting through. It has all the advantages of any good tile, with the no-frost feature added, and when equipped with the Famous Ladder-Hinge Door, it makes a perfect Silo.

The Man Who Climbs the silo always votes for the Ladder-Hinge Door. It's safe.

The Hinge-Door has been used for years on the best stave silos and is well known to farmers. It is now possible to secure it on a Lasco Tile Silo.

The Lasco Tile Ladder-Hinge Door Silo gives strength, durability and convenience, yet it is no more expensive than other good silos. Write for full information. Agents wanted.

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Best Michigan northern oats, buy good seed and grow 80 to 100 bushel, per acre. Price 90c per bushel. Samples free. MAYERS PLANT NURSERY, Merrill, Mich.

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Car lots or less. YOUNG-RANDOLPH SEED CO. Owosso, Mich.

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Leader for half a century. Original double geared, self-governing windmill. Built for years of constant service. Send for FREE Booklet. STOVER MFG. & ENG. CO., 1631 Sanson Av., Freeport, Ill. Also Stover Engines, Pump Jacks, Feed Mills, etc.

It pays to make your own stock tonic, condition powder, etc.



Tix-Ton-Mix
Keeps away Worms
Germs and Ticks

For Cows
Herds,
Sow
Herds,
Ewe
Flocks

"Your Flocks and Herds Need It"

Order today, ask for booklet on "Nature and Care of Sheep"

Tix-Ton-Mix with your own salt or grain all year around keeps animals healthy. A \$5.00 box makes \$40.00 to \$60.00 worth of medicated salt or \$75.00 worth of "stock tonic" — saves you big money — A \$2.00 size box of **Tix-Ton-Mix** will medicate a barrel of salt or 900 lbs. of cereal feed. **Tix-Ton** is a powerful, non-poisonous, internal antiseptic and parasite exterminator. ("different from all others"). A standard product of true merit you can not afford to be without.

Manufactured only by
PARSONS CHEMICAL WORKS
Leona Park Farms Experiment Station, GRAND LEDGE, MICH.
"Aid for animal health is aid to a nation's wealth"

DUROC OPPORTUNITY

Michigan Breeders and Farmers prefer to buy Duroc Jerseys at private rather than public sale. For the first time in five years we are able to offer as many as 40 bred sows and gilts private. Same blood lines and bred to some prize winning boars as our sale stock. Prices are in keeping with the individuality and breeding of the offering, send for sale list. If you need a boar we have them.

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

OAKWOOD FARM

A few choice sows bred for Mar. and April farrow. Also Buff Plymouth Rock Cockerels at \$2.50 each.
RUSH BROS., Romeo, Mich.

DUROC-JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

DUROC JERSEYS

Gilts bred for June farrow of the heavy boned type also fall pigs either sex pairs not akin.
F. J. DHOOT, R. 1, Monroe, Mich.

Duroc bred gilts for March and April farrow with quality and size. Fall pigs both sexes not akin.
W. C. TAYLOR, Milan, Mich.

Duroc Jersey Sows, Large type, heavy boned, 1000 lb. herd boar.
JOS. SCHUELLER, Weldman, Mich.

Duroc Jerseys. A few choice gilts bred to Brookwater King Special 11467. (A full brother to Brookwater Lass D, the grand champion sow at the 1918 International). Carey U. Edmonds, Hastings, Mich.

THE WORLD'S CHAMPION

big type O.I.C.S. Stock of all ages for sale. Herd headed by Calloway Edd, the World's Champion O.I.C. boar assisted by C. C. Schoonmaker, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. C. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Grandell's prize hogs, Cass City, Michigan.

Breed The Best
THE WORLD NEEDS LARGE
FAT HOGS

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

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

U. S. Government Inspected
We have bred the O. I. C. Hogs since 1868 and have never lost a hog with cholera or any other contagious disease.

WRITE TODAY FOR FREE BOOK
"The Hog from Birth to Sale"
THE L. B. SILVER CO.
196 Heights Temple Bldg.
CLEVELAND, OHIO

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 a fine early developer — ready for market at any season old. Write for my plan — More Money from Hogs.
G. S. BENJAMIN, R. F. D. 10, Portland, Michigan.

Shadowland Farm

O. I. C.'s

Bred Gilts 200 to 300 lbs. from prize winning stock. A few fall yearlings and 2 yr. old sows, big type, growthy boars of all ages, guaranteed as breeders. Everything shipped C. O. D. Express paid and registered in buyers name. J. CARL JEWETT, Mason, Mich.

O. I. C. and Chester White Swine
Strictly Big Type with QUALITY. I am sold out of everything but fall pigs. These pigs are as good — and I think better than any I ever bred. I am one of the oldest breeders of Big Type in the U. S.
NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

Chesters Gilts bred for March, April and May farrow from mature stock of the large prolific kind. Satisfaction guaranteed.
F. W. ALEXANDER, Vassar, Mich.

O. I. C. BRED GILTS
all sold. Have some good last fall boars.
OTTO S. SCHULZE, Nashville, Mich.

O. I. C.'s big type serviceable boars. Yearling sows and gilts bred for spring farrow.
G. P. ANDREWS, Danville, Mich.

O. I. C. Boar, 14 months old. Large fall pigs of either sex.
C. J. THOMPSON, Rockford, Mich.

O. I. C. Gilts bred for summer farrow and a few fall boars plus any of them good enough to ship. C. O. D.
F. C. BURGESS, R. 3, Mason, Mich.

