

MICHIGAN FARMER

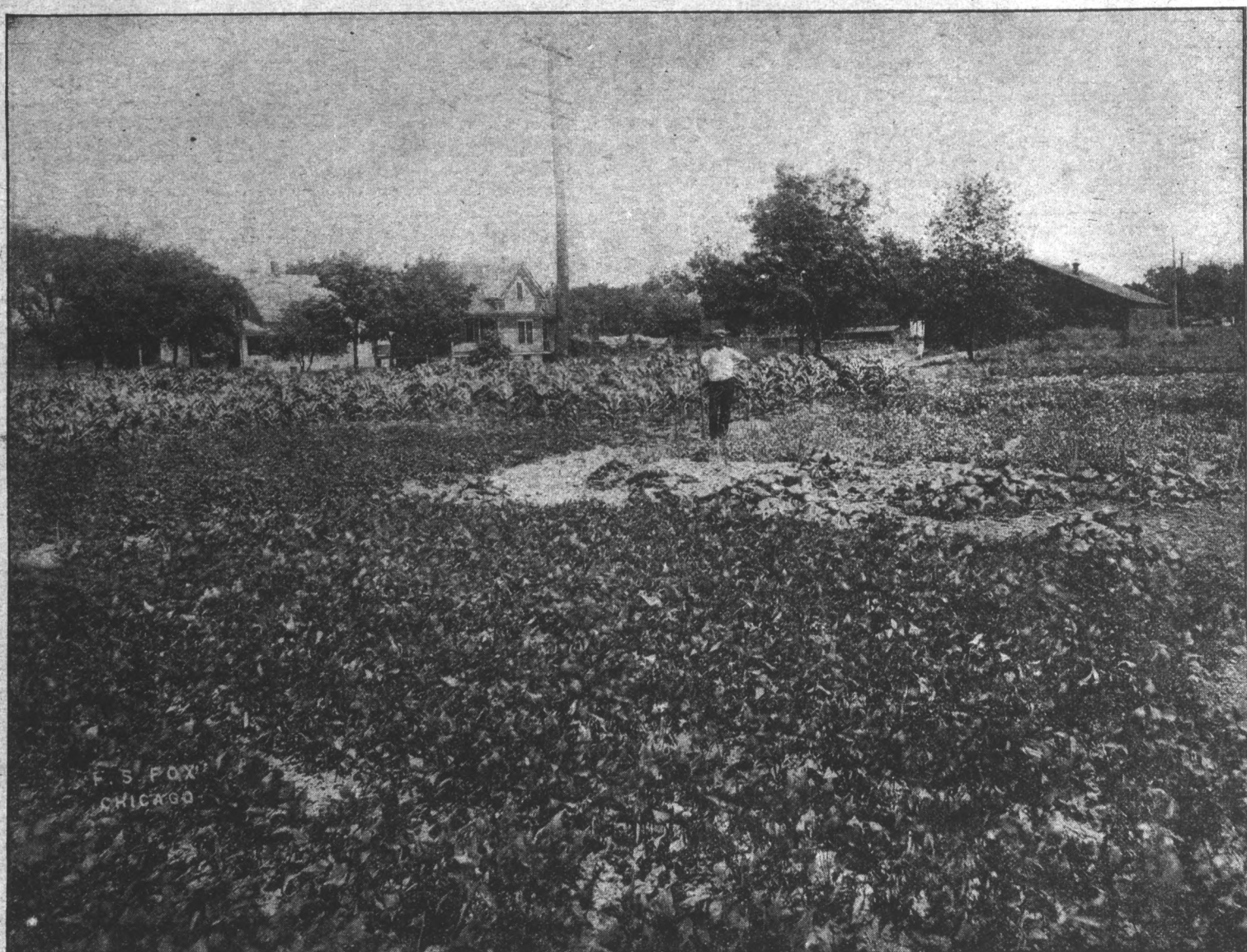
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Sound Minds and Healthy Bodies

Perhaps nothing has done so much to hasten the time when mind and body of country children will both be adequately cared for as the development of boys and girls club work. This is a phase of rural education which it is high time we put on some methodic basis. The first in importance, though many times the last to be considered, is the problem—how to decide which of the various projects concerns them most, or in other words make a careful appraisal of the relative values of knowledges. The old method of presenting truths in the

abstract has been falling out of use. Club work presents them in the concrete. Of the many changes which this work has brought about the most significant is the fact that boys and girls find the acquirement of knowledge pleasurable rather than painful. The rise of an appetite for any kind of information is evidence that the mind is ready to assimilate it; and sees the need of it for purposes of growth. The projects which bring mind and body in united action tend toward sound mental and healthy physical development.



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DETROIT, MARCH 12, 1921

CURRENT COMMENT

Federal Farm Loan Law Stands

EARLY last week the United States Supreme Court rendered a decision in the case involving the validity of the federal farm loan act, which has hampered the activities of the farm loan banks for many months. This test case was started by a stockholder of a trust company located in a middle western state, who sought an injunction to restrain his institution from investing its funds in federal farm loan bonds. In this petition the contention was made that the farm loan act was invalid, on the ground that congress had no authority under the constitution, either to establish banks or to exempt their securities from state taxation. The application for an injunction was denied by the lower court and the case was appealed to the federal supreme court. The opinion handed down by that body upheld the authority of the government to establish fiscal agencies and to provide for the exemption of their securities as a necessary protection. The opinion was practically unanimous, although two justices rendered a dissenting opinion in which they took exceptions to the court's assumption of jurisdiction, rather than to the findings in the decision.

This decision would seem to settle for all time the fight of the corporate money-lending interests against government aid to farmers in the financing of long-time loans on the amortization plan. As a result the federal farm loan board has announced an immediate issue of federal farm loan bonds to finance the many millions of dollars in loans which have been approved by the board, but held up for lack of available funds, pending the decision of the court of last resort in this test case.

This decision will open the way for renewed activities of the federal land banks, just as rapidly as the offerings of bonds are absorbed by the investing public. While the farm loan board has expressed the hope that the market may absorb farm loan bonds rapidly enough to keep pace with the long-time loan requirements of the farmers of the country, they point out that it is not safe to predict the result of a financial operation of this magnitude under present disturbed conditions. It is, however, a safe prediction that funds will begin to be available for the resumption of operations by the federal land banks at an early date, and that these tax-exempt bonds will find increasing favor with the investing

Grain Marketing Meetings

ARRANGEMENTS have been made by the Farmers' Marketing Committee of Seventeen for holding meetings in the various grain-producing states to be attended by representatives of farm organizations in each state interested in the cooperative marketing of grain.

These meetings have been called for the purpose of selecting delegates from each state to attend a conference to be held at the La Salle Hotel, Chicago, on April 6, where the proposition of ratifying the plan for a national grain marketing association will be taken up.

The Michigan meeting will be held March 17 at the Kerns Hotel, Lansing. Mr. L. J. Taber and C. V. Gregory, of the National Committee of Seventeen, will address the meeting. The delegates from the various marketing organizations in this state will select three delegates to the Chicago meeting. Two delegates are allotted to Michigan on the basis of the amount of grain marketed, and one delegate-at-large will be selected.

public with the resumption of more normal conditions.

These bonds, which will bear five per cent interest, should appeal strongly to small investors, particularly to farmers who have surplus funds to invest, both because of the safety of the security and the benefit which will accrue to other farmers who receive the funds so raised on long-time loans.

Mastering Farm Machinery

FARMERS who are interested in keeping their boys and girls on the farm would do well to give more study and attention to the use of better farm machinery and the introduction of modern conveniences in the home. There are too many people who seem to think that education is the solution of the problem, and they have in mind an education that will carry the boy and girl to the agricultural college and then back to the old farm, contented for the rest of their lives.

Boys and girls who are brought up on a farm where most of the hard work is done by hand and where but few modern conveniences are in use can see but little need of a technical

education that will teach them the great things to be done on the farm and how best to do them. Send boys and girls from such farms through the public school, on through high school, and then to the agricultural college and they will in all probability prepare themselves for some other profession than that of farming or agriculture in its true sense. On the other hand boys and girls whose impressions in early life were gained on a farm well-equipped with labor-saving machinery and in a home where modern conveniences were used will take an active interest in a technical training, in machinery they can control and become supreme master of; something which holds their interest in the mysteries of construction along with the power of accomplishment. It is the satisfaction that comes from driving a truck or tractor for work, or from doing some particularly fine piece of mechanical work in the tool shop that sends a thrill of power through the nervous system of the most phlegmatic boy. If hydro power on small power plants are at the disposal of farm homes the girls would find more interest in staying at home and attaching the motor to the sewing machine or churn than

Dairy Interests Fight Butter Tax Ruling

LARGE delegations of representatives of the dairy and creamery industry from the leading butter-producing states, were in attendance on the hearings before Internal Revenue Commissioner William M. Williams, relative to the proposed treasury ruling on so-called adulterated butter. The ruling declares that all "butter made from decomposed or rancid cream, which has been neutralized with chemicals before churning, or from cream which is high in acid and has a bad odor, and which has been chemically neutralized before churning is adulterated butter, and is subject to a tax as such at the rate of ten cents per pound, under the act of 1902." A statement issued from the treasury accompanying the announcement of the ruling, said in substance that all butter made from cream in which the acidity had been neutralized by the use of chemicals would be considered as coming within the ruling. Commissioner Williams, however, repudiated this press statement issued by the bureau of internal revenue, stating that he had never said anything of the kind, and assuring the creamerymen that the hearing was based solely upon the treasury decision as given above.

The creamery butter manufacturers and dairy interests generally in the middle west outside of Minnesota object to this ruling which, unless withdrawn will become effective April 1. Appearing for their constituents several senators and congressmen from

the middle west made vigorous protests against the ruling, saying that it was their belief that the ruling would destroy the creamery and dairy industry of several states, including Michigan, Iowa, Nebraska, Kansas, Oklahoma, Colorado and the southern states. Senator Hitchcock argued that if there was any doubt in the mind of the commissioner as to the intent of the law of 1902, the dairy industry was entitled to the benefit of the doubt. Representatives Haugen and Towner of Iowa, also spoke in opposition to the ruling.

Attorney F. L. Jones, representing the National Dairy Products Committee, had charge of the case for the opposition to the ruling. Among the opponents of the ruling were N. P. Hull, of Lansing, Michigan, representing the National Dairy Union; O. T. Goodwin, representing the Michigan Agricultural College; Milo D. Campbell, A. C. Anderson, R. F. Frary, and Mr. Shedd, all of this state.

It was the evident belief of Commissioner Williams that the lime water used in the process of neutralization was a deodorizer, tending to remove bad odors and flavors from spoiled cream. The expert witnesses in opposition to the ruling testified that the lime solution was not used as a deodorizer; that it had no effect in removing the odors and flavors from cream; that it was essential to pasteurization of cream high in acidity, and that its use in large sections of the country, especially in the great plains states and the south, where the dairy popula-

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they do in the home where these conveniences are not in use. Both boys and girls take an interest in doing good work and after they have acquired an education and training they find it more difficult than ever to return to the farm and take up the old order of things.

Farmers who are complaining about their boys and girls leaving the farm can do much to improve conditions by introducing labor-saving machinery for the farm and modern conveniences for the home. If they can have these things right at home the boys and girls are not going to the city to look for them. The strongest factor in the life of a boy or girl is the things they do because they have an education or the power at their command. The boy or girl on the farm given the mastery of machinery and modern conveniences, trained to efficiency in their management and use, made to feel that every operation in the conduct of the farm is something to call for the best technical and intellectual treatment of which they are capable, are going to feel that a kingdom lies at their feet waiting for its ruler.

News of the Week

Wednesday, March 2.

THE United States Senate in secret session adopts a resolution providing for negotiations with Great Britain and Japan for a reduction of naval armament.—On account of revolutionary activities in Russia, Lenin and Trotsky are reported to have fled from Moscow to Crimea.—The condition of democratic leader of the house, Champ Clark, is extremely grave.—The Fordney emergency tariff bill is delivered to President for his signature.—Five bathers are killed at Pensacola, Florida, when a seaplane dipped too close to the water.

Thursday, March 3.

THE anti-soviet movement in Russia is gaining much headway although it is reported that the soviet has not lost control.—Voters of Michigan will be asked to approve a \$30,000,000 bond issue for the benefit of soldiers, sailors, marines and nurses of the world war.—An agreement has been reached by the house and senate upon a standing army of 156,000 men.

Friday, March 4.

WARREN G. HARDING and Calvin Coolidge are inaugurated as President and vice-president of the United States at Washington.—President Wilson vetoes the emergency tariff bill and the house fails to pass the measure over the veto.—Congress passes bill authorizing the erection of a bridge across the Detroit river.—A large deposit of coal has been located in New Brunswick.—The United States Reserve Board firmly predicts an approaching era of stabilized business.—R. G. Jones, superintendent of city schools in Cleveland, is elected head of the National Educational Association.

Saturday, March 5.

RAILWAY companies are sustained in a decision in the United States Appellate Court on the issue that the Michigan Public Utilities Commission has no power to change transportation rates within the state.—Costa Rican forces are advancing upon Almirante, a Pacific port under the control of Panama.—A coroner's jury holds the crew of the Michigan Central train responsible for the wreck at Porter, Ind., last Sunday, when thirty-seven persons were killed. Eleven Flint restaurant proprietors are in court charged with selling adulterated milk and cream.

Sunday, March 6.

MEMBERS of the German cabinet, Reichstag leaders and technical advisers in an authorized statement instruct German representatives not to exceed the counter-proposals made to the allies.—Railroad men throughout the southeast have begun the taking of a vote on advisability of a strike.—Costa Rican troops are victorious in a frontier fight with the Panamanians.—The laying of a cable from Miami to Barbados is halted by United States war vessels.

Monday, March 7.

IT is reported that Trotsky, the bolshevik war minister, has again assumed control of military operations.—The enforcement of penalties on Germany for non-fulfillment of reparations requirements is decided upon by the allied representatives in session in London.—Japanese business men are

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Bee-keeping in the Wolverine State

Favorable Conditions and Progressive Apiarists Place the State High Up Among the Leaders

MICHIGAN bee-keepers are just getting into information on the industry coming into their own, accordingly gathered by the State Farm Bureau, which shows that fifteen thousand producers have placed Michigan high in the ranks of the honey-producing states with an annual production of ten million pounds. In addition to leading the field in quality, as expressed in flavor and color, the Michigan men are rapidly organizing themselves in the interests of advertising the merits of their product. Only one-twelfth of one per cent of the possible honey market has been developed, according to R. H. Kelty, of the M. A. C.

The farm bureau has learned that there are now 150,000 colonies of bees in the state, but fewer bee-keepers than formerly. Bee-keeping is becoming a specialized industry, with more bees and fewer bee-keepers. With all these facts in mind, Mr. Kelty says that the future of the industry in Michigan is brighter than ever before.

Michigan has an edge on all other states in climatic conditions best suited for honey production. Because of the plentiful rainfall and favorable conditions of vegetation throughout the summer, keepers in this state get a good honey crop every year, says Mr. Kelty. This is decidedly different from conditions which obtain in more southern states where, due to a lack of rainfall and the consequent character of the vegetation, the yield fluctuates greatly and lean years are very common.

Bee-keepers in this state are confi-



The Apiary of J. J. Eskil, of the Upper Peninsula.

dent for the future of their industry and are organized for business, accordingly to the State Farm Bureau. Besides, the Michigan Bee-keepers' Association, with its eight hundred active members and the thirty-eight county bee-keepers' associations, there has recently been organized and incorporated the Michigan Honey Producers' Exchange for the purpose of more widely advertising and distributing Michigan honey. This latter organization is affiliated with the American Honey Producers' League.