O. I. C. Gilts to farrow in March and April. Also fall pigs either sex.
CLOVER LEAF STOCK FARM, Monroe, Mich.

FOR 25 YEARS
This establishment has been head quarters for Big Type Poland Chinas. We have a nice lot of boars and sows of strictly big type breeding at very low price. Let me know what you want. Bell phone.
JNO. C. BUTLER, Portland, Mich.

Additional Stock Ads on Page 399

CATTLE

Fine Reg. Guernsey

7 yr. old cow and her heifer calf 1 mo. old right in every way except — just one quarter — \$300 buys this pair
J. M. WILLIAMS, North Adams, Mich.

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

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

5 Register Guernsey cows A. R. Record, cheap if taken soon — write
JOHN EBELS, R. 2, Holland, Mich.

Guernseys Grade Heifer Calves Registered Bull Calves: write your requirements
WALTER PHIPPS FARM, 30 Alfred St. Detroit, Mich.

Registered Guernseys — Cows, bull ready for service April, bull calves, best of breeding. Write for particulars and prices. A. M. Smith, Lake City, Mich.

Holstein Herd
Averages 18,812 lbs. Milk
Near Big Bay, Mich. is a herd of thirteen pure bred Holsteins. Last year the average yield per cow of this herd was 18,821 lbs. of milk and 638.57 of fat.
Do you realize the money there is in such cows? It is estimated that the average annual yield of all cows in this country is under 4,000 lbs. These thirteen cows produce as much milk as sixty-two cows of the 4,000-lb. class. It would require twenty-eight cows giving 8,500 lbs. to equal their output. Why feed, milk and shelter any more cows than you need to produce the milk you require?

If interested in
HOLSTEIN CATTLE
Send for our booklets — they contain much valuable information.
HOLSTEIN FRIESIAN ASSOCIATION OF AMERICA, Box 164, Brattleboro, Vt.

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.

\$550 Buys six high grade unregistered Holstein heifers 2 yrs. old freshen in spring. Well marked, bred to 33 lb. bull.
B. B. Reavy, Akron, 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.

"Winwood Herd"

REGISTERED
Holstein - Friesian Cattle
Sire in Service
FLINT MAPLECREST BOY

His sire is Maplecrest Korndyke Hengerveld. His three nearest dams each over 30 lbs. of butter in 7 days. His dam and granddam both made over 1200 lbs. of butter in one year. It is this yearly cow we are looking for to deliver the goods. Flint Maplecrest Boy's Dam is Gluck Vassar Bell, 30.57 lbs. of butter in 7 days and 121 lbs. in 30 days. Her butter fat test is 5.27. This looks about right to the man who goes to the creamery. We have bull calves from 2 weeks to 12 months old. From A. R. O. dams and sired by Flint Maplecrest Boy, which we will sell at a dairy farmers price breeding considered. Just think 40 more cows to freshen which means more bull calves. Let us know your wants. We will make terms on approved notes.

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

Registered and high grade Holsteins. Eight cows from three to eight yr. old sows. Fresh others to freshen in Feb. and Mar. from 20 lb. sires, others bred to a 30 lb. sire good dairy cows. Will sell one or the eight.
HENRY S. ROHLFS, R. 1, Akron, Mich.

Registered Holstein Bull calves from A. R. O. cows up to 29.32 lbs. butter in 7 days, grandsons of the \$50.00 bull.
O. H. GIDDINGS, Goblesville, Mich.

BULL CALVES

Sired by Maple Side Korndyke
No. 112849. The sire's dam at 2 1/2 years, granddam at 3 1/2 years, and great granddam have semi-official records averaging 842 lb. butter in 7 days. Dams of calves have A. R. O. records up to 19.23 lb. butter in 7 days. Write for breeding and prices.

ACELAND STOCK FARM
Three Rivers, Mich. Chas. Peters, Herdsman
C. L. BRODY, Owner Port Huron, Mich.

CLUNY STOCK FARM

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

Write us your wants.
R. BRUCE McPHERSON, Howell, Mich.

THE HOLSTEINS

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

\$6.86 above cost of feed for Feb. from milk fresh April 21, age 29 mo. test 4.5% gallon of Pontiac Milk 34.21 lb. due May 20. Son of Maple Crest Korn. Heng. \$300 terms. M. L. McLAULIN, Redford, Mich.

Write for description and price of 5 Holstein bulls, born Sept. and later, 32 lb. sire, M. W. WILLARD & SONS, R. 2, Grande Rapids, Mich.

Registered Holstein bull calf. Born Dec. 13 1918, mostly white. Dam dan. of a 24.13 lb. cow, write for price. Delivered. I have another yearling.
E. E. STURGIS, St. Johns, Mich.

For Sale at a bargain. A few young bull calves from high producing stock. Buy one of these fine calves and raise a bull for next fall.
F. LOOMIS, Owosso, 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.

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

Reg. Holstein Bull Calves dandies at \$50 reg. and del.
J. ROBERT HICKS, St. Johns, Mich.

For Sale Reg. Holstein bull, 17 months old, from a 30.5 lb. sire & a 27.13 lb. dam.
T. B. GILLES, Howell, Mich.