The work of inspecting apiaries is declared to be highly developed in Michigan. It is under the general supervision of Mr. B. F. Kindig, state inspector of apiaries, reputed to be one

of the best known authorities on apiculture in the United States. Associated with him in this work are P. T. Ulman, chief deputy apiary inspector, R. H. Kelty, deputy apiary inspector, and fourteen county apiary inspectors.

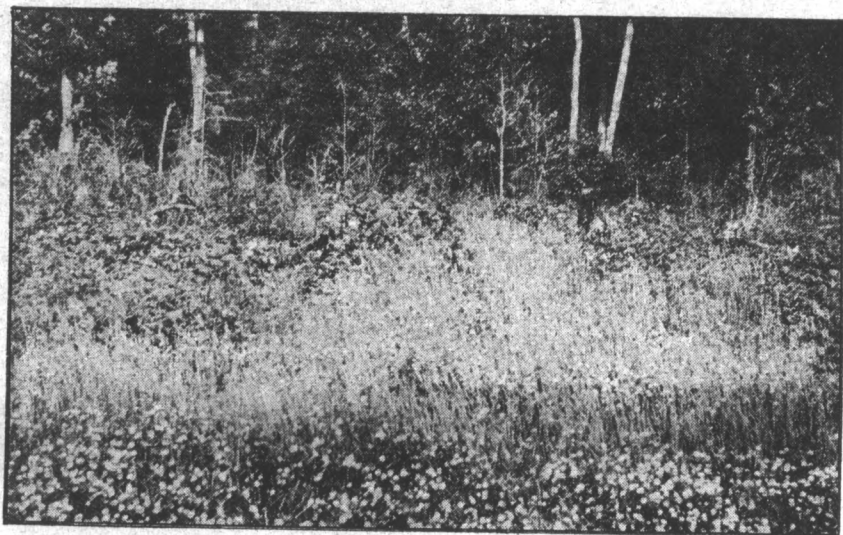
The thumb section is called the center of the bee industry in Michigan, although many bees are kept along the eastern side of the state and in the northern part of the lower peninsula, with only a few in the upper peninsula.

The H. C. L. never worries "the busy little bee," for it gathers its sweetness from plants that grow in abundance in the fields, forests, and orchards of the Wolverine state. The chief honey-yielding plants in Michigan are the clovers—alsike, white, and yellow, and

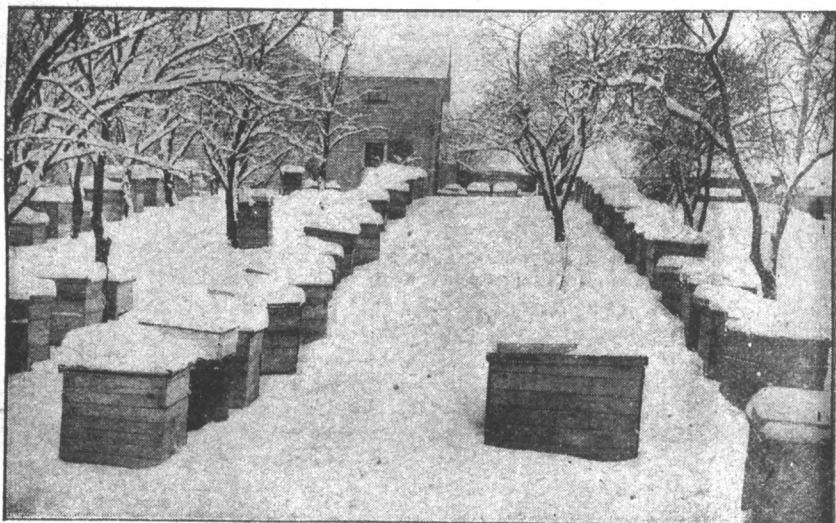
white sweet clover. In the northern part of the state raspberries, milkweed and fireweed are the chief sources of honey. In swampy places the bees work on goldenrod, Spanish needle, asters and boneset. Among the minor honey sources are buckwheat and basswood. Dandelions and fruit bloom are used to build up strong colonies to take advantage of the clover season.

That bee-keeping in Michigan has splendid financial prospects is indicated by a statement recently issued by Mr. B. F. Kindig, state inspector of apiaries, in which he says that he can name a number of Michigan bee-keepers whose annual incomes from bees during the past several years have been between \$5,000 and \$10,000 each. He further states that the assertion of several extensive bee-keepers, that a colony of bees is worth more to them than an acre of land, was fully verified when he made a survey of bee-keeping conditions in Michigan and found that the bee-keepers who had an average of one hundred colonies had an average income of nearly \$3,000 a year.

The 2,000,000 pounds of comb honey, 8,000,000 pounds of extracted honey, and 500,000 pounds of beeswax produced annually in Michigan, is part of 200,000,000 pounds of honey and 5,000,000 pounds of beeswax produced by the 10,000,000 colonies of bees owned by the 1,000,000 bee-keepers in the United States. The total product gathered by the busy insect, if loaded 30,000 pounds per car, would make a train fifty miles in length and the cargo would be worth \$22,000,000.



Volunteer Alsike and Wild Raspberries in Northern Michigan.



View of Floyd Markham's Apiary at Ypsilanti.

Finding the Best Egg Markets

By Briant Sando

THE loss and spoilage in market eggs produced on the farm runs into the millions every year. Ninety per cent of this enormous loss is caused simply by the farmer and storekeeper not giving the eggs proper care.

In the matter of gathering and keeping eggs most farm and village poultry keepers follow the line of least resistance. Instead, they should know how to test eggs, and should carefully go over every egg before they take or send it to market. For top prices, they should know how to market and when to market, and should give the hens the very best treatment.

There are three main kinds of dead loss in market eggs—losses from cracks, "held" eggs and "rots."

"Cracks" are usually caused by shipping, due to rough roads and handling. "Held" eggs are caused by the great desire of either producer or small buy-

er to wait for an advance in price. This is especially so in the fall of the year when the price is apt to rise at any time. The third loss, rotten eggs, is caused by various things, but, of course, the main trouble comes in the heat of the summer. One hour's direct rays of a mid-summer sun will often put an egg out of condition. Another cause is by the hens stealing nests and the eggs not being gathered soon enough. Another by carelessness on the part of the farmer. He may gather his eggs from one to three times per week, then take them to the kitchen, put them behind the stove, because it is a well protected spot, until they are ready to be taken to town. Thus the eggs go through a process of heating and cooling, which causes "rots."

First of all, perhaps, the hens should be provided with a convenient and

clean place to lay their eggs. It is natural for hens on range to hunt some secret spot for a nest, somewhere off in the weeds or woods. This should be eliminated and when any of those hidden nests are found, the eggs should be marked and kept for home use.

During bad weather the eggs should be gathered at least twice a day to keep them clean. During hot weather it is important to gather the eggs several times a day, which prevents them from commencing to decompose, or the germ from starting development. When the eggs are laid in barns, sheds, etc., a careful search should be made frequently, in order to be sure that no eggs are gathered after becoming stale.

As soon as the breeding season is over, the male birds should be separated from the hens. A male bird is

not necessary for the production of eggs, but is useful only to fertilize the egg, which will be laid just the same, regardless of his absence of presence. A fertile egg will commence development, consequently deteriorate more quickly than a sterile egg. A fertile egg when fresh laid is supposed to be already started in its development, and if other laying hens or an occasionally "broody" hen is allowed to stay on it any length of time it will soon be in bad conditions.

When eggs are gathered they should be put and kept in a clean, dry, cool place until marketed. In a damp place, bacteria and moulds often develop and the eggs soon spoil.

Before eggs are sent to market, they should be gone over and all small, stained, dirty, doubtful eggs removed. Small and dirty eggs, if used immediately, are quite all right for one's own

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What Cooperative Marketing Will Do

By Bruce Lampson, of the Washington-Idaho Wheat Growers' Association

IN the first of this series of articles, mention was made of the fact that there were two channels through which farm products could be sold. The two systems were discussed in general. The fundamental principles and objects of the speculative system, in its highly organized state, were discussed somewhat in detail. The fact was pointed out that if this speculative system succeeded it must cause a great spread between the producer and consumer.

It was also pointed out that there was a great demand for improved and economic methods of distributing food products from the farm. This article will discuss the fundamental principles and objects of the pure cooperative marketing associations, and show how they are narrowing the spread between the producer and consumer. The following three articles will discuss the essential features of pure cooperation and show where and how they are working.

As shown in the former article, the grain dealers have so highly organized their buying department for the purpose of fixing the price on the farmer's grain, it is not reasonable to believe that they have not what is termed "business sense" enough to organize their sales department in like manner. They undoubtedly will, if they haven't already, eliminate competition in selling as well as in buying.

The managers of this capital stock concern must, if they make good and attain their purpose of paying dividends, make the spread between the producer and the consumer as great

as possible. There are in too many instances, not only one, but several of these organized speculative concerns between the producer and the consumer of the food product, which makes several profits instead of one and as we know, these profits are not always reasonable.

The day of individually and single-handedly attending to "your own business" in the marketing world has passed. The question is not, shall we cooperate in the distribution of our farm products, but how shall we cooperate? If we are going to build up agricultural production—the production of foodstuffs and raw material for clothing, with which to clothe and feed the world, we must increase consumption and increase production by eliminating the adverse interests between the producer and consumer.

Distribution must conform to economic principles. The pure cooperative distribution plan which has been so successful in California and other places for both producer and consumer, is in very striking contrast to the highly organized speculative system. This cooperative plan provides that the distributors shall be organized producers of a commodity. They should sell direct as possible through highly trained specialists, so that the consumer's price will be less and more produce consumed and yet the grower receive more for his products.

When we know that there are millions of persons every year who never have a sufficient amount of food, it can only be concluded that over-pro-

duction is, with very few exceptions, if any, not real, but rather a sentimental impression created by the speculators in order that they may buy cheap when the product is offered by the producer. The price to the consumer can be decreased and thereby increase the consumption.

Before the organization of the California Almond Growers' Association, the producers received eight cents per pound and the consumer paid thirty-five cents per pound for almonds. The producer received twenty-two cents of the consumer's dollar, the distributor received seventy-eight cents. After the producers organized and sold direct, they received seventeen cents a pound and the consumer paid thirty-five cents. The producer received forty-seven cents of the consumer's dollar. The price of almonds did not increase to the consumer during the inflated price period.

By this pure cooperative form of organization, the Oregon Dairymen's League secured an advance of four cents per quart for their milk and sold to the consumer for one cent per quart less. This was done by the producers so organizing that distribution was made direct upon a non-profit basis. Since the producers sell their own commodity, production in California has increased in some cases as high as five hundred per cent, and yet the product is all sold at a profit to the producer. The cry of over-production is not heard where the speculative system of distribution has been replaced by producers' selling agencies.

This economic distribution is being accomplished by producers forming a cooperative selling agency to operate upon cost, without capital stock and without profit to the organization.

Like prohibition and other great national movements, cooperative distribution has been slowly, but surely penetrating the mind of the public. People have been educated to its principles. Economic principles are absolutely demanding cooperation.

We can point to years of slow cooperative development in New Zealand and Denmark. Its great possibilities have been proven beyond a shadow of a doubt in about thirty California organizations which sold last year \$300,000,000 worth of farm products. This was forty-five per cent of the total farm product value of that state.

The cooperative movement has swept over Oregon in the name of the Oregon Dairymen's League, the Oregon Poultry Producers' Association, and Oregon Growers' Association. Its fundamental principles are embodied in the New-York Dairymen's League and the Michigan Potato Growers' Exchange. The Texas Cotton growers are now organized to sell their own product cooperatively. The Canadian wheat growers are now in process of organizing upon this same pure cooperative plan, as are the wheat growers of Washington, Idaho, Montana and Oregon.

How these selling organizations are formed and are solving, and will solve, our most fundamental economic problem—feeding the world—will be discussed next week.

Plans of the Committee of Seventeen

AFTER working for several months the plans for a system of more direct marketing of grain have been developed by the Committee of Seventeen. At Chicago on March 2 the details were laid before a group of leading agricultural editors. The plan is a gigantic one; it is well worked out and with good management under a constructive policy it should prove successful. This great cooperative selling movement is certain to have many obstacles thrown in its path by those who fear the effects on their own business. This is to be expected for the organized selling plan of the growers will have to go up against one of the most strongly entrenched systems of business organization in the country.

The encouraging feature of the entire program is that the commodities are to move through the customary channels. The new program plans merely to decrease the number of hands through which the grain from the American farm will be compelled to pass and bring the producer and the consumer more closely together.

The Chicago conference was attended by Governor McKelvey, of Nebraska, and Governor Preuss, of Minnesota, both of whom were greatly interested in the work of the Committee of Seventeen and both expressed their confidence in the outcome of the work, provided plans were matured on reasonable grounds. Governor Preuss mentioned the fact that Nebraska had declared the grain exchanges to be public markets and that the lower house of the Minnesota legislature had passed a bill to that effect, although the senate had not yet acted on it.

Chairman Gustafson of the committee gave a brief history of the work that had been done and declared that in all cases action had been unani-

mous. He announced that various state meetings would be held to discuss the plan as mapped out and that a national ratification meeting would be held April 6, at the La Salle Hotel, Chicago. State ratification meetings will be held in this territory as follows: March 15, Claypool Hotel, Indianapolis, Indiana; March 16, Deshler Hotel, Columbus, Ohio; March 17, Kerns Hotel, Lansing, Mich.; March 21, Park Hotel, Madison, Wisconsin.

The plan of marketing under the committee plan was explained by Wm. G. Eckhardt, of Illinois. The grower would have three ways of disposing of his grain: By consignment, by direct sale to the local buying agency and by pooling. The latter method was favored as bringing the best returns throughout the season. Through it the

price would be averaged and all growers receive the same price for their grain of similar grade. The local growers' association would make its contract with any local elevator. The directors of the National Sales Agency would choose its managers, foreign representatives, etc. The proposed plan does not displace any of the existing grain handling agencies. A saving of one per cent on the total grain marketed would effect a total saving of over fifteen million dollars which might be used for warehouse ownership, etc. The proposed finance corporation would be organized for one hundred million dollars capital and could issue debentures for about ten times its capitalization. The warehouse receipts of shippers might raise the total assets or collateral of the

finance corporation to one and one-half billion dollars.

Mr. Clifford Thorne, general counsel for the American Farm Bureau Federation told of the extreme care given to investigating all cooperative selling organizations before starting to build up the grain growers' selling plan. Under the pressure that was being exerted by grain growers it required courage to go slow and build with care and thoroughness. With the present selling plan he declared the chief fault lay with the farmer himself, due to the fact that he ships seventy-five per cent of his grain to market within three or four months. This custom is the result of inadequate storage facilities on the farm and to inadequate credit. He quoted a member of the Chicago Board of Trade to the effect that more direct shipment would save from one to ten cents per bushel. Mr. Thorne denied the utility of the present system of dealing in futures and presented charts to show that it had actually brought farmers' prices down instead of supporting them during recent months. He warned against propaganda opposing the bill to prevent dealing in grain that could be delivered and declared that only twenty-eight one hundredths of one per cent could be delivered in Chicago last year. He emphasized the importance of the farmers' finance corporation due to the fact that every effort would be made to break the selling organization.

The proposed plan expects to move grain more regularly and uniformly; to make possible more direct shipment to the consumer; to reduce the speculators' and middlemen's profits; to place the seller and buyer on a more nearly equal footing; to afford more efficient storage, credit and market news facilities.

Michigan's Truth-in-Fabric Bill

THAT Michigan's "Truth-in-Fabric" bill has aroused wide interest was evidenced by the large representation of farmers, manufacturers, and dry goods dealers who appeared to present their views at the public hearing on this proposition recently held by the state affairs committee of the house, who had the bill under consideration.

The well-known arguments in favor of such a measure were ably presented by Representative Henze, of Dickinson, and Representative Holland, of Gogebic. The representatives of the merchants and dry-goods dealers pointed out that the passage of this measure would work great hardships to the business interests of Michigan. They stated that in order for them to correctly label goods which they might secure from other states, and which, of course, would not be labeled when they

received them, it would be necessary for them to employ trained industrial chemists, since only such specialists would be able to prepare an analysis of the goods as required by the proposed measure. They felt that if any legislation along this line were desirable it should be national in its scope.

The bill as introduced by Representative Henze would require that all cloth or clothing offered for sale in this state should bear a label stating the amount of wool, cotton, silk, shoddy, or other materials contained therein, and that fur garments should carry a label showing the kind of fur, while leather or rubber goods would have to be labeled to show whether or not they contained substitutes. The enforcement of this act would be left to the food and drug commissioner.

State Aid for Rural Schools

What a Great System of State Aid Has Done for Minnesota—By R. P. Crawford

MINNESOTA has plenty of money for its rural schools and believes in spending it. Nearly everywhere one goes in that state he finds consolidated schools. There is probably no state in the Union that has handled the financial problems of the consolidated school as well as has the

the fact that twenty-five per cent of the voters in every district must have previously petitioned for the consolidation.

Lessons from Experience.

On the occasion of my visit to Minnesota, I asked an official of the state department there to give some good

\$450; supplies, \$200; transportation of pupils, \$2,000; interest on investment, \$1,600, making a total of \$10,700. Out of this amount the state would pay \$4,100 distributed as follows: \$300 for consolidated school, \$2,000 for transportation aid, \$600 for state graded school aid, \$500 for high school aid, and \$700 representing the state apportionment from the current school funds. There would also be \$550 from the local one-mill tax on property. The school district then would have to levy around \$6,000 to cover the remainder of the bill. In this particular case the district had a valuation of \$550,000 and it meant that each quarter section of land would have to pay on an average of \$33 to keep up the school. This consolidation was more modest than those in many sections of the state, but one which is of interest as showing the amount of money from the state that is given to such schools.

It is especially interesting to note that each consolidated school receives yearly from the state \$2,000 with which to transport pupils, and three-fourths of such an amount beyond \$2,000 as is expended for transportation.

No school, however, can receive more than \$4,000 from the state for transportation expense. It will be seen that one of the arguments against consolidation is done away with in Minnesota, because the state gives a great deal of money outright for transporting pupils. In addition, each school receives \$2,000 when a building is first erected. Truly, it may be said that probably no state in the Union has

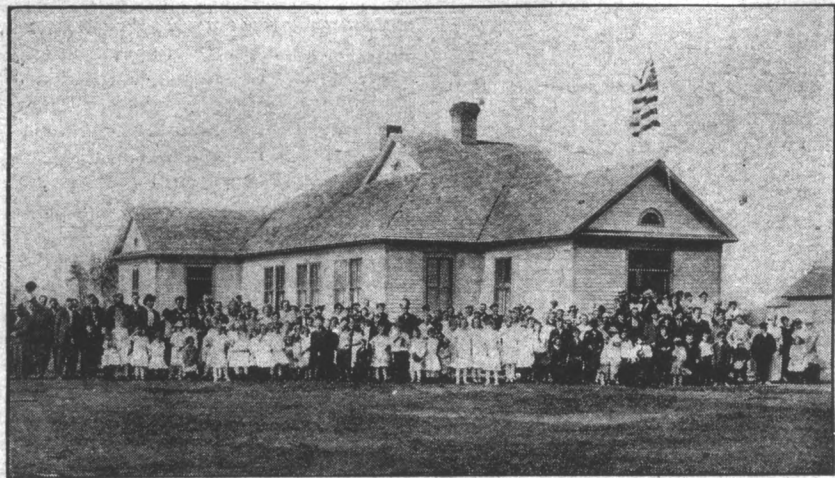
a school is selected. It may be near a country store or creamery, or anywhere that people are accustomed to meet. If a village is within reasonable distance of most of the pupils, it is so much the better.

A Model School Building.

Perhaps one of the finest buildings for a consolidated school is the one known as the Bloomington School about six miles from Minneapolis. It was erected two years ago at a cost of \$100,000 and is located right out in the open country on a site of eighteen acres. There are a few stores and houses at a cross-roads near-by, but they do not even constitute a post office. The building is a two-story brick, of fire-proof construction, two hundred and twenty-two feet long and fifty-eight feet wide. At each end of the building there is a one-story wing, one of them being taken up with an auditorium and the other with a science laboratory and a manual training room. The country surrounding the school is a very prosperous farming community, such as is found near any big city, and the farms are probably smaller than the average. The district comprises twenty-two sections.

Five old schoolhouses were discarded and now no one would think of going back to the old plan. The school has around two hundred pupils and it has been made large enough to accommodate a much larger number as the community grows. In fact, it is generally the experience that a consolidated school increases the number of school children in the community. Many who have never thought of attending high school readily change their minds when they have a good building right at hand.

A person who is accustomed to only the little one-room schoolhouse would be astonished at the character of this building. In fact, it puts to shame most of the school buildings in ordinary cities. The school has a double system of heating, the same as most of the larger buildings in Minnesota. This includes the ordinary steam radiators and also the vacuum system. The latter is built on the most approved lines, the air being brought into the basement, washed by being forced through tiny jets of water, and heated by steam coils and then forced into the rooms. In ordinary weather, this system alone is used, but in very cold weather it can be reinforced by using the radiators also. At each end of the building there is an electric motor which pumps the foul air out of the building. The temperatures in the individual rooms are controlled by thermostats. The school has its own wa-



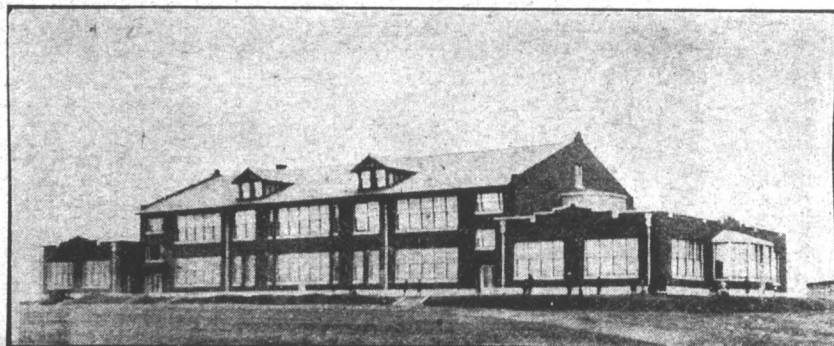
This Open Country Consolidated School was Formed in 1904. The Building was Remodeled at a Cost of \$5,000. The Total Cost of Maintenance is About \$6,000 a Year, Including Transportation. There are Three Teachers and Ninety Pupils.

state of Minnesota. The requirements which every consolidated school must live up to are probably also the highest of any in the Union. The state has all sorts of subsidies for its consolidated schools, such as consolidated school aid, transportation aid, state graded aid, high school aid, and the apportionment of the current school fund.

If one did not know this, he might indeed wonder how Minnesota has made such great strides in consolidation. Even in the most northern parts of the state are good consolidated schools, and I recall that there is one such school only a comparatively few miles from Red Lake, and fifteen miles from the nearest railroad. In dozens of villages in that state the schoolhouse is the only building in town that has a water-works system. Such vigorous oversight is given the schools of Minnesota that no school is permitted to erect a consolidated building without having the plans approved by the state department, and without having an entirely modern building. The requirements for consolidated schools include everything from approving the proposed districts to requiring that every school serve a hot lunch during the winter months. Minnesota can make these regulations because it gives the schools state aid, and thereby has a lever to make them live up to certain definite requirements.

Before any consolidated school can be established in Minnesota the county superintendent must make a plat showing the territory it is proposed to consolidate, the location of the school and all other available information. The state department can approve or reject the consolidation. This does away with the possibility of some section being left without a consolidated school when it should be in a consolidation. Twenty-five per cent of the voters of each district that it is proposed to consolidate must petition for the school to the county superintendent. All districts then vote together at an election. If the majority of the votes of all districts are in favor of the consolidation, the question carries. That means that one section cannot hang back and so defeat a good school which is favored by nearly everybody else. However, the interests of the individual districts are safeguarded by

advice from that state's experience with consolidated schools. As a general thing, the state department does not believe that a consolidated school should be established with less than one hundred pupils. The consolidated schools over the state average about one hundred and fifty pupils. It is believed that at least four teachers



One of the Finest Consolidated School Buildings in the United States is Located at Bloomington, Minn. It is in the Open Country on a Site of Eighteen Acres.

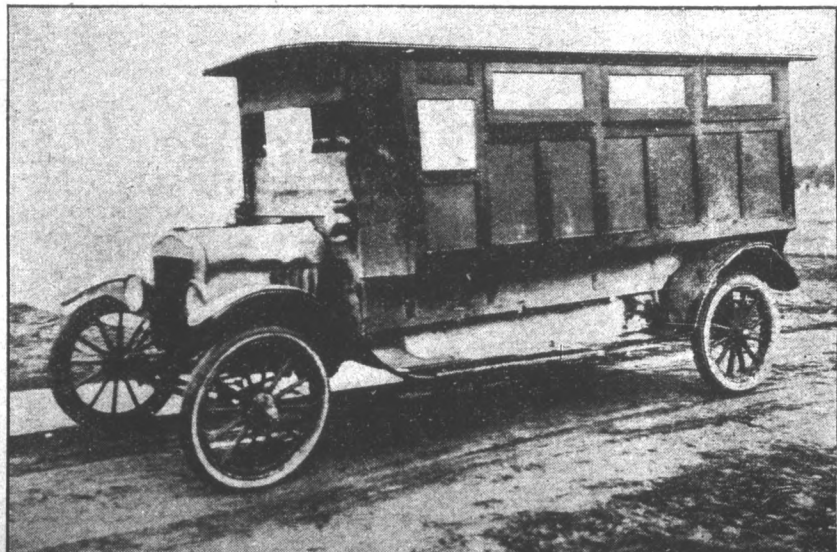
should be employed for the grades and two for the high school, and that is almost impossible with fewer than one hundred pupils. Of course, there are cases where communities may be isolated, where it is impossible to have one hundred pupils, and in such cases, the proposed school may be approved.

As a general thing, the state department favors a two-story brick building. Three-story buildings are frowned upon. A requirement in a consolidated school is that every school must have an auditorium. Of course, in some of the smaller schools two classrooms may be arranged so they may be opened to form an auditorium, but the larger buildings usually have the auditorium entirely separate. Every building must be entirely modern with the right kind of light, modern toilets, ventilation, steam heat, and drinking fountains on every floor.

Here is an expense account for a fairly modest consolidated school in Minnesota. The cost of the building would be about \$40,000 and bonds for this amount would be voted to the state at four per cent interest, the school fund in that state being loaned out to the school districts. The yearly expenses of such a school were roughly figured as follows: Principal, \$1,500; four teachers, \$3,600; one teacher for high school, \$1,000; fuel, \$350; janitor,

done more for the consolidated school than has Minnesota.

As a general rule, thirty sections are regarded as a reasonable area for a consolidation and the busses should not be required to haul any children any farther than five miles. Twelve sections are the minimum for consolidation except where a town is included. Generally, some logical center for



Some Schools Use Automobiles in Fall and Spring, and Horse-drawn Vehicles in Winter.

ter system, of course, but electricity is secured from a transmission line out of Minneapolis. There is a vacuum cleaning plant in the basement with connections throughout the building so that all the dirt can be sucked down into the basement. Gas for operating the stoves in the domestic science room is piped from a tank outside of the building. In fact, there is nothing missing to make a completely equipped school.

Both upstairs and down are wide hallways between the various rooms opening off at the sides.

At one end of the main floor is a combined gymnasium and auditorium. At this end of the building there is an entrance to a small box office window at the door. This part of the building is entirely separate from the rest of the school, although there are doors also opening into the main hallway on the lower floor. Farmers' meetings may thus be held without interfering at all with the work of the school.

In the one-story section of the building at the opposite end are located the manual training shops and science laboratories. There is also a conservatory opening out of this end of the building with glass on three sides. Here agricultural experiments are carried on during the cold weather. On either side of the main hallway are the grade schoolrooms. Upstairs there is a fine study hall for the high school, besides recitation and classrooms. There is also a suite of rooms for the domestic science department and a teachers' restroom which is also used for taking care of any of the children that become sick at school. The eighteen acres afford plenty of room for agricultural experiments, and athletic field and playground.

Schools in Cut-over Lands.

Many schools equal to the one I have just described can be found in the rural sections of Minnesota. But lest the reader might be of the opinion that I am describing schools existing under unusually favorable conditions, we shall take a little trip to the northern part of the state and see how the schools fare in the more sparsely settled sections. A day's journey brings us to the lake country of Minnesota, about two hundred miles northwest of Minneapolis. This is a great country for tourists in the summer, but by late fall most of them have journeyed to warmer climates, and only the hardier spirits brave the winter. It is a rather new country agriculturally, and the real reason we are making this trip is simply to prove to the most skeptical that there are really fine schools in the sparsely settled sections of the country. The school at Pequot, which was erected a number of years ago, has already been outgrown and other buildings have been pressed into service. In fact, that seems to be the experience all along the line—as soon as a community gets a consolidated school, the attendance jumps rapidly.

An interesting feature of this school is a special teacher who is employed to enable the farm boys who enter school late in the fall to catch up with their work, especially those employed during the potato digging season in the fall.

This school district embraces twenty-eight sections and twelve additional sections that have been added just recently. There are also two small schools which are associated with this school, and in which domestic science and agriculture are taught under the supervision of instructors from the consolidated school. The building was erected at a cost of \$18,000 and is a good type of plain, substantial, brick building. Practically all of these schools maintain a lunch-room where a noon lunch is served, the state department requiring that a hot lunch be served during cold months. It usually consists of one hot dish, such as cocoa, baked beans, potatoes, soup, or anything that seems advisable. In some schools pupils bring pennies to pay for this and in other schools they bring certain articles of food, while some schools serve the hot lunch and charge it up to the district.

Just about every town on the railroad line that runs to our international

around \$45,000, including equipment. There are some seventy-five students at present and more will gradually attend the school from year to year as the country builds up. The building will accommodate in the neighborhood of one hundred and sixty pupils. Five teachers are employed and the grades are combined in such a way as to offer instruction in the first, third, fifth and seventh grades one year and the first, second, fourth, sixth and eighth grades the next year. The strong pupils are put ahead a grade and weak ones are held back when it comes to changing from the first grade, and no second grade was being taught that year. Instruction in a high school of this sort is given in the ninth and eleventh grades one year and in the tenth and twelfth the next year. I might enumerate the schools of this sort by the dozen, because nearly every railroad station has a consolidated school.

Even Beltrami county, part of which forms the shore line of the Lake of the Woods, has numerous consolidated schools. Within a radius of twenty-five miles of Bemidji, in that county, there are probably a dozen consolidated schools. One consolidated school in that county was organized fifteen miles from the nearest town by consol-



idating five log schoolhouses. Three years of high school work are taught out here, and a comparatively few years ago this country was almost a wilderness.

These schools in northern Minnesota have been described, not so much because they are the most famous schools in that state, but just to show what has been accomplished under pioneer conditions. If such schools as these are maintained in the more sparsely settled sections of a state, with as long winters and as snowy weather as Minnesota, there can hardly be any excuse for poor country schools in more favorably situated communities. It has been found in many parts of Minnesota that real estate men are selling property on the basis of good school facilities, and more than one family has settled in a particular community because a consolidated school was only a short distance away.