Maple Lane R. of M. Jersey herd. Bulls, bull calves and heifer calves sired by a nephew of the new World's Champion, Sophie's Agnes. Also H. H. Cockerels, both combs. Irwin Fox, Allegan, Mich.

Hillside Farm Jerseys, offer 3 yearling bulls, backed by tested dams, and sired by a double grandson of Royal Majesty, first prize & junior champion at Mich. State Fair, good individuals, C. & O. Deane, Tipton, Mich.

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

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

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

The Wildwood Jersey Farm.
Bulls for sale by Majesty's Oxford, Fox 13214 and Eminent Lady's Majesty 14084, and out of R. of M. Majesty dams.
ALVIN BALDEN, Capac, Mich.

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

Lakewood Herefords Strong in the blood of that breeds true to type and predominates the leading show and sale rings of the country. A few high class young bulls for sale. Come see, and compare. Farm adjoins town. City Phone 29.
E. J. TAYLOR, Fremont, Mich.

Herefords

5 Bulls 9 to 14 months old Prince Donald, Farmer and Perfection Fairfax breeding.

ALLEN BROS., Paw Paw, Mich.

Michigan Herefords

REPEATERS AND PERFECTIONS
Young stock for sale at all times.
80 head in herd, all ages.

Farm 5 miles south of Ionia. Visitors welcome. JAY HARWOOD, Ionia, Mich.

CITIZENS TELEPHONE 122-4
Buy a Hereford Sire Improve your Stock

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

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

BIDWELL SHORTHORNS

Registered bulls, cows and heifers Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. 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.

Richland Farms

Shorthorns.

Home of the Mich. Champions. We have just purchased the entire herd of Scotch cattle belonging to the Estate of the late A. D. Flintom, Kansas City, Mo. About Feb. 1st we will offer a choice lot of young bulls for sale.

C. H. PRESCOTT & SONS,
Office at Tawas City, Mich. Farms at Prescott, Mich.

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

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

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archibald Hope, Avondale, Maxwell Sifton and White Hall Sifton by the Cheola Co. Shorthorn Breeders Ass. JOHN SCHMIDT, Sec. Reed City, Mich.

Shorthorn Bulls ready for service of the choicest breeding. Write me you want.
A. A. PATTULLO, R. 4, Deckerville, Mich.

Scotch Shorthorn. A fine lot of young bulls for sale. Phone Pontiac 7153 or Orion Exchange. John Lessiter & Sons, R. 1, Clarkston, Mich.

For Sale 2 yr. old Scotch herd bull sired by Valiant 35721, a Lespedeza Farm product.
LAURENCE P. OTTO, Charlotte, Mich.

Five Shorthorn Bulls ready for service. One herd bull 4 years old.
W. F. BARR, Aloha, Mich.

Stockers & Feeders For Sale
150 Shorthorn Steers ave. 1065 lbs.
120 Hereford Steers ave. 950 lbs.
2 cars of yearling Herefords ave. 750 lbs.
2 cars of Shorthorn yearlings reds and roans. These steers are dehorned and in good flesh. Wapello Co. Ia. is noted for its good cattle. Write
JOHN CARROW, R. 3, Ottumwa, Ia.

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

CLARADALE Milking Shorthorns and Large type Berkshires hogs, young bulls ready for service at reasonable prices, white and roans the ideal farm cow is for butterfat, beef and milk. We have them, write
F. W. JOHNSON & SONS, Custer, Mich., Drawer 26.

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

Shorthorns Central Mich. Shorthorn Breeders Ass. offer 37 bulls all ages. If females for sale. Write.
Oscar Skinner, Sec., Gowen, Mich.

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

Shorthorns 100 head to select from. Write me your wants, price reasonable.
Wm. J. BELL, Rose City, Mich.

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

Milking Shorthorns Bulls only Clay bred.
O. M. YORK, Millington, Mich.

Cattle For Sale Stockers & feeders, from 500 to 1,000 lb. Write your wants.
ISAAC SHANSTROM, Fairfield, Iowa.

HOGS

Serviceable Berkshire Boars and White Leghorn Cockerels.
PRIMEVAL FARM, Osseo, Mich.

Big Growthy Berkshires 3 yearling boars, registered.
W. H. EVERY, Manchester, Mich.

DUROC

Bred sows and last fall boars. State Fair Champions and winners. Down to date breeding and correct type. Orion's Fancy King heads herd.
NEWTON BARNHART, St. Johns, Mich.

Registered Duroc Gilts

Descendants of the leading strains: Cherry King, Defender, King of Cols. The Professor, all bred to Col. Defender the 25th. No. 123705, his sire, Pat's Premier Col. T. No. 8022. Dam, Royal Defender No. 231530, one of the most promising herd boars in Michigan. Prices reasonable. Write for prices and further information.
THE JENNINGS FARMS, R. 1, Bailey, Mich.

LATEST MARKET REPORTS

SECOND EDITION

The markets in this edition were revised and corrected Thursday afternoon, March 6.

WHEAT.

A quiet trade prevails in wheat circles although the visible supply during the past week decreased 2,987,000 bu. There is need of this grain in Europe and active buying on the part of Great Britain owing to danger of a general strike is reported. The growing crop in the United States is somewhat threatened by freezing and thawing and by lack of moisture in a few states. Flour is higher but wheat bran is selling at reduced figures. No. 2 red wheat was quoted at \$2.17 on the local market one year ago. Present Detroit prices are:

No. 2 red	\$2.30
No. 2 mixed	2.28
No. 2 white	2.28

CORN.

Since Monday corn prices have advanced. The news is generally bullish. Farmers are not selling where they have sufficient live stock to consume their holdings. The delay in fixing hog prices for March has kept dealers from buying corn as freely as they otherwise would. Strikes in Argentine continue and 180 ships are tied up in the ports of that country. This is forcing the United Kingdom and continental Europe to come to North America for grain supplies. The visible supply of corn for the United States decreased 749,000 bushels. Detroit prices are:

No. 3 corn	\$1.35
No. 3 yellow	1.40
No. 4 yellow	1.35
No. 5 yellow	1.32
No. 3 white	1.38

Chicago.—The dealers who are short of corn are getting anxious because of small receipts and lack of hope of relief from Argentine. Prices are higher in Chicago as follows: No. 3 yellow \$1.36@1.37; No. 4 yellow \$1.34@1.35; May corn \$1.29½; July, \$1.24½.

OATS.

Small receipts and a good demand have boosted oat prices, with the feeling firm at the advance. Prices in Chicago, show improvement, with standard oats quoted there at 60½¢, 61½¢, and No. 3 white at 59½¢@60½¢. At Detroit prices are slightly lower, owing to the absence of buyers. These prices are:

Standard	.62
No. 3 white	61½
No. 4 white	60½

RYE.

Values have improved with a fair demand for shipping. On the local market cash No. 2 is quoted at \$1.44 per bushel, an advance of 4c during the past week.

BARLEY.

There is very little doing in this market and values are scarcely holding their own. Cash No. 3 is quoted at \$1.85; No. 4 at \$1.80 per cwt.

BEANS.

The recent announcement that the government would buy 350 cars of pea beans in Michigan at \$9.25, and 100 cars in California at \$8.50 gave the market a temporary boost in jobbing circles. As shown on the first page of this issue, these prices have not been reflected in the quotations being offered our growers. The New York market shows an advance of about 50c for the week, with choice pea beans now quoted at \$7.75@8 per cwt. and common to fair at \$6.50@7.50. The same quotations prevail for mediums. The prices in Chicago are somewhat improved but there appears to be no great activity. The demand is largely confined to fancy hand-picked, while most of the offerings do not appear to be of this grade. California stock is reported to be "off" to about the same degree as Michigan stock was a year ago. The Chicago dealers are paying \$7@7.35 for choice to fancy hand-picked pea beans. Detroit quotations have declined 50c from the high point reached following the announcement of the government's purchase. The quotation here is \$7.50 per cwt.

FEEDS.

Mill feeds are lower and the other grades about steady as follows: Bran \$48; standard middlings \$44; fine mid-

dlings \$45; coarse corn meal \$56; cracked corn \$56; chopped feed \$48.50 per ton in 100-lb. sacks to jobbers.

HAY.

The hay market is higher with supplies limited. Prices on the local market are: No. 1 timothy \$27.50@28; standard timothy \$26.50@27; No. 2 timothy \$25.50@26; No. 1 clover \$24.50@25.

Pittsburgh.—This market is stronger with an increased demand for clover grades. Quotations are: No. 1 timothy \$30@30.50; No. 2 timothy \$27.50@28.50; No. 1 light mixed \$28@29; No. 1 clover mixed \$28.50@29; No. 1 clover \$28@28.50.

SEEDS.

This trade is moderately active with prime red clover quoted here at \$25.20; March \$25; alsike \$17.50; timothy at \$4.65.

POTATOES.

A better feeling prevails in potato markets. Inquiries at producing centers show increased interest in the trade. Michigan growers are receiving from \$1@1.10 at warehouses for U. S. No. 1 in bulk. At Detroit this grade is selling at \$2.40@2.50 per 150-lb. sack; at Buffalo \$1.80 per cwt; at New York \$2.90@3 per 150-lb. sack; at Cincinnati \$1.80@1.90 per cwt; at Pitts-

burgh \$2.75@2.77½ per 150-lb. sack; at Columbus \$2.75@2.85; at Indianapolis \$1.70 per cwt; at Chicago \$1.70@1.75.

BUTTER.

Further advances have been made in butter prices since a week ago. Receipts are moderate and the demand good. Fresh creamery is selling at Detroit at 56c; at Chicago trade is higher with the range for creameries at 45@47c. In New York a firm trade prevails at 54½@59½c for creamery stock. The price at Philadelphia is 58½c for western offerings.

EGGS.

Although the trade was a little weak at the opening Monday, prices are above those quoted a week ago. Fresh firsts are jobbing at Detroit at 40½c and extra firsts in new cases at 41½c. At Chicago prices rule lower with firsts at 39½c; ordinary firsts 38½@38¾c. Eggs are higher in Philadelphia, western extra firsts and firsts being quoted at \$12.90@13.05 per case.

POULTRY.

The local poultry market is active with quotations for live as follows: No. 1 springs 32@33c; small springs 30@31c; hens 34@35c; small hens and Leghorns 32@33c; roosters 23@24c; geese 24@25c; ducks 36@37c; turkeys 35@36c.