Transporting the Pupils.

The question of transporting children to and from school, which always seems unsurmountable in the minds of most school patrons, is often a very small matter after all. A few years ago some very definite statistics were secured in regard to transportation. One hundred and eighty-five schools reported as follows:

Total number of routes....	588
Number of trips missed by van	593
Number of times vans were late	646
Days schools closed through impeded transportation ..	50
Children walking from one-half to three-fourths of a mile to van	645
Total children transported..	9,675
Number of children hauled over five miles	446
Total cost transportation..	\$265,353.00
Average monthly salary for drivers	49.31

If Minnesota can transport its pupils through snow drifts and cold weather, it certainly can be accomplished in almost any other state. It will be seen that the schools were closed on an average of less than a third of a day each for the entire year on account of impeded transportation. The cost of transportation averaged less than ten cents a mile per pupil per day, this figure including the round trip. No route is over six, and preferably they should not be over five miles long. The following regulations govern the hauling of children in Minnesota.

1. All children living more than two miles from the school building shall be transported. Those living within the two-mile limit may be transported. As far as possible, all children shall be hauled.

2. A child may be required to walk not to exceed three-fourths of a mile to meet the van.

3. Drivers must sign a definite contract and give a \$300 bond.

4. Only vans built according to state specifications or approved by the inspector shall be used.

5. Provision must be made for heating the vans by means of foot warmers or some other safe method. Stoves inside the van cannot be permitted.

6. Where not more than four children are to be transported from any one direction, a district may make special arrangements for their transportation, upon application to the inspector.

7. Drivers shall make daily and weekly reports to the principal.

8. If conveyances carrying children are required to cross railroad tracks, the driver shall stop his team and have one of the older pupils designated by the principal, flag the conveyance across the tracks.

9. No child shall be hauled farther than the shortest distance by public road from his home to the school building unless approved by the inspector.

10. A driver shall not use an automobile in place of the regular van except by special permission from the principal. In case an automobile is used a sufficient number of trips shall be made so as not to crowd the children in the car.

11. No person under eighteen years of age shall be allowed to haul children except by special permission from the inspector.

"Remaking Rural Communities," a story dealing with the consolidated schools of Colorado, will appear in an early issue.—Editors.

Bill for Department of Agriculture Favored

THE State Department of Agriculture, as recommended by Governor Groesbeck and favored by the Michigan State Farm Bureau and other farmers' organizations, will in all probability be created by the present legislature. Representative Atwood's bill providing for such a department was reported favorably March 1 with but minor amendments by the state affairs committee of the house, to whom it had been referred. If the unanimous support given the entire program of reorganization of the state's administration is any indication of the way in which this bill will be received, the prospects for the speedy enactment of

this legislation are indeed favorable.

One feature of this measure which it is expected will arouse considerable opposition is the provision made in Sec. 4 of the bill for taking over the state fair at Detroit. This proposal has aroused considerable interest and is regarded as an open question even by the sponsors of the bill.

Representative Atwood's bill would create a commissioner of agriculture to be appointed by the governor. This commissioner and his assistants would take over the duties now performed by the department of animal industry, state food and drug commissioner, state veterinary board, immigration

commission, the commissioner of immigration, the board of geological survey, the state inspector of orchards and nurseries, the inspector of apiaries, and the agricultural statistics division of the secretary of state's office.

Section 5 of the bill provides: "It shall be the duty of the department of agriculture to foster and promote in every possible way the agricultural interests of the state of Michigan; to co-operate with agricultural agencies in the different counties of the state and of the federal government; and to prevent, and assist in preventing, by all available means authorized by law, the sale of unimproved lands and lands

not suitable for agricultural development within the state by fraud, misrepresentation or deceit and the publication of false or misleading statements or advertising matter designed to effect such sales."

Carrots are not excelled as a food for the horses. They are particularly refreshing given to a hunter after a hard day over rough country, or to a work-horse. They are usually fed raw or sliced.

If silage is fed to cattle under cover, and not waddling about in cold mud or a wind-swept feed-lot, it will produce good results. It is too laxative a feed for animals that are exposed to cold, stormy weather.

Methods of Farming Light Soils

By H. W. Ullsperger

LIMESTONE when used on sandy soils supplies food actually needed by many plants, such as clover, alfalfa, soy beans, etc., which feed heavily on limestone; that is, they require calcium to build their plant tissues. Limestone is also a soil amendment, correcting certain acid conditions in the soil. These acid or sour conditions prevent plants from securing sufficient nourishment or food for proper growth. Thus, we can readily see that the use of limestone is very important on these light soils.

Limestone or lime is just as essential to plants as it is to animals or human beings. When the ration fed to growing animals does not contain sufficient calcium, it produces a stunted animal. Certain diseases in children are caused largely by insufficient lime in the child's food. Lime water is the remedy. Plant diseases are caused by an insufficient amount of lime in the soil. Limestone is the remedy. Plants grown on soils having a good supply of lime are higher in feeding value than plants grown on sour soils. Plants cannot tolerate a sour soil any better than we can tolerate a "sour stomach," commonly called "heartburn."

Limestone when applied on acid soils also furnishes a suitable medium for bacteria which adds nitrogen to the soil. These bacteria do their best work in a neutral or slightly alkaline soil. Limestone produces this condition.

Use Limestone Properly.

In using limestone the following suggestions will prove helpful:

1. Find out how much limestone your soil needs. Then supply this amount of limestone.
2. Use limestone with manure if possible. Limestone is not a complete fertilizer.
3. Apply limestone in the early fall or, preferably, a year before you expect to see results on your crops.
4. Apply it as a top-dressing and disc it in. Limestone must be mixed with the soil.
5. Apply it with a manure spreader, lime spreader, or with a shovel.

Experiences with Limestone.

The writer has discussed limestone and its use with hundreds of men at farmers' institutes during the past five years, and has heard numerous stories both for and against using limestone. Those farmers who condemned limestone after thoroughly discussing and studying their problems and testing their soils, found that they made some mistake in its use. The following are a few of the experiences with limestone as given at these meetings:

A farmer living at Durand, Wisconsin, after listening to a talk on "Limestone and its Uses," stated: "Two years ago I bought a carload of the

best grade of limestone I could buy, put on three tons per acre on a ten-acre field, but have not secured any better crops by using limestone," he concluded, "I do not believe in limestone."

This farmer was persuaded to bring samples of his soil to the meeting the following day. He brought them and they were tested with an acidity tester. Imagine his surprise when the test indicated that none of his soil was sour and that he did not need lime.

"Why, how is it," he said, "that I do not need lime and my neighbors do, according to the tests you made yesterday?"

Further questioning developed the fact that he had a limestone bluff on his land which through the action of the weathering and washing by rains was correcting his acid soil conditions.

This man spent \$150 for limestone

only place where I have a stand of clover on the forty-acre field is on the two acres on which I put the lime five years ago. I did not believe in liming until this year, but am now thoroughly convinced that lime is necessary. If I had used limestone on the whole forty-acre tract I would have forty acres of clover instead of two acres."

The above statement is typical of many others made by those who have used limestone. When men become convinced by actual demonstration on their own land that limestone is beneficial they regret not having used it on a more extensive scale. There will always be a time in the cropping of all soils when lime will prove beneficial. Testing will tell when this point is reached.

Where lime is cheap and land values are high, heavier applications of lime can be made more profitably than



The Leguminous Crops Require Lime.

which he could have saved if he had tested his soil. It is always advisable to know the limestone requirement of your soil. Your county agent, state experiment station or state soil extension workers will gladly test your soil.

Another farmer at the same meeting condemned limestone, stating: "I used it last year, planted the field to clover and did not get any better clover where I limed." This man, after answering numerous questions finally admitted that he plowed it under six inches deep. We went out to his farm, took samples of his soil five inches deep and from five to eight inches deep. The top five inches of soil was still as acid as usual; the second sample taken where the lime did its work was only slightly acid. The main root system of the clover plant was in the top five inches so the crop was not benefited by the application of limestone.

Apply limestone as a top-dressing. Rains will carry it downward, but very little is carried upward.

At a meeting at Hancock, Wisconsin, another farmer related his experience with limestone. His story was as follows: "Five years ago I applied four tons of limestone on two acres of land and planted the field to rye and clover. I saw no results from liming, the clover stand being very good on the entire field. No results were seen next year or for two years following, but this year, that is, the fifth year, the

where the opposite conditions obtain. Of the common crops alfalfa, sugar beets and canning peas respond best to liming; red clover, soy beans, barley and wheat come next; while oats, corn and rye are not affected so much directly, but are greatly benefited in an indirect way because the general fertility of the soil is increased by the most successful growing of clover, alfalfa and soy beans. Most of the garden crops except watermelon, strawberries and potatoes are greatly benefited by the use of lime. Soils low in fertility respond better to liming than soils high in fertility; therefore, it is more necessary to apply limestone to sandy soils.

Results of Liming.

The beneficial effect of lime on acid soils is illustrated by the results of a few field tests which follow. At Ellis Junction, Marinette county, two plots of alfalfa were seeded in the same field of acid sandy soil in 1910 without a nurse crop. One plot received an application of air-slaked lime at the rate of one ton per acre. The other plot received no lime. Both were mowed at the rate of six loads per acre and inoculated. In 1911, 2,080 pounds (from two cuttings) of alfalfa hay were cut per acre on the limed plot, and only 1,340 pounds per acre on the unlimed. This shows a gain of 55.2 per cent in favor of lime.

In another field at the same place two other plots were seeded to alfalfa

the same year, (1910). One plot was limed and the other received no lime. In 1912 two cuttings were made on each plot. Four thousand one hundred and sixty pounds of hay per acre were taken off the limed plot and 1,820 pounds per acre from the unlimed. This represents a one hundred and twenty-seven per cent increase due to lime. The quality of the hay was also improved, as about twenty per cent of the hay cut on the unlimed plot was June grass, while the crop on the limed plot was good alfalfa hay.

At the Sparta substation two plots of acid sandy soil were seeded to Mammoth clover in 1911 without a nurse crop. One plot was treated with ground limestone at the rate of one ton per acre before seeding, and the other received no lime. In 1912, 1,906 pounds of clover hay were cut per acre from the limed plot, while the crop on the unlimed plot was a failure.

Mammoth clover growing on acid sandy soil treated with lime and manure gave a yield of 5,063 pounds of hay per acre in 1912, while on land treated with manure alone the yield was 3,566 pounds. This shows a gain of nearly forty-two per cent in favor of lime.

Soy beans on limed soil produced 6.96 tons of green crop per acre in 1911. Only 2.27 tons were cut per acre where no lime was applied. In this case the lime more than doubled the yield. In 1912, the yields on limed plots were 66.6 and 77.8 per cent greater than on unlimed soil.

How to Apply Limestone.

Lime may be applied as ground limestone, marl, ground shells, quicklime, air-slaked lime, or refuse lime (lime carbonate) from glue factories, tanneries and beet sugar factories.

Lime in any pulverized form may be distributed by putting a thin layer over the manure in the manure spreader and setting the spreader at the lowest gear; by using some form of distributor especially adapted for spreading limestone; or by shoveling carefully from a wagon box. Only when the lime is damp should the last method be used.

Where only quicklime is available, it may be dumped in piles of about one-half peck each, using about 1,300 pounds to the acre. A little water should be thrown on the lime and the piles then covered with earth. After the lime slacks, more earth is added, and the material is spread with a shovel. Another method is to slack the lime in a box on a wagon, and after it is broken into fine particles to spread it broadcast with a shovel.

If large amounts of lime are to be used it will be advisable to purchase a limestone distributor. These machines spread limestone very rapidly and efficiently. They are built similar to a grain drill.



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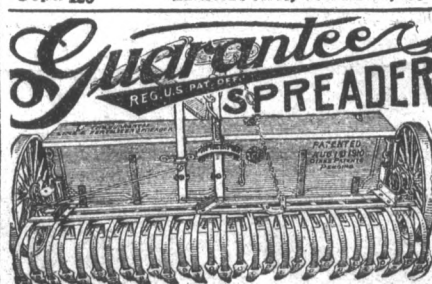


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Would Sell Cream on Merits Dairy Committee of Fifteen Holds Session

THE pressing need of the dairy industry in Michigan is immediate steps for improvement of quality of cream marketed by the dairy farmer was the consensus of opinion of the Committee of Fifteen on dairy affairs in Michigan, which met at Michigan State Farm Bureau headquarters in Lansing, March 3, to devise means to pull the industry out of the present chaos which exists in this state. It was agreed that such improvement must precede all other steps for betterment of the dairy farmer's lot.

"No educational campaign to improve dairy products in Michigan or any other state will work," said H. C. Wendt, chief of the dairy division of the state food and drug department, "unless it is accompanied by a universal system of grading cream that will make a substantial difference in the price paid for poor cream and for a high-quality product." N. P. Hull, treasurer of the Michigan Allied Dairy Association, and one of the milk producers' representatives, concurred in this statement, which found favor with the committee as a sound foundation upon which to build other reforms in the dairy industry.

Committeemen's versions of the success of cooperative cream pools and creameries in this state which are operating on a quality basis were heard with interest by other members of the committee. It was brought out that in all quality organizations the producers received from three to nine cents per pound of butter-fat over the current market price, and in some cases as high as fifteen cents. Farmers' creameries making the highest grade butter were shown to have markets for their product where price was no object.

It was declared that manufacturers of dairy products would welcome any action which would insure them of a higher quality of cream or milk from all the producers.

The following resolution was then adopted:

Whereas, the quality of the creamery butter manufactured in Michigan is gradually deteriorating, and

Whereas, this fact, in the opinion of this committee, is fundamentally due to the fact that under the present competitive conditions no financial incentive is provided for the production of a better quality of cream, and

Whereas, it is also recognized by this committee that the present duplication of cream-buying agencies is an uneconomic tax upon the producer and together with the question of quality, constitutes a condition which the cream producer is unable to stand under prevailing economic conditions affecting the industry, and

Whereas, this committee deems it fundamental that the quality of Michigan butter be improved in order that consumption may be substantially increased, recognizing that poor butter means increased consumption of the substitute article, and that, if the industry is to progress, unnecessary buying machinery must be eliminated.

Therefore be it resolved, that this committee recommend that the Dairy Department of the Michigan State Farm Bureau promote and assist in establishing cream pools in the various dairy communities of this state for the purpose of collective marketing of the cream produced by the dairymen of a given community on a quality basis.

M. L. Noon, of Jackson, was elected permanent chairman of the Committee of Fifteen on dairy affairs in Michigan, and Secretary C. L. Brody, of the State Farm Bureau, was made secretary of the committee.

Chairman Noon appointed a committee of three to act with himself in preparing a plan of procedure for presentation at the next meeting of the committee, which will be March 7 at Lansing. They were: J. C. Near, representing the farm bureau; B. A. McGill, the cooperative creameries, and N. P.

Hull, the Michigan Milk Producers' Association.

Those present were: Cooperative creamery representatives: J. S. Kinney, of Montgomery; John C. Butler, of Portland; B. A. McGill, of Big Rapids, and C. W. Pennock, of Nashville.

Michigan Milk Producers' Association: N. P. Hull, Lansing; R. C. Reed, Howell; M. L. Noon, Jackson, and Mr. Harwood, Adrian.

Michigan State Farm Bureau: J. C. Near, of Flat Rock; Roy C. Potts, of Washington; Robert Monteith, of Martin; George Kern, of Owosso, and Alfred Hendrickson, of Shelby.

DAIRY INTERESTS FIGHT BUTTER TAX RULING.

(Continued from page 328).

tion is widely scattered, was necessary to the maintenance of the dairy and creamery industry. It was definitely stated that none of the lime enters into the butter, and that butter made from cream neutralized and pasteurized kept better than butter not so handled.

The attorney for the creamerymen contended that the act of 1902 did not have reference to the manipulation of cream in any way, but that it applies specifically and exclusively to the "manipulation of melted parcels of butter or butter-fat," such as was used in the production of "process" butter, a commodity not now found in the markets. He declared that cream, its character and manipulation, came within the provisions of the pure food laws, and on this ground he asked for the withdrawal of the commissioner's ruling. The creamery experts declared that cream which was putrid was not used for butter, and if used would subject the resulting bad butter to condemnation under the pure food laws. It was also contended that it was impossible to draw the line between bad odors and objectionable odors, that what might be considered a bad odor by one inspector might not be objectionable to another, and that if the ruling were to go into effect it would be impossible to secure enough men qualified to judge butter fairly as to the law's provisions, and that it would subject the creameries to an endless amount of trouble if they used the neutralizing process for any purpose, and render them liable to taxation or criminal prosecution according to the decisions of incompetent revenue officials. It was also declared that any treasury ruling which would prevent the use of a neutralizer or compel the payment of a ten-cent tax on butter from cream so neutralized would greatly restrict the dairy industry of the country.

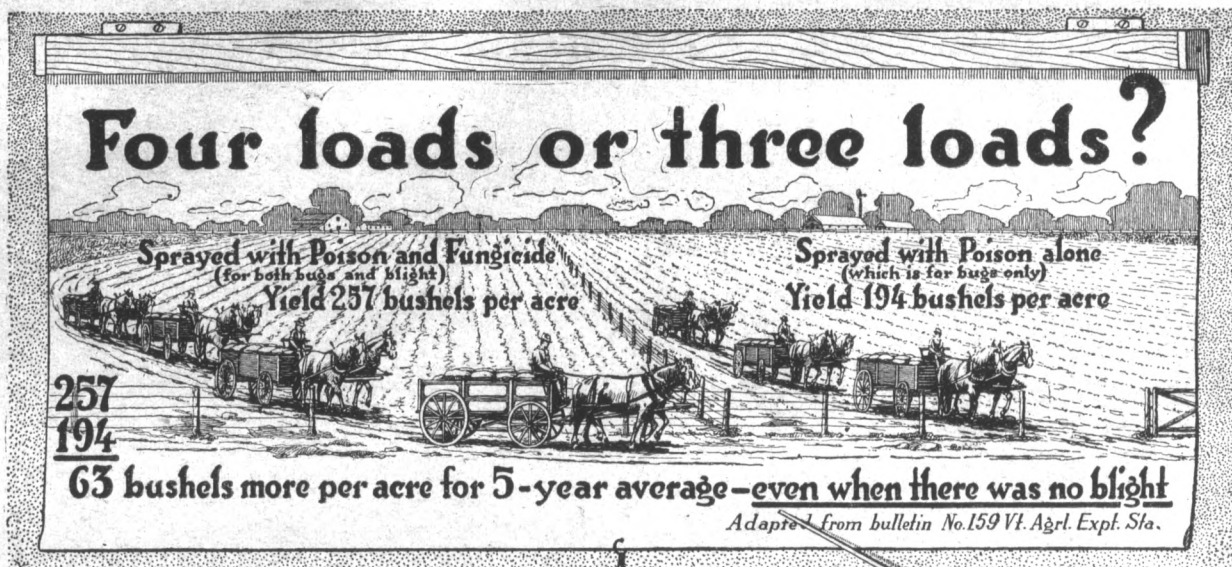
James Sorenson, representing a large number of Minnesota cooperative creameries, argued that cream which was in such a condition that it required neutralization and pasteurization was not suitable for use in butter-making; that because the centralized creameries accepted cream that was turned down by the local cooperative creameries, the small creameries were at a disadvantage and unable to compete with the larger creameries which made extensive use of the neutralization process. The oleomargarine interests were represented by Secretary J. S. Abbott, of the Institute of Independent Margarin Manufacturers, and the National Lime Association by Professor E. O. Fippin, but they were not given an opportunity to testify.

According to the best information obtainable, Mr. Goodwin, of the M. A. C., states that from seventy-five to eighty per cent of the creamery butter made in Michigan is churned from cream neutralized with lime.

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Use
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Apples
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“even when there is no fungus”

WHEN buying a spray material, consider that fungous diseases cause more damage than insects. Consider further that it pays to spray with a copper fungicide even when there is no fungus.

AT the Vermont Agricultural Experiment Station, the average increase for 20 years of spraying potatoes with a copper fungicide was 105 bushels per

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You need a fungicide to control fungous diseases—a powerful one.

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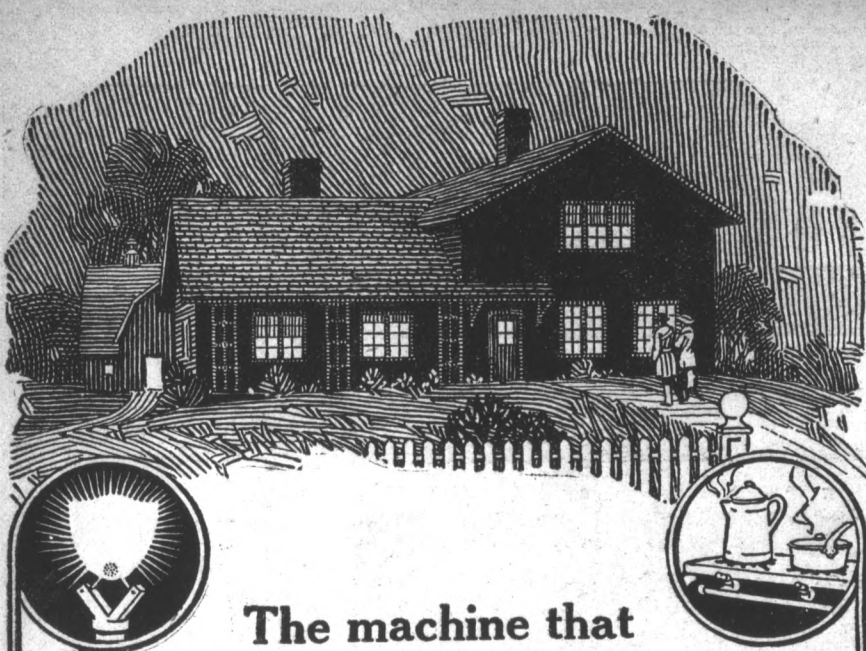
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“even when there is no fungus”

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The machine that moved the city to the country

JUST a simple little machine for mixing crushed stone and water to produce fuel and light. But what a machine! This marvelous mechanism is known as the Colt Carbide Lighting-and-Cooking Plant.

It brings carbide (crushed stone) in contact with plain, ordinary water automatically. The gas generated thereby makes the *hottest* cooking fuel known; it makes soft, mellow light that has been called "the chemical counterpart of actual sunlight."

You want this machine, because:

It will take the heat and drudgery out of the summer kitchen by substituting clean carbide-gas for sweltering coal and messy oil. It will put man-made sunlight in every room in the house, barns, outbuildings, drives.

It will give you every advantage of city cooking and lighting wherever you live, and at a cost so low as to be negligible.

There is no waste with a Colt plant. An automatic shut-off control suits the supply to the demand. The residue of the devitalized carbide is slaked lime, valuable for fertilizer or white-washing.

It is easy to install a Colt Machine. The only attention it asks is a small supply of carbide about once a month. And carbide is readily obtainable in every rural community.

Will you let us tell you the whole story of carbide lighting and cooking, as rendered by the simple little Colt machine? Just send us your name and address on a post-card. Take this first step today—without obligation.

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AND-COOKING PLANTS

C-1-21

Holding Fast The Good

Big Organizations Joining Hands

THREE great and powerful agricultural organizations of Michigan which, according to Michigan State Farm Bureau officials, have formerly held aloof in the matter of affiliating with the farm bureau, fearing that under centralized control they would lose their corporate identity, are now closer to the state organization than they have ever been. This great convergence of agricultural interests is virtually an endorsement of the commodity control idea, says the farm bureau and is called significant in that it came immediately after the election of state officers and an executive committee on the commodity control issue.

The Michigan Fruit Growers' Exchange, the leading cooperative fruit organization of the state, has asked the farm bureau that it be made the official fruit organization of the farm bureau under the commodity plan. A farm bureau committee has been ordered to negotiate with the fruit men. Negotiations are under way with the Michigan Potato Growers' Exchange, a powerful marketing organization with an immense plant. The Michigan Live Stock Shippers' Association, at their recent annual meeting, endorsed the State Farm Bureau and agreed among themselves to join the organization under the commodity control plan.

Farm bureau officers call these recent developments not only an endorsement of the commodity control, but a strong belief in the future prosperity and permanency of the Michigan State Farm Bureau by great cooperative organizations which have made a success for themselves in their own field and along the same general line of control.

Under the commodity control plan, as understood by the farm bureau men, each commodity organization would have complete charge of its own field, would serve all other farm bureau members in a cooperative manner and would in turn have the use of other commodity organizations. All commodity organization members would become farm bureau members, and eventually the commodity organizations probably would have representation on the State Farm Bureau executive committee.

Plans are now entertained for the organization of the entire farm bureau membership into cooperative associations, which would serve one another and all would be served by the general departments of the State Farm Bureau—publicity, seed, traffic, marketing, and legislative. Already several counties have every farm bureau member identified with a cooperative association.

More than twenty-five thousand Michigan farmers have signed crop contracts whereby they agree to handle all their produce through their cooperative associations, according to the extension department of the agricultural college. Cooperative associations are being formed in the state at the rate of twenty a month, and the idea is reported to be taking fast in all existing farm organizations.

The farm bureau's reasons why it believes that commodity control will guarantee its future have been summarized as follows:

1. It is already a big growing business.
2. The commodity organizations will still continue to be regarded as departments of the centralized organization.
3. Their services will be so correlated that a member of any one commodity cooperative association can get help from any of the departments.
4. All specialized farmers and gen-

eral farmers will still get the services of the general departments of traffic, seed, legislation, publicity, and the secretary's office.

5. A large percentage of Michigan farmers are general farmers with interests in a number of commodities whose influence and the influence whose county agent will be toward a united service rather than a division.

6. Michigan's commodity organization policy now provides for the admittance of the potato growers' exchange and other such organizations which can come in without utterly losing their identity and whose admittance means an increased service and an increased satisfaction on the part of the farmers.

7. The vote for president at the annual meeting was one hundred and thirteen to fifty-five favoring James Nicol, which was the test vote of the attitude of the membership toward commodity organization and would seem to indicate that two-thirds of the membership were already sold to the commodity idea.

8. That one commodity organization being incorporated will not become responsible for the acts of another commodity organization.

9. Ultimate representation of commodity organization on the executive committee of the State Farm Bureau will give the needed unity of action and mutual understanding.

MOTOR CAR HELPS BOTH WAYS.

IT used to be a long day's work to go from our locality to town with farm produce. We had to get up at three o'clock in the morning and usually it was long after dark when we reached home, and we kept the horses shacking at that. Then, too, the teams were taken away from the farm work, which really was the most serious thing of all.

But the auto truck changes all that. Now we have an early breakfast and are in town twenty miles away with our cauliflowers or whatever we have to sell, by the time the stores are open. In half an hour or an hour at the outside we are all sold out and ready to get back home. If we have any errands to do, the machine takes us right round town quickly, with the least possible loss of time.

Here are some of the gains: First, the teams are at work on the farm. This is especially important in the busy season of the year. We get our stuff in the stores away ahead of those who must depend upon horses to take their loads in. It is a great deal easier to ride in an auto than in the easiest wagon. We get back to the farm comparatively fresh and ready for quite a day's work. Being early in the market, we are able to get top prices for our stuff. This is an advantage we appreciate, for later in the day, the stores are usually well supplied, so that it is more difficult to make a sale. There are no horses to put out and feed in town. That always had to be done with horses. There was always some expense connected with stabling the time while eating. We do not have to wait till the team is hitched up before we go around and pick up our load. That has all been done as we went along with the auto. The machine does not get tired climbing hills or traveling over hard roads. We have no trouble with horses' feet getting sore pounding over cement roads.

E. L. V.

Protein grown on the farm in the form of clover, alfalfa, cowpeas, and various legume crops is generally cheaper than that bought on market.

These Seven Cows

Fed From the Product of One Acre Every Day for Over a Year

64 tons of Ross' Eureka Silage Corn to the acre is the yield reported by Mr. Reynolds, Farm Superintendent of the Worcester State Hospital, Massachusetts. At 30 lbs. each per day, this would feed seven cows for one year and eight months.

Ross' Eureka Corn grows the tallest, has the most leaves, is very short jointed and will produce more tons of good sweet ensilage per acre, than any other variety. We have been selling Eureka corn for nearly 40 years and we know before shipping that it will grow under favorable conditions. This corn usually germinates 90 per cent. or better.

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Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

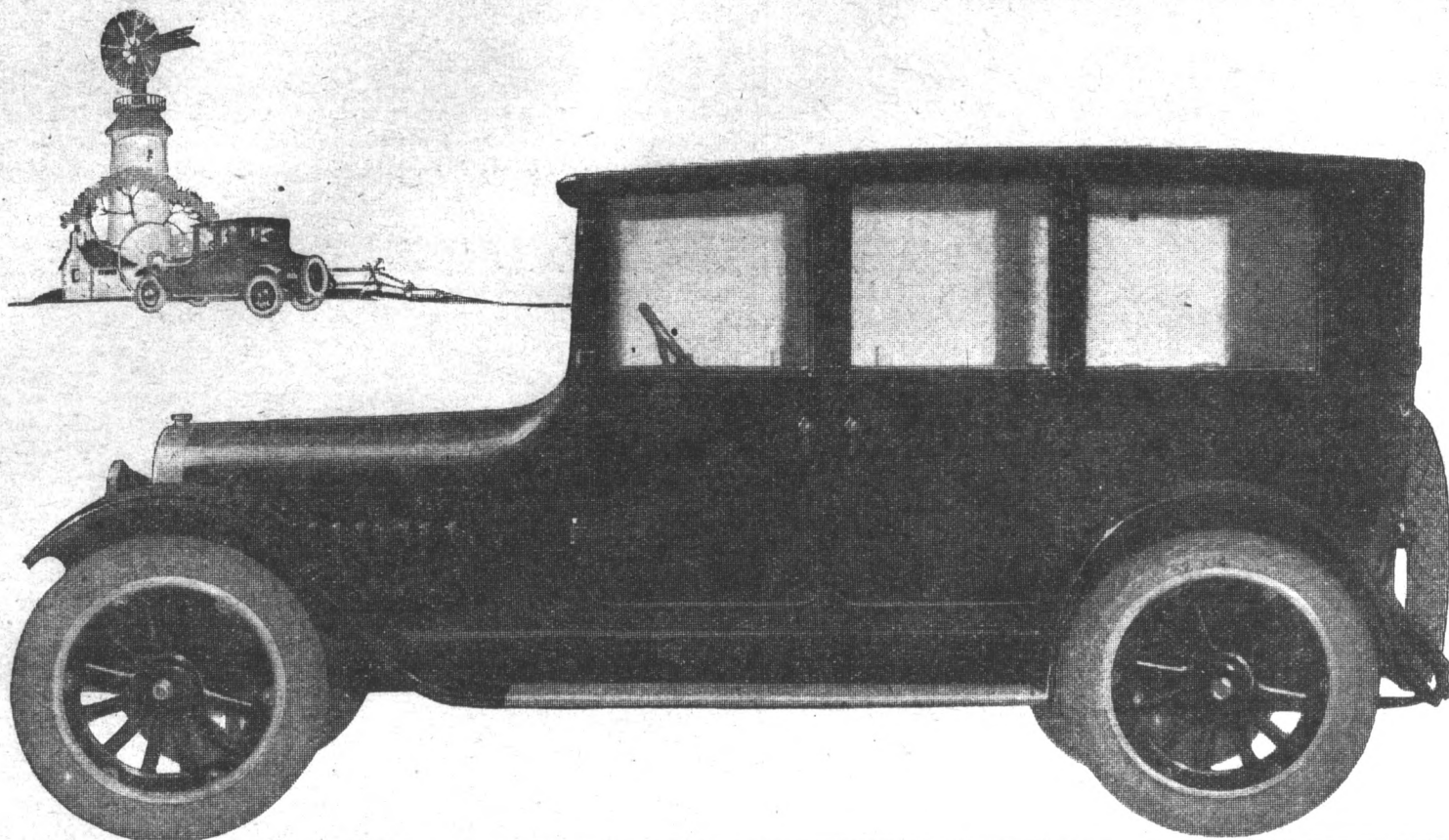
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18 TO 25 MILES PER GALLON OF GASOLINE
AND FROM 8,000 TO 12,000 MILES ON TIRES