GRAND RAPIDS

The recent government order placed in Michigan the past week for beans, had the effect to advance the paying price to growers to \$6 per cwt in this section of the state; firm at that price. The demand for onions for shipment abroad has had the effect to advance prices in this section. Jobbers quote them at \$3.50 per cwt. sacked. Demand for potatoes is moderate and deliveries light. Price to growers steady at \$1@1.10 per cwt. Government agent reports total shipment from Michigan of 1918 crop so far is 5,724 cars; last year it was 5,042.

HOG GUARANTEE IS UP TO PRESIDENT.

The present minimum price of \$17.50 per hundred pounds for hogs, which expired at midnight Feb. 28, will be continued until a decision is made by President Wilson regarding the existing embargoes on pork affecting neutrals and other countries. This statement was made today by the officials of the Food Administration.

NEWS OF THE WEEK.

(Continued from page 362). and social life.—The sixty-fifth congress will probably fail to enact army and navy measures carrying heavy appropriations.

Tuesday, March 4.

THE English Minister of War declares that it is absolutely essential that Europe safeguard itself against Bolshevik anarchy.—It is announced that within the week the territorial limits of European countries will be defined by the peace conference.—Three ship loads of American grain for Switzerland reach Genoa, Italy.—United States Senate goes on record as opposed to the present plan of a League of Nations.—The bill providing for tail lights on all vehicles fails to pass in the Michigan senate.

FOR SALE USED MACHINERY

5-10 Avery tractor; 8-16 Avery tractor; 8-16 Bull tractor; 12-24 Waterloo Boy tractor; 25 H. P. I. H. C. tractor; 25-50 Avery tractor; 30-60 Huber tractor; 28 in., 30 in., 32 in. used grain threshers. Ask for our new catalog of GREYHOUND threshers and our complete used machinery list.

THE BANTING MANUFACTURING CO.
114 Superior Street
TOLEDO, OHIO.

GET-A-WITTE
At Reduced Price
Buy on your own terms. Save \$15 to \$200. Catalog FREE.
WITTE ENGINE WORKS
2190 Oakland Ave., Kansas City, Mo.
2190 Empire Bldg., Pittsburgh, Pa.

Guaranteed Garden and Flower Seeds. 10c packet with each order. Postage paid. Special prices to Market Gardeners and large growers. ALLEN'S SEED HOUSE, Geneva, Ohio.

Live Stock Market Service

Reports for Thursday, March 6th

BUFFALO.

Our market today sold pigs at \$18.25 and other hogs at \$19. The best calves brought \$19.60 and top calves reached \$21.50. The cattle trade continued steady at yesterday's prices.

CHICAGO.

Cattle. Receipts 10,500. Market opening very slow. Good choice beef and butcher cattle steady to strong. Others weak. Good to prime choice steers \$16.50@20; common to medium butchers \$10.50@16.50; heifers \$8@15.50; cows \$7.35@15; bologna bulls \$8.40@13.25; canners and cutters \$5.75@7.35; stockers and feeders good \$11.15@14.75; do medium \$8@11.15; veal calves \$17.50@18.

Hogs.

Receipts 20,000. Market opening slow. Closing from 5 to 10c lower. Bulk of sales \$18.15@18.35; heavy \$18.35@18.50; mixed and light \$18.25@18.40; packers hogs \$17.25@17.75; medium and heavy \$17.75@18.15; light bacon hogs \$17.75@18.25; pigs good to choice \$15.25@17.25; roughs \$16.75@17.25.

Sheep and Lambs.

Receipts 12,000. Market opening slow but steady. Choice to prime lambs \$19.60@19.75; medium and good lambs \$18.25@19.60; culls \$15.25@16.75; medium good and choice feeders \$16.70@18; choice yearlings \$18@18.25; medium and good yearlings \$14.75@18; wethers medium and good \$13.50@17.25.

Reports for Wednesday, March 5th

BUFFALO.

Cattle. Receipts 25 cars; best grades are strong, others slow; prime heavy strs \$17@18.50; best shipping steers \$14@15; medium shipping steers \$13@13.50; best native yearlings 950 to 1000 lbs. \$15@16; light native yearlings, good quality \$14@14.50; best handy steers \$13@14; fair to good kinds \$11@12; handy steers and heifers, mixed \$12@12.50; western heifers \$11.50@12.50; best fat cows \$10@11; butchering cows \$7.50@8.50; cutters \$7@8; canners \$5@6; fancy bulls \$10; butchering bulls \$9@10; common bulls \$6@7; best feeding steers 900 to 1000 lbs \$11@12; medium feeders \$9@10; stockers \$7.50@8; light common \$6.50@7.50; milkers and springers \$7.50@15.

Hogs.

Receipts 5 cars; market higher; heavy and yorkers, \$19; pigs, \$18.

Sheep and Lambs.

Receipts 60 cars; market higher; top lambs \$19.60; yearlings \$16@17; wethers \$14.50@15; ewes \$13@14.

Calves.

Market 50c higher; tops \$21.50; fair to good \$19@20; grass calves \$5.50@8.50.

CHICAGO.