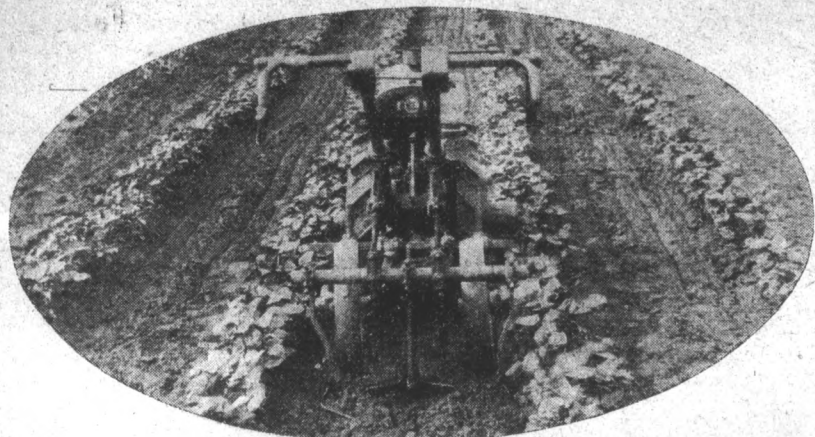
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THE Oakland Sensible Six engine is of Overhead-valve design—a design clearly demonstrated as superior by its use in all racing car and airplane engines. The cylinders of this engine afford the nearest possible commercial approach to the ideal combustion chamber. As a result of this and other Oakland features, the Oakland owner enjoys more miles from the gallon of gasoline, more power per pound of car weight, quicker getaway, easier hill-climbing and greater flexibility, than are available in any other car at anywhere near the Oakland price.

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And NOW is the Time to Use One and Keep
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This PROVED machine is being offered to you today on a Liberal Deferred Payment Plan. A small

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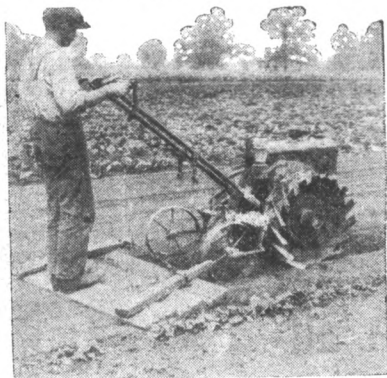
Act NOW. Let our dealer demonstrate. He will give you the details of our Payment Plan. Get your Utilitor while we can make prompt delivery.

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DEALERS—Learn how you can make money and friends selling the Utilitor. Our Deferred Payment Plan gives you your profit immediately. A WORKING service plan is behind every machine you sell. Write or wire today.

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SOLD BY GROCERS
EVERYWHERE

Made by
Postum Cereal Company, Inc.
Battle Creek, Mich.



Farm Labor Situation

County Agents Tell of Conditions

FARM labor will not be a scarce varying from board only to \$25 a month article this season nor will the with board. Wages there have been farmer have to pay an unduly high cut fifty per cent.

Prices do not warrant a continuance of high wages, say Manistee farmers who are hiring by the day and paying \$2.00 to \$3.00, a cut of from fifty cents to \$1.50. No decrease is expected in the number of men employed.

Play safe is the advice that Oceana county farmers are giving each other. They have lowered wages \$10 to \$15 a month and have made the monthly rate about \$40 and board. Mason county calls the labor market one for employers and notes that the wages are dropping from \$10 to \$20, with more men available.

Eaton county does not anticipate a plentiful supply of farm labor during the coming season, but expects to employ about the same number as in 1920. Farmers offer \$45 a month and board. Greater crop acreage is going to boom the Alpena county labor market to some extent. Farmers there are offering \$30 to \$50 a month for men.

Antrim county farmers say that as they have no guarantee of returns on their investment, risk and labor, they are not going to invest very much good money in labor that has been spoiled by high wages, short hours and half-hearted work. Lapeer county will employ twenty per cent less farm laborers this year than last, according to County Agent S. F. Wellman. Many farmers there feel that they would be money ahead to allow their farms to lie idle than to pay high prices for labor and sell produce at present prices. Good men will draw \$40 to \$45 there, a reduction of \$10 to \$15.

No change will be noted in the number of farm hands to be employed in Ionia county. Labor is not rushing back to the farm from the city and indications that farm labor will be short in that county if city conditions pick up. A few farmers who left Kalkaska county are returning. No change is probable in the number of farm laborers who are being paid at the rate of \$40 a month. Tenant farmers will take the place of forty per cent of the farm laborers in Isabella county according to the forecast from that section. Farmers there are not planning to raise much more than enough to meet expenses. More men will be employed in Jackson county where County Agent C. V. Ballard says the neglected farms are in need of attention and that the labor costs would probably be within reach of the farmers. Jobless men are invited to come out and do chores and chop wood for their board until spring, when work opens up. The going wage is promised. Sons and sons-in-law have hit the trail for the farm in Berrien county since the industrial slump, where jobs are to be had in limited number at \$2.50 to \$3.00 a day, somewhat less than last year. Gratiot county farmers are agreed that they can't continue to pay high wages and break even. Over-production is going to cause Ingham county farmers to raise what they can without hiring men. Fewer laborers will be hired and the prevailing wage will be \$25 to \$30, from \$15 to \$20 less than in 1920. Mecosta county farmers announce that they are not going to hire. A few are being taken on by the year and the wage question is generally unsettled. Marquette, Manistique, Dickinson and Alger counties are going to hire get jobs in Wayne county at returns more men.

Fifteen Michigan counties making reply to the questionnaire said that more men would be employed in their respective counties during the coming season, ten saw no change and eight others predicted a curtailment of both labor and production. Reports from the county agents were, in brief:

Missaukee county said that only year-round help was being hired, without much change in the prevailing wage. However, farmers declare that they can't hire at any price on present prices.

Muskegon county will increase the number of farm laborers by forty per cent and will pay from \$50 to \$60 a month, but at present farmers are slow in hiring.

Farmers are undecided in Newaygo county and there is a tendency to curtail acreage and build up the land by seeding to clover or legumes. Very few laborers are being hired, but the rate is from \$40 to \$50 a month.

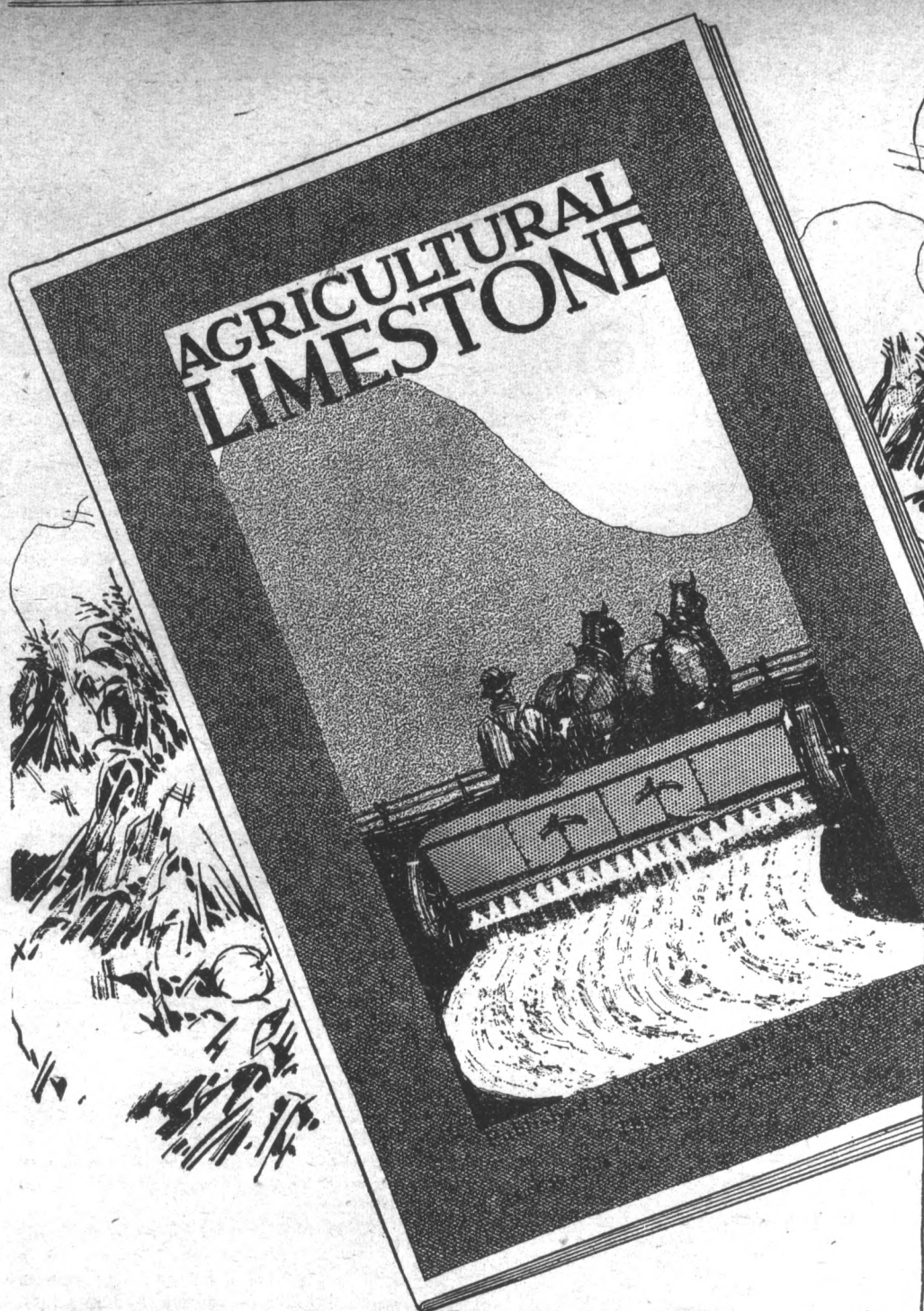
Oakland county farmers are determined not to pay high prices for farm labor and have set the price at \$25 to \$40, but plan to hire more men this season.

Ottawa county will hire more men but the number will depend largely upon conditions. Farmers there say that during the war they worked without help and can continue to do so as long as farm prices are low and manufactured products are high.

Presque Isle farmers do their own work and have no labor problems, says County Agent E. S. Brewer, in estimating that labor costs will be one-third less in 1921.

Washtenaw has difficulty in getting good men and sees very few men returning to the farms from the cities. Wages have been cut \$15 to \$30.

Perhaps five hundred more men will get jobs in Wayne county at returns



For Bigger
Crops Next Fall



COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF MICHIGAN

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AND OTTAWA COUNTY BOARD OF
SUPERVISORS COOPERATING.

EXTENSION DIVISION
COUNTY AGENT WORK
OFFICE, COUNTY HOUSE
BELL PHONE 483

GRAND HAVEN, MICHIGAN February 9th, 1921.

Wing & Evans Inc.,
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I wish to thank you heartily for remembering me with this booklet.

Yours truly,

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County Agr'l. Agent.

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Since sending them out, we have had letters from farmers, from county agents, and from agricultural experts in every line complimenting us on the book. The above letter is a sample.

If you have neglected to send for your copy, we suggest that you do so now, so that you can apply the information which the book contains towards helping you produce bigger crops this year.

A glance at a few of the chapter heads will give you an idea of how thoroughly the subject is covered.

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Limestone and Non-Legumes
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It will require not over half an hour's time to read the book and it will give you an accurate knowledge of this vital subject which will put you in position to obtain greater yields and greater profits for the rest of your life.

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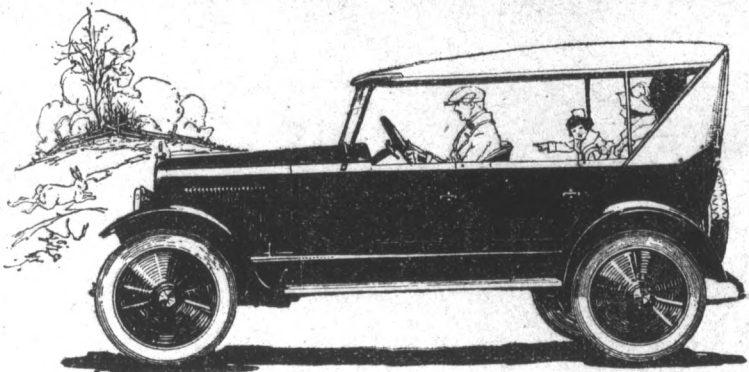
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The beauty of line and its perfection of finish please the eye; its easy riding gives comfort over country roads; its exact balance and light weight reduce strains and increase mileage; and its world-famous motor sets a standard of economy that is recognized everywhere.

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Elevates and Cleans 300 to 800 Bu an hour

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From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc. A. J. PLATT, MFR. BOX J STERLING, ILL.

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Sturges Milk Cans

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

Upper Peninsula News

By L. A. Chase

THE recently published live stock reau. Agent E. L. Kunze will do the summary, issued by the Bureau editorial work for the News on its agricultural side, and every bureau member will receive the paper. The Chipewa County Farm Bureau has rented a warehouse at Pickford to house and distribute supplies to members in that section.

The snow motor which has been in use near Ironwood recently pulled four large sleighs loaded with eighty-four tons of logs, according to the Daily Globe of that city. This was not the limit of its capacity, it was asserted. The augur drive on the skates of the drums is the basis for the power developed by this invention, it is stated, which can ascend the steepest hills without difficulty, it is claimed. On the streets of Ironwood the machine pulled nine sleighs loaded.

The coming season will see the construction of the new cut-off road from Lake Linden to Gay on the upper Keweenaw Bay shore, to be carried on jointly by Houghton and Keweenaw counties. Houghton county will utilize four miles of old road that is to be rebuilt, while Keweenaw county must undertake six miles of new construction throughout. The new road reduces the traveling distance between the termini by twenty miles, it is stated, and will pass through virgin timber, adding another very scenic drive to the delightful highways of the peninsula.

Government Explosives Probably Not Available.