Cattle. Only about 31,500 head have arrived during the first half of the week, comparing with 43,158 a week ago, including 6,500 today. In spite of the extremely small supplies, it has been a very uneven market, with Monday's average advance of 25 cents followed by a Tuesday decline of 25 to 50 cents for steers and a fall of 25 cents in butcher stock. The Wednesday market shows no marked change, although the choicer lots of cattle are a little higher on an average. The best price for the week was \$19.85 on Monday. 95 steers bringing that figure. The best sales

Tuesday and Wednesday were at \$19.50, three loads averaging 1,367 lbs., from Iowa, largely Angus steers, varying much in quality and weight, going at that price today. Sales from day to day are largely at \$14.50 to \$18, with fancy steers quotable up to \$20, none being offered. Inferior light weight steers sell at \$10 to \$12, with a few little canning steers selling around \$9.25 to \$9.50. Good weighty steers sell at \$18 and upward, with pretty fair steers of light weight going at \$17 and over. Butcher stock is in the usual demand at \$7.60 to \$16 for cows and heifers, although few sell over \$14.25. Canning cows and cutters are having a moderate sale at \$6.25 to \$7.50, bulls bringing \$7.50 to \$13.50, and stockers and feeders \$8.25 to \$15.25, but not many sell above \$13.50. Calves are firm and active at \$8 to \$18, good light vealers going at \$17.50 and over.

Hogs.

Big advances in prices are taking place every day under a good demand and meager offerings, only 7,450 hogs having arrived during the first half of the week, comparing with 161,509 for the same time last week. With estimated receipts Wednesday of 21,000 hogs and a sharp local and eastern demand, prices were 25 to 40 cents higher, buyers paying from \$18.35 to \$18.55 for the better class of heavy butchers and \$18.25 to \$18.45 for medium and light butchers, while heavy packers brought \$17.25 and upward. Light weights brought \$17.75 to \$18.35 and pigs sold at \$14 to \$17 mostly. After most of the hogs were sold much of the early advance was lost.

Sheep and Lambs.

Receipts for three days amount to only 23,700 head, comparing with 40,731 a week ago, the Wednesday run being about 7,000 head. Prices continue to rise, with choice lambs bringing \$19.75 today.

\$7.50 After 30 Days Free Trial

Belgian Melotte
International Prize Winner of Europe.

30 days' free trial—then, if satisfied, only \$7.50 and a few easy payments—AND—the wonderful Belgian Melotte Separator is yours.

No Money Down!

Catalog tells all—write.

Caution! U.S. Bull

shows that vibration of the bowl causes cream to rise.

The Melotte bowl is self-balancing. It cannot vibrate. Can't cause currents in cream. Can't remix cream with milk. The Melotte has won 264 International Prizes!

Books FREE!

"Profitable Dairying," a practical, commonsense text book that every dairyman should have in his library by G. H. Benson. Tells how to feed and care for dairy cattle—how to make more money. FREE—along with latest Melotte catalog and details of our 15-year guarantee which is 100 per cent stronger than any other separator guarantee. Write TODAY.

The Melotte Separator, H. B. Babson, U.S. Mgr.

Dept. 431A, 2843 W. 19th Street, Chicago, Ill.

Runs so easily. bowl spins 25 minutes after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is porcelain lined.

CULOTTA & JULL

Eastern Market, Detroit, Mich.

We need your shipments of Poultry, Veal, Dressed Hogs, Live & Dressed Pigs, Eggs, Live Rabbits and Game. Highest prices possible obtained on arrival. We can handle your Potatoes, Onions, Apples, Cabbages and root crops, carlots or less. Your shipments will be appreciated and have our best care and attention, and you don't have to wait for your money. Reference Peninsular State Bank.

Mr. POULTRY FARMER:

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

GEO. R. ELDRIDGE CO.

494-18th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment.

Holmes, Stue Co., 445 Riopelle St.

Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank, Bradstreet. Detroit, Mich. Cad. 2375.

HAY

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

Wanted: Michigan 90 to 125 pound healthy pigs in ear lots. We buy them all year. Write Danville Stock Hog Co. Danville, Illinois.

HOGS.

O. I. C. Bred Gilts All Sold.

H. W. MANN, Dansville, Mich.

FRANCISCO FARMS

SHORTHORNS—POLAND CHINAS

Three choice heifers and a few young cows to offer. Also fine good gilts bred for late spring farrow. Prices are attractive.

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

Big Type Poland Chinas

A 400 lb. Aug. 23 yearling and a few 250 lb. Apr. gilts. Quality stuff, registered, and cholera immune. Bred for Mar. and Apr. farrow.

WESLEY HILE, R. 6, Ionia, Mich.

L. S. P. C. A few gilts bred for April & May farrow at bargain to close them out at once.

H. O. SWARTZ, Schoolcraft, Mich.

Big type P. C. fall boars the big prolific kind, their breeding traces to the best herd in Ill. Iowa & Neb.

C. E. GARNANT, Eaton Rapids, Mich.

Big type Poland Chinas. Spring gilts of the best of breeding. With quality from 1000 lb. sire's and 800 lb. dam's. Will be bred to a great son of the noted \$6000 Gertsdale Jones. Also fall pigs.

W. BREWBAKER & SONS, R. 5, Elsie, Mich.

P. C. bred gilts sold. For sale herd boar prospect 17 mo. old, wt. 600 lb. with quality, sire Buster Giant, 238593, dam Nemo L. 548940 an 800 lb. sow in flesh. Sire sold for \$1500, priced reasonable. Free Livery from Parma.

W. E. LIVINGSTON, Parma, Mich.

Big Poland Chinas with quality. For sale, summer and fall gilts, open or bred.

G. A. BAUMGARDNER, R. 2, Middleville, Mich.

Large Type P. C. boars all sold. Spring gilts and young litters sold, bred for March and April farrow. Free livery from Augusta.

W. J. Hagelshaw, Augusta, Mich.

Big Type P. C. boar and bred gilts. Choice Aug. pigs at a bargain.

A. A. WOOD & SON, Saline, Mich.

Big Type P. C. Choice bred sows from Iowa's greatest herds, the big bone-prolific kind with size and quality.

E. J. MATHEWSON, Buier Oak, Mich.

Big Type Poland Chinas, Spring boars all sold. Bred gilts ready for shipment. Inspection invited.

L. L. CHAMBERLAIN, Marcellus, Mich.

P. C. Bred Sows Large style best we ever owned. Satisfaction or no sale.

R. W. MILLS, Saline, Mich.

Mammoth Poland Chinas. Choice lot early fall pigs now ready to ship. Double Immune. Inquire Clyde Weaver, Ceresco, Mich.

Large type Poland China's bred gilts all sold. Fall pigs of either sex for sale. Sired by 500 lb. yearling.

A. A. FELDKAMP, Manchester, Mich.

MICH. Champion herd of Big Type P. C. Nothing for sale but fall pigs. Orders booked for spring pigs.

E. R. LEONARD, St. Louis, Mich.

Hampshire Hogs The International Grand Champion Hog of 1913, both sexes for sale. Spring deliveries booked now.

ELI SPRUNGER & SON, Saginaw, W. S., Mich.

Hampshires Boars at a bargain bred gilts all sold.

JOHN W. SNYDER, R. 4, St. Johns, Mich.

BRITISH ISSUE WOOL PRICES.

HERE are the "British Issue Prices" for wool which now mark the minimum prices for government auctions, translated in terms of our grades and United States currency. These prices are for scoured fleece wools of the Ohio type:

Choice unwashed delaine.....\$1.55
Average unwashed delaine.....1.51
Good or choice fine clothing.....1.43
Half-blood staple choice.....1.45
Half-blood staple average.....1.41
Half-blood clothing.....1.30
Three-eighths staple.....1.19
Three-eighths clothing.....1.12
One-quarter staple.....1.01
One-quarter clothing......94
Low quarter......86
Common and braid......74

At the sale of government wools held in Philadelphia on February 26, 3,500,000 pounds of fleece wools were offered and 3,185,833 pounds were sold at prices that ruled above the British issue prices. Some Michigan three-eighth staple that showed a shrinkage of forty-seven per cent brought 64c and a lot of three-eighths coming with the same percentage of shrinkage sold at the same figure. Another lot of three-eighth staple and shrinking forty-seven per cent changed hands at 65c.

THE NEW YORK PRODUCE MARKET.

Butter.—The tendency of the butter market has been upward this week and trading has been brisk and active practically every day. Jobbers bought freely and out of town buyers added to the general activity. In addition there was a considerable demand for the export trade, such demand being created by agents for the Scandinavian countries, especially Denmark, and some for France and England. About 8,000 tubs alone have been purchased to be shipped to Denmark. In consequence of all the demand values increased and all stocks have cleaned up well. While heretofore stocks of high-grade butter only have been free sellers, this week saw an active demand for all grades. The total increase in price since last week is approximately 2½c per pound. At the close yesterday established quotations were as follows: Extras 55@55½c; higher scoring than extras 56@56½c; firsts 49½@54½c; and seconds 46@49c.

Cheese.—The cheese market has developed a firmer tone during the week and while there has been no appreciable increase in price the tendency is upward. The increase in make in eastern producing sections seems to be nil at present and there is active demand for all fresh Wisconsin make that can be obtained. Consumption has increased and there are indications that there will be a strong demand in the near future for export stock. As with butter, it is France and the Scandinavian countries that are in the market for cheese. Average run held cheese, which is in light supply, is selling at a range of 32@33c. Higher quality brings 34@36c; current make average run cheese is quoted from 30¼@31¼c, while specials bring about a half-cent more.

Eggs.—The usual unsettled condition of the egg market at this season of the year continues. Receipts have been heavy and while there has been an active demand both locally and from out of town trade stocks have accumulated. There has been some demand for eggs from England but values are falling in that country and no dependence can be placed on that market. Ten cars of Chinese eggs were received during the week. The fore part of the week, because of the reports of colder weather in the west, caused a strengthened market, but as receipts continued large the week closes with the condition barely steady. Fresh gathered firsts are quoted at 41½@43c; extra firsts 43½@44c; extras 44½@45c.

Live Poultry.—Because of increased receipts of fowls during the week values have fallen. Chickens, while receipts have been light, are weaker. Old roosters have also declined in price. Fowls are quoted at 35@36c; chickens 28@32c; old roosters 24c; turkeys are selling at 32@40c; ducks 40c; geese 21@22c.

Domestic wools sold quite satisfactorily at the Boston sale held February 21, where 600,000 pounds of delaines were offered. Among these offerings were some Michigan stock which went over the block at from 58@70c. One 17,155-pound lot of Michigan three-eighths blood brought 62c; another of 25,010 pounds with some Indiana mixed sold at 58c.

Form 1206

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NEWCOMB CARLTON, PRESIDENT

GEORGE W. ATKINS, FIRST VICE-PRESIDENT

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W. E. SCRIPPS

DETROIT NEWS, DETROIT, MICH.