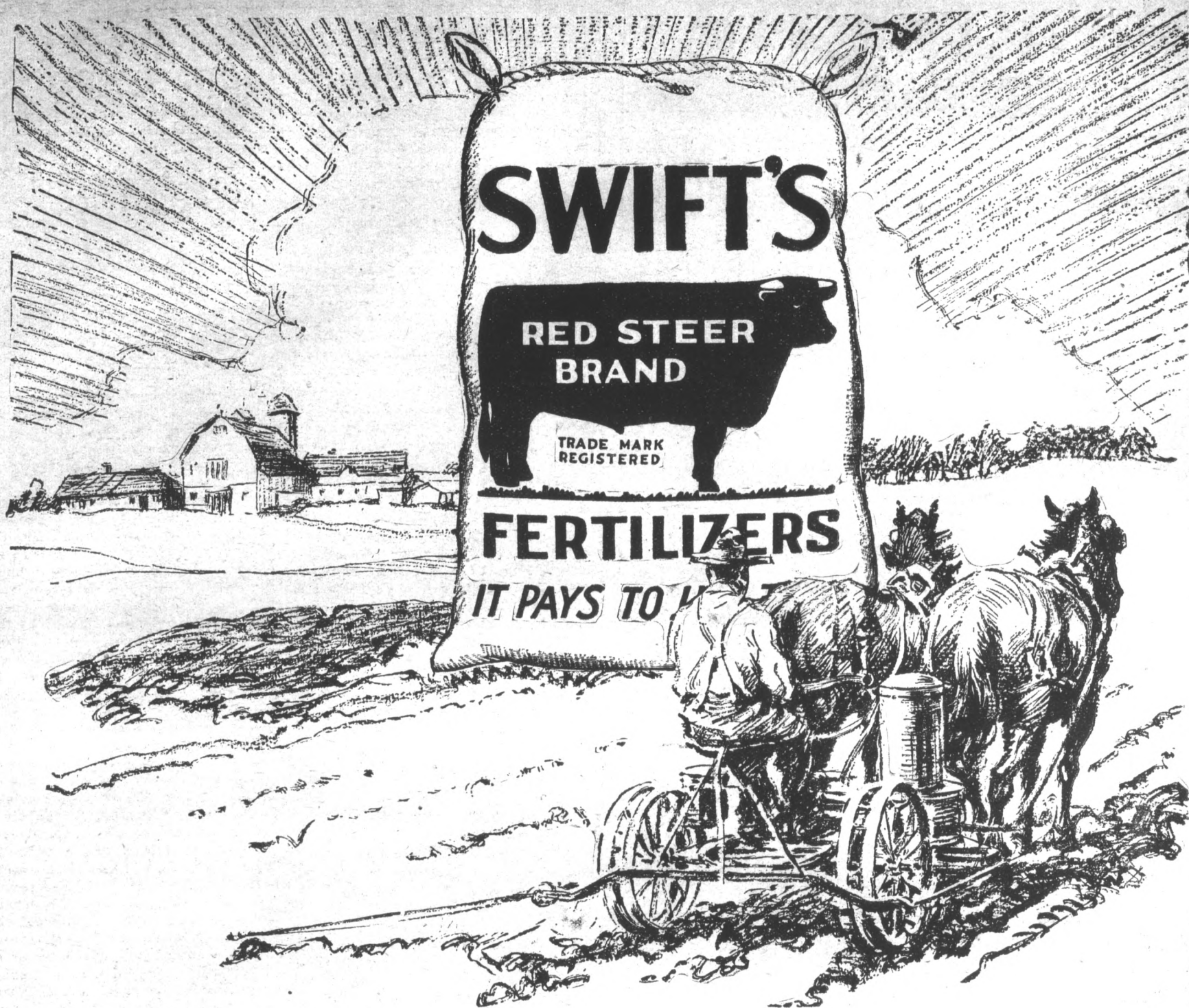
The prominence given the subject of land-clearing in the cut-over district of northern Michigan and the other lake states, calls attention to the great quantity of salvaged war explosives—TNT and picric acid—temporarily located near Sparta, Wisconsin, rather to the disquietude of the good people of the neighborhood. The war department purposes, it is understood, the removal of this stored explosive to a remote district in the southwestern United States, where it will not endanger life and property and where it will be available in time of war. An effort is being made to retain this salvaged war explosive in the lake states region, where it may be employed for land-clearing, road-building, drainage and similar operations. Considerable correspondence has passed between experts of the College of Agriculture of the University of Wisconsin, the Upper Peninsula Development Bureau, and other interested agencies, and Washington, looking to legislation and rulings that will effect this object. The problem is complicated, involving a difference of opinion regarding the deterioration of TNT when stored indefinitely, military policy, and the availability of picric acid as a substitute for TNT on our northern lands. The secretary of war appears to be willing to relinquish picric acid at Sparta and at Fort Wingate, N. J., but is disinclined to let go the TNT. Just what the outcome will be cannot be said at this writing. There are said to be more than 16,000,000 pounds of TNT at Sparta, with 3,300,000 pounds of picric acid there, and nearly twice that amount at Fort Wingate. The Wisconsin idea is to have this explosive—or a portion of it—sold to the states at low cost, to be distributed by public agencies to local uses also at low cost. Military policy may prevent the execution of this plan.

Big Week for Cloverland.

The dates of the Cloverland Farmers' Institute are March, 29-30-31, and the place is the Menominee County Agricultural School situated close to the city of Menominee. The farm bureau movement will feature the first day's proceedings. Women's interests are also to receive particular attention at the conference and a strong list of speakers for them particularly is said to have been arranged. Under this head, "Textile Day" will be March 29, and "Health Day" on March 30. This date will also be "general agricultural day." The last day of the conference will be given over entirely to children, parents and teachers, it is stated. The second annual grain show held at the school will also take place this year. Last year, six trophy cups were offered by business men of Menominee county, the cups being awarded finally only if the winner is successful in three events. These trophy cup contests are open to all upper peninsula farmers who desire to participate. There is to be no entry fee. It is expected that, as last year, seed-buyers from outside the district will be on hand. There is likewise to be a garment contest in which schools will take part in a contest for a trophy cup which also must be won thrice to insure permanent possession. A silver trophy cup will be awarded to the upper peninsula farmer who displays the best potatoes. Mr. Kebler, superintendent of the school, is urging general interest in the conference and the exhibits.

The Sault Ste. Marie News and Upper Michigan Farm Journal has entered into an arrangement with the Chippewa County Farm Bureau whereby it handles publicity material and general farm news for the farmers of the county, of whom some thirteen hundred are associated with the bu-

The catch of trout in Lake Superior in 1917 was 1,536,851 pounds, and of the famous whitefish, the catch was 242,262 pounds, taken in Michigan waters. In the commercial fishing industry of Lake Superior, Chippewa county led, followed by Marquette and Keweenaw.



Your crop cost will be low

MAKE your land yield more bushels of oats or more bushels of corn per acre. Make the output per man greater. That is the way to grow your crops at low cost.

The certain way to insure large yields of best quality, which means low production cost, is to supply the crop with plenty of available plant food.

Swift's Red Steer Fertilizer will do this.

It is made from carefully selected materials, both organic and chemical, and furnishes available plant food from seeding to maturity.

Swift's Red Steer Fertilizer is evenly mixed and thoroughly cured. It supplies each plant with its proper proportion of plant food, thus insuring largest yields.

Liberal applications insure biggest crops of best quality.

For more than fifty years Swift & Company has maintained a reputation of making each Swift product the best of its kind. Three new factories were built by us last year to keep pace with the growing demand for Swift's Red Steer Fertilizer.

You can get Swift's Red Steer Fertilizers from the local Swift dealer or our nearest Sales Division. Don't delay—order and haul now.

Swift & Company, Dept. 43
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Hammond, Indiana

More per acre

Every acre must be made to yield its best to secure satisfactory profit.

It takes a certain number of bushels of corn, potatoes or oats per acre to pay for the cost of production. All over this quantity is practically clear profit.

The average application of fertilizer per acre is larger each year because more and more farmers are learning that heavier applications pay them the biggest profit.

Your safest way to insure profits is to use a liberal application of Swift's Red Steer Fertilizers containing 14% or more of plant food.

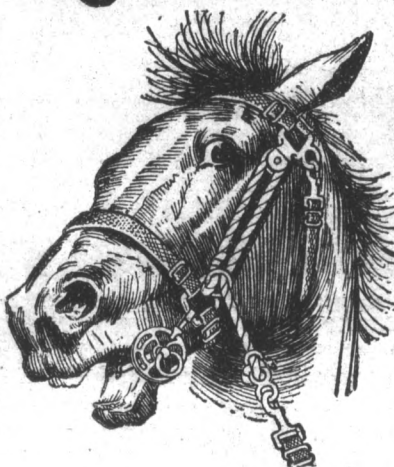
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Prof. Beery's Amazing New Invention 3-in-1 Breaking Bridle

Yes, absolutely FREE! Prof. Beery's new invention is a **Breaking Bridle**, a **Halter** and a **Regular Bridle** ALL IN ONE! Works perfectly for each of these uses and can be changed from one to any other in an instant! Regular price \$4.25—Now yours free! Nothing like it ever before invented. Adjustable to any colt or horse. Subdues the wildest colt instantly. Quickly brings to time the most powerful and vicious horse.

Picture shows why horse must submit at once! Professor Beery's new invention is made of the best webbing ever produced—2½ times stronger than leather. Not effected by weather conditions. All metal parts of finest castings. Includes Professor Beery's famous Four-in-one Driving Bit. Complete invention is well worth twice its regular price of \$4.25—Read why we give it to you **ABSOLUTELY FREE!**



\$125 Clear Profit!

That's what Chas. Mackley of Unadilla, N. Y., made in 10 days! You can easily do it too. Mackley bought an ornery horse for \$50. Ten days later he sold him for \$175, making \$125 clear profit! Beery's Secrets in Horse-Breaking and Training did the trick! In order to introduce to YOU Prof. Beery's Secrets we offer you—for only \$5—the entire Condensed Course in 6 amazing lessons—and we will give you this \$4.25 Three-in-One Breaking Bridle FREE. **WE WILL ACCEPT NO MONEY** now—we want you to see with your own eyes and judge for yourself!

Mackley is only one of the many who make big money through Beery's Secrets! Mr. S. L. Arant writes: "Just to test Beery's methods I bought the worst balky, kicking, fighting horse I could find. Paid \$65 for him. After handling him only a few hours according to Beery's system I sold him for \$135". Think of it! \$70 clear profit in only a few hours! Scores of others are making big money like this. You can do it too!

SEND NO MONEY

No, not a single penny! This coupon brings to you at once Prof. Beery's entire Condensed Course in Horse Breaking and Training Secrets, learned after 30 years of experience with thousands of horses. Mail coupon at once and you will receive the 3-in-1 Breaking Bridle (Regular Price \$4.25) Absolutely Free! If you like the Course, after 5 days' free examination, send only \$5 for it—the 3-in-1 Bridle you keep Free. If you don't like the course return it with the bridge—and forget the matter.

We can make these amazing offer because nobody returns the Course of Secrets. They see right away that it will bring them big money; and the 3-in-1 Breaking Bridle does such wonderful things with all kinds of horses and colts that people jump at this chance to get it free. Read the

PROFITS! PROFITS!
You can not only pick up "ornery" horses and quickly make them bring you big money but you can also make your own horses more safe and valuable, or you can break and train your neighbors' horses for big fees.

As proved by these and scores of other letters in our files—there's no end to the money you can make. "I made \$10 in just 10 minutes," says Douglas Clark of Shubemacade, Nova Scotia. Dell Nicholson of Portland, Michigan made \$165 on one horse. "I made \$195," writes Orphie Bishop, Bernard, Kansas. "Made \$279 profit on 1 mare," says Louise McCutcheon, Berlin, Ontario. "Changed a worthless balker into a \$225 horse," says Dean Smith of Findlay, Ohio. "Made a horse that cost \$17.50 sell for \$150," writes Everett McBook, Elkhart, Ill. And these are only a few of the letters! Beery's Secrets will mean as much to YOU. Let us put the entire 6-lesson Condensed Course into your home for Five Days' Free Examination—at a special price of only \$5 if you are satisfied.

coupon—it tells the story. Fill out and mail this coupon today. Beery's School of Horsemanship, 463 Main St., Pleasant Hill, Ohio.

Beery School of Horsemanship,
463 Main St., Pleasant Hill, Ohio.
Send me Prof. Beery's Condensed Course in Horse Breaking and Training—6 complete lessons. I will look it over for five days and if I like it I will send you \$5.
On this special offer I am to get Absolutely Free Prof. Beery's new invention the 3-in-1 Breaking Bridle.

Name.....
Address.....

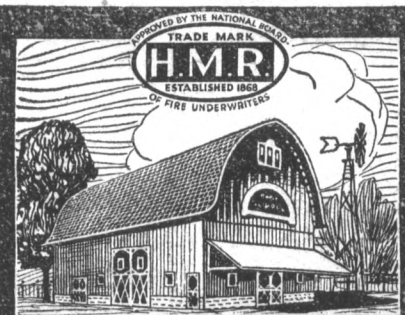
STRAWBERRY PLANTS
The real money makers—the worth white kinds—including the three BEST EVERBEARERS. A good assortment of other profitable varieties. Vigorous, heavy rooted and true to name. 25 years experience in growing and packing plants. Prices have been reduced. Wholesale prices on large amounts. Our FREE CATALOGUE TELLS THE TRUTH, a valuable book for the grower. A. R. Weston & Co., R. D. 6, Bridgman, Mich.

Strawberry Plants that Grow
WHITTEN'S large rooted healthy strawberry plants are the result of more than 30 years' successful experience and study. Sure to grow and produce large, luscious berries all season. EXCLUSIVE WHITTEN BERRIES: The COLLINS, an early, hardy market variety and EATON the Strawberry Supreme, a mid-season variety of wonderful flavor and texture are our leaders. Write today for beautifully illustrated Catalogue, full of valuable information about Strawberries, Raspberries and small fruits. It's Free. Send a postal at once.
C. E. WHITTEN & SON, Dept. 14, BRIDGMAN, MICH.

STRAWBERRY PLANTS
Good strong, well rooted plants at \$4.00 and \$5.00 per thousand. Also a complete line of the best red and black raspberries, hardy blackberries, fancy gooseberries and currants, a large stock of popular grape vines. Many of our customers are making from \$500.00 to \$1200 per acre growing berries from our fruit plants. Send for our free catalog.
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Strawberries, Everbearing
and Spring varieties. Raspberries, Hardy Shrubs, Roses & Etc. Our plants will please you and our prices will save you money.
GEO. H. SCHENCK, Elsie, Mich.

Choice Strawberry Plants
\$4.00 per thous. leading varieties at \$4.00 and guaranteed first class or money refunded. catalogue. MRS. FILENA WOOLF, Swan Lake Fruit Farm, Allegan, Mich.



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Rain - Hail - Wind and Snow

Just as they have laughed at all the elements for 20 straight years. Built for protective roofing service, they are especially appreciated by farmers who know what it is to combine real fire protection and economy. Backed by 10 year guarantee, the Reynolds Trademark on each and every package is your best roofing protection. Let us help you protect your buildings. See your nearest dealer.

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"Originators of the Asphalt Shingle"
GRAND RAPIDS, MICHIGAN
Reynolds Shingles Grow More Beautiful With Age

EVERBEARING STRAWBERRY
Our free Catalog describes and illustrates a full line of choice small fruit plants. SEND FOR IT.
J. N. ROKELY, R. 6, Bridgman, Mich.

Our Service Department

ALFALFA ON WHEAT GROUND.

Would you consider it wise to sow alfalfa seed on my wheat ground this spring? This is clay loam and well drained, also soil is in good condition. Montcalm Co. O. C. M.

Many Michigan farmers are securing success with alfalfa seeded with wheat in the spring. On well-drained clay loam soil, which in your experience has sufficient lime to carry red clover, a spring seeding of alfalfa should be followed by a good stand.