SCOTTISH FARMER, FEB. 8, SAYS "EDGAR'S", Sired by YOUR "EDGAR OF DALMENY" WAS CHAMPION OF PERTH BULL SALES AND SOLD FOR 2100 GUINEAS, TEN THOUSAND FIVE HUNDRED EIGHTY FOUR DOLLARS. THREE OTHER SONS OF "EDGAR'S" AVERAGED 822 POUNDS 20 SHILLINGS OR OVER FIVE THOUSAND DOLLARS. THIS OUGHT TO MAKE "EDGAR'S" CALF CROP MIGHTY EXCLUSIVE AND PUT YOUR SIRE IN A CLASS BY HIMSELF.

HIGGINS

AMERICAN ABERDEEN ANGUS BREEDERS ASS'N

THIS IS A WORLD'S RECORD

Just think of one calf less than one year old bringing this price of \$10,584.00, which is undoubtedly the highest price ever paid for an Angus bull in Scotland or this country.

WE HAVE THE "DADDIE"

MR. SCRIPPS' strongest desire, when he entered the Aberdeen-Angus business was to have a world-beating bull, and with this object in view imported from Scotland, in the spring of 1918, "EDGAR OF DALMENY," purchased from Mr. J. F. Cummings and bred by the Earl of Rosebury, owner of the Dalmeny Estate, in Edinborough, Scotland.

"EDGAR OF DALMENY"

is the only Angus bull that was imported during submarine warfare times. We have some 50 head of the highest grade Blackcaps, Blackbirds, Queen Mothers, Ericas, Prides and K Prides, bred to "EDGAR" and many others that are the sons and daughters of BLACK MONARCH III, three times Grand Champion at the Michigan State Fair.

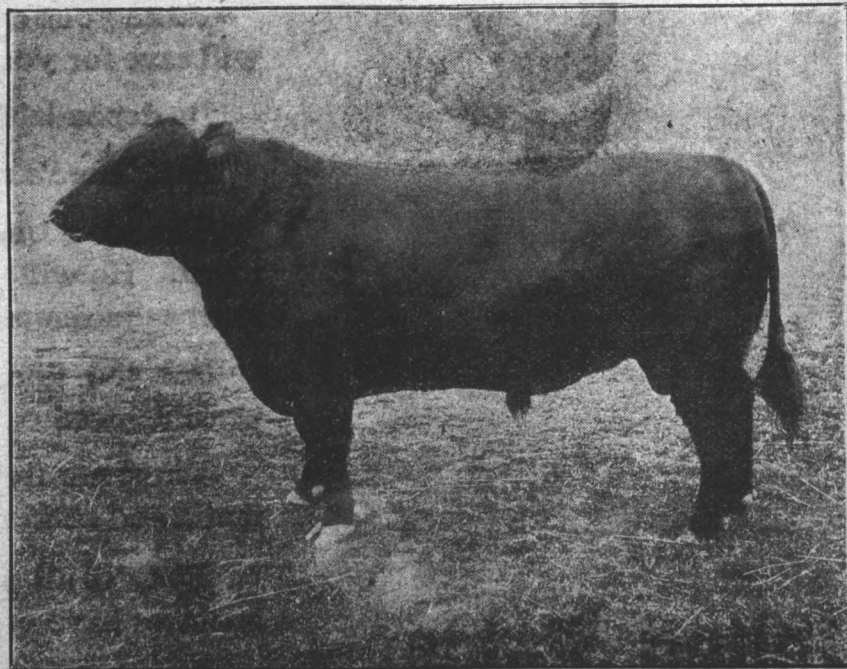
DO YOU NOT THINK, THEREFORE, THAT WILDWOOD FARMS IS IN THE POSITION TO SUPPLY YOUR NEEDS, WHETHER FOR A BULL ALONE OR FOR A FOUNDATION HERD?

WILL WELCOME CORRESPONDENCE

WILDWOOD FARMS
ORION, MICHIGAN

W. E. SCRIPPS, Prop.

SIDNEY SMITH, Supt.



"EDGAR OF DALMENY"
MICHIGAN'S GRAND CHAMPION BULL

And winner in 2 year old class at INTERNATIONAL, CHICAGO, 1918. His first calf was sold recently at the Perth Bull Sale for the record price of \$10,584.00. The highest price ever paid for an Angus bull in the United States or Scotland. Three other calves of his sold for an average of over \$5,000.00 each.



Make Your Car Help

America is asking for a Victory Harvest this year.

Every country's short of everything. You never had such an eager market. Every additional bushel you can make your fields produce means just that much more in the bank for you.

Make your car help. Think of the time, energy and good, hard cash it will save for you! Think of the speed it will put into those trips to town.

Its dependable service means a lot to you.

And there's no such thing unless you give it good tires to travel on.

There's a United States Sales and Service Depot dealer in the nearest town. He will gladly point out the United States Tires that will meet your requirements to perfection.

For the line of United States Tires includes tires to meet any possible need.

There are five different types for passenger cars as well as both pneumatic and solid tires for trucks.

They're all good tires—the best our seventy-six years in the rubber business have taught us to make.

Once you discover what they mean to your car—their wonderful dependability, their real goodness—you'll stick to United States Tires just as tens of thousands of other farmers are doing right now.

Try it and see. Ask our Sales and Service Depot to help you.

**United States
Tires
are Good Tires**