We strongly recommend northern-grown alfalfa seed produced in Montana, the Dakotas, or northern Idaho. The Grimm alfalfa is the best variety. Recommend seeding fifteen pounds of ordinary northern-grown or ten pounds of Grimm seed per acre.

Culture for inoculation may be secured from the Department of Bacteriology, East Lansing, Michigan. The price is twenty-five cents per bottle and one bottle contains sufficient material to inoculate a bushel of seed. Directions for application accompany the material.

The Michigan Agricultural College, of East Lansing, will send you a circular on request, giving full information in regard to securing a stand of alfalfa and source of dependable seed.

J. F. Cox,

WHITE SWEET CLOVER.

Please tell me how to handle white sweet clover for the best success. Will it grow on sour soil?—Subscriber.

While it is claimed by some that sweet clover will grow on almost any kind of a soil, it seldom makes a profitable growth on an acid soil. It is one of the most sensitive crops to this condition. An application of two tons of ground limestone or from two to three cubic yards of marl is usually necessary to secure a good crop on an acid soil. Proper inoculation is important. (See answer above for directions for securing cultures for inoculation).

Sweet clover should be sown in the early spring on a well compacted seedbed at the rate of about twelve pounds of scarified seed per acre. The white biennial gives a larger yield and is more upright in growth than the yellow biennial. Sweet clover may be sown on fall-sown wheat or rye, or with oats or barley. The possibility of securing a crop the first year depends quite largely upon the fertility of the soil and moisture supply.

The first crop the second year when desired for hay should be cut before the blossoms appear and high enough that a few leaves will be left on the stubble, otherwise the young shoots will not start and the second crop will be lost.—C. R. MEGEE, Assistant Professor of Farm Crops.

PROPER GRAIN WITH ALFALFA HAY.

Kindly tell me what is the right proportion of alfalfa hay, bean, corn and oats meal to feed a cow. She is giving about seven quarts of milk a day now but should do better. I am feeding two pounds of corn and oats meal and one pound of bran a day with two feedings of hay and one of corn fodder. Ingham Co. A. L. R.

The foods you mention are all splendid food for dairy cows. All you have to do is to feed the proper amount and in right proportion. If your cow won't give a maximum flow of milk on this feed, then I think I am safe in saying

that she is not a genuine dairy cow.

You can feed all the alfalfa hay and cornstalks that the cow will eat up clean without material waste. Mix the bran and ground corn and oats equal parts by weight, then feed one pound of this grain ration for every three pounds of milk your cow produces in a day. As she increases in flow of milk increase the grain ration in proportion.—C. C. L.

FERTILIZER FOR CUCUMBERS.

What kind of fertilizer would you advise me to use on sandy soil that I am trying to put in shape for cucumber pickles? Have put a coat of manure on it which I will plow under in the spring? What fertilizer should I use on muck, which I expect to seed along with oats in the spring? Ottawa Co. D. M.

I would recommend on sandy soil for cucumbers, a complete fertilizer, one containing at least two per cent nitrogen, eight or ten per cent phosphoric acid and two to four per cent potash. If you cover this soil with stable manure and plow this under, probably it is only necessary to use fertilizer in the hills, but it ought to be well mixed with the soil. About two or three hundred pounds per acre placed in the hill and harrowed in or raked in with hand-rake would be sufficient.

No one can tell exactly what fertilizer to use on muck, because muck differs so in character. As a general rule, it is deficient in phosphoric acid and potash, but sometimes it is also deficient in available nitrogen because the nitrogen in the muck is in an inert form. For most muck you would use a fertilizer containing phosphoric acid and potash, say, a 10-4 or 10-5 fertilizer.—C.

FERTILIZER FOR CLOVER.

I have ten acres of very poor sandy soil that should be seeded this spring, and also wish to sow it to oats. It is located west of Orchard Lake and you will probably be able to judge the kind of sand it is. The soil at present needs fertilizing badly, and can you advise the proper kind of fertilizer, amount to be used, and if it is more expensive than other kinds? Also quantity of oats to sow per acre to produce best results with seeding. Also particulars on seeding. Should big clover be used or what kind is best to insure a catch? Oakland Co. B. E. K.

It is possible that your land needs lime as much as it needs fertilizer in order to get a good catch of clover. If the soil is acid clover will not do well, even though heavily fertilized. You can determine with blue litmus paper whether your soil has an alkaline action or not. If it turns the paper red you should use at least one ton of ground limestone per acre, then when you sow your oats and clover seed use about three hundred or three hundred and fifty pounds of fertilizer containing ten or twelve per cent acid phosphate and two to three per cent potash.

It is better to sow not over one bushel of oats per acre if you want to give the clover the best chance. If the season should prove to be very dry before the oats mature it would be better to cut the oats for hay and get it off the ground and give the clover the entire possession, as it will take all the moisture that you can possibly save to pull the clover through in a dry season.

It might be well to sow white clover on say one-half of this field and red clover on the other, and notice which does the best.—C.

*Douglas Fir
Northern White Pine
Idaho White Pine
Western Soft Pine*



*Western Hemlock
Washington Red Cedar
Red Fir and Larch
Norway Pine*

TAKING THE GUESSWORK OUT OF THE SELECTION OF LUMBER

IN the early days, the use of soft wood in this country was largely confined to one or two species. They happened to be good all-purpose woods.

Toward the close of the last century a number of new woods, which had up to that time been used only locally, came into the general market.

These woods are of many kinds, with numerous grades of each kind.

As these new woods came along they were used everywhere that the older known species had been used. For some purposes the new woods proved the equal of the old; for certain very important purposes, superior; where they failed, it was because they were used in the wrong service.

Out of the experience of the last twenty years there has accumulated a scientific knowledge of the fitness of the different woods for particular uses that can be helpful to every user of wood.



Today we know how much weight various kinds of timber will bear; what woods will last longest when exposed to the weather and in contact with the soil or moisture; how preservative treatment affects the life of woods; which woods have a tendency to warp and which "stay put."

We know the relative merits of the different woods as railway ties, as flooring material, as pipe staves, as tanks, in car construction, and

so on through all the varied uses to which wood can be put.

The selection of wood has ceased to depend on guesswork. Experience, observation, research and experiment have placed it on a scientific basis.



What we advocate is conservation and economy through the use of the right wood in its proper place.

To this end we will supply to lumber dealers and to the public, any desired information as to the qualities of the different species and the best wood for a given purpose.

This service will be as broad and impartial as we know how to make it. We are not partisans of any particular species of wood. We advise the best lumber for the purpose, whether we handle it or not.

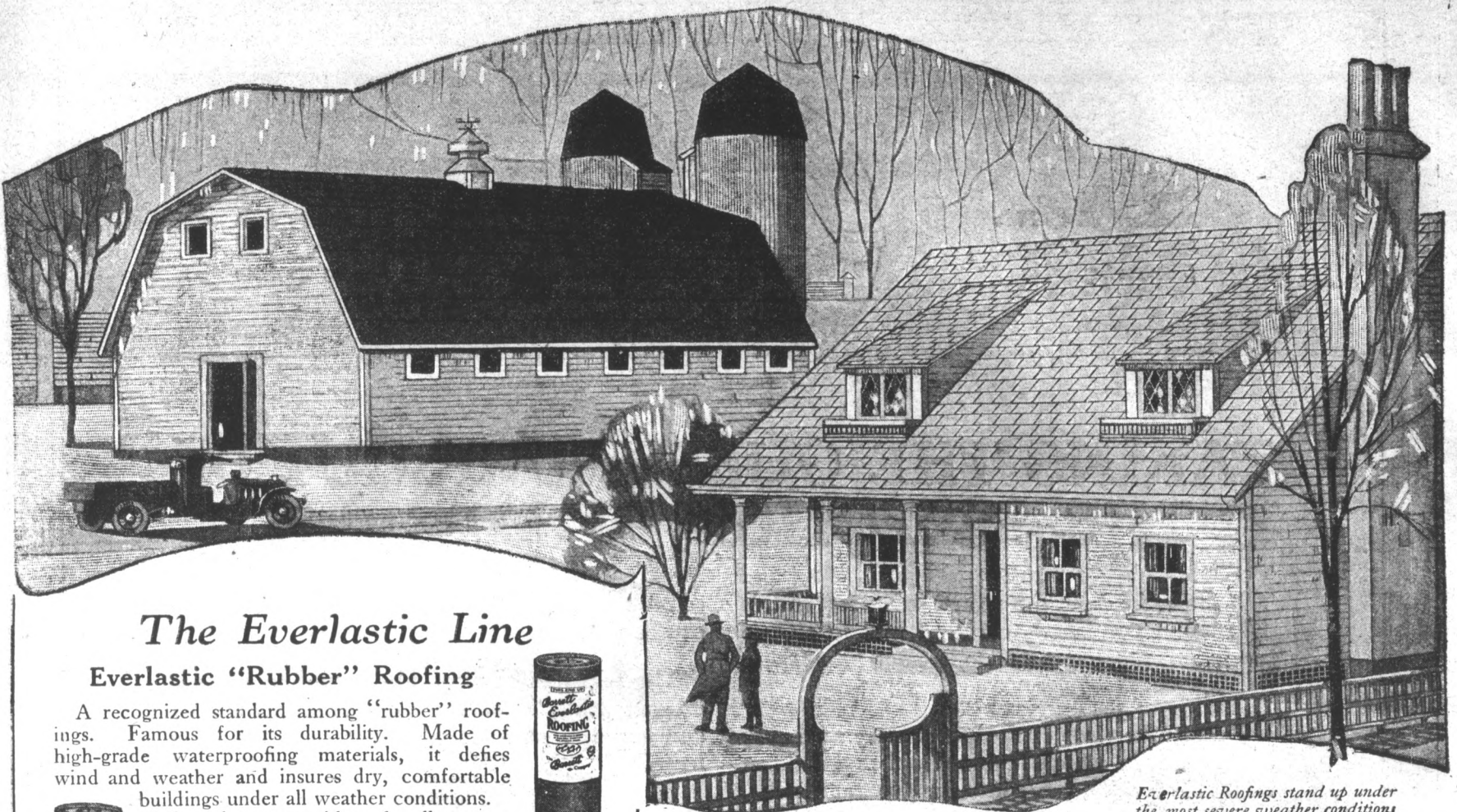
From now on the Weyerhaeuser Forest Products trade-mark will be plainly stamped on our product.

When you buy lumber for any purpose, no matter how much or how little, you can look at the mark and know that you are getting a standard article of known merit.

Weyerhaeuser Forest Products are distributed through the established trade channels by the Weyerhaeuser Sales Company, Spokane, Washington, with branch offices and representatives throughout the country.

WEYERHAEUSER FOREST PRODUCTS SAINT PAUL • MINNESOTA

Producers of Douglas Fir, Western Hemlock, Washington Red Cedar and Cedar Shingles on the Pacific Coast; Idaho White Pine, Western Soft Pine, Red Fir and Larch in the Inland Empire; Northern White Pine and Norway Pine in the Lake States.



The Everlastic Line

Everlastic "Rubber" Roofing

A recognized standard among "rubber" roofings. Famous for its durability. Made of high-grade waterproofing materials, it defies wind and weather and insures dry, comfortable buildings under all weather conditions. Nails and cement with each roll.



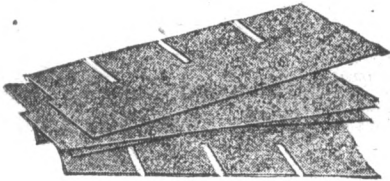
Everlastic Slate-Surfaced Roofing

A high-grade roll roofing, surfaced with genuine crushed slate, in two natural shades, red or green. Needs no painting. Handsome enough for a home, economical enough for a barn or garage. Combines real protection against fire with beauty. Nails and cement with each roll.

Everlastic Multi-Shingles

(Four-Shingles-in-One)

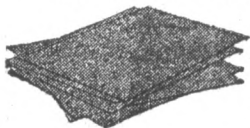
Made of high-grade thoroughly waterproofed felt and surfaced with crushed slate in beautiful natural slate colors, either red or green. Laid in strips of four shingles in one



at far less cost in labor and time than for wooden shingles. Give you a roof of artistic beauty worthy of the finest buildings, and one that resists fire and weather. Need no painting.

Everlastic Single Shingles

Made of the same durable slate-surfaced (red or green) material as the Multi-Shingles, but cut into individual shingles, 8 x 12 $\frac{3}{4}$ inches. Laid like wooden shingles but costs less per year of service. Need no painting.



**Barrett
Everlastic
Roofings**

Two Ways to Know Good Roofing—

You can find all sorts of plain-surfaced "rubber" roofing on the market. Some are good, some fair, and some practically worthless. All look alike when new.

But you have two ways of telling whether roofing is good.

One way is to put it on your building and see how it wears. But that's *hindsight*—a costly method if the roofing *isn't* good.

The second way is the simplest and the safest. *Be sure that the label bears the name "Barrett Everlastic."* That's *foresight*—proof-positive of a moderate-priced roofing, good for many years of satisfactory, economical service.

For behind every Barrett Everlastic roof stands the reputation for dependability cherished by The Barrett Company for over fifty years.

There's a style of Everlastic for each one of your farm buildings. Roll roofing, plain surfaced, or covered with red or green crushed slate. Shingles—single or in strips of four—and slate-surfaced in red or green.

Illustrated booklets describing each style free on request.

The Barrett Company

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland	
Cincinnati	Pittsburgh	Detroit	New Orleans	Birmingham	Kansas City	
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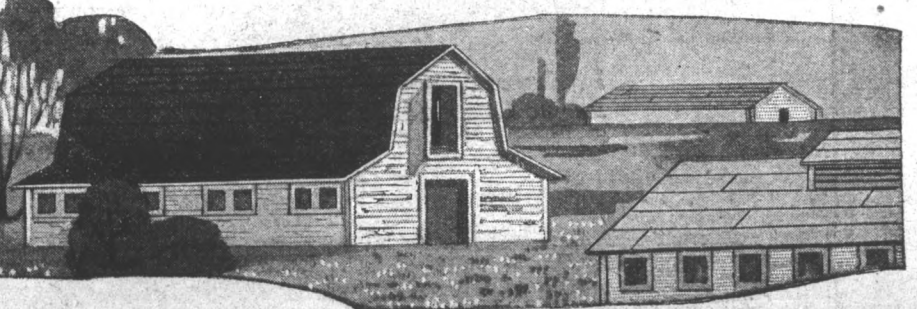
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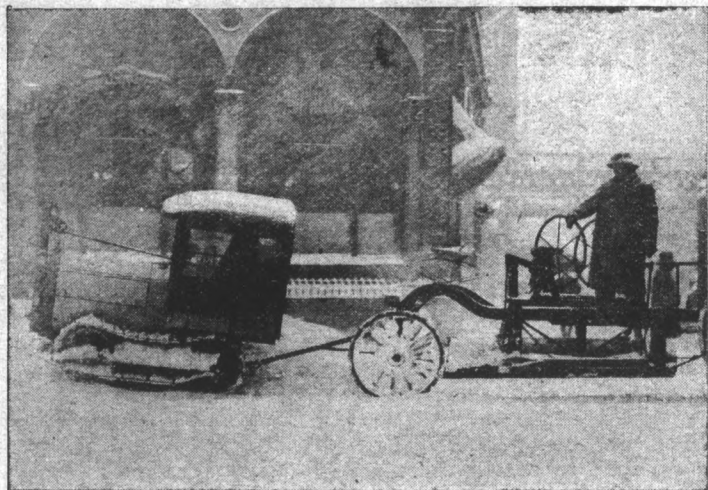
Vancouver

St. John, N. B.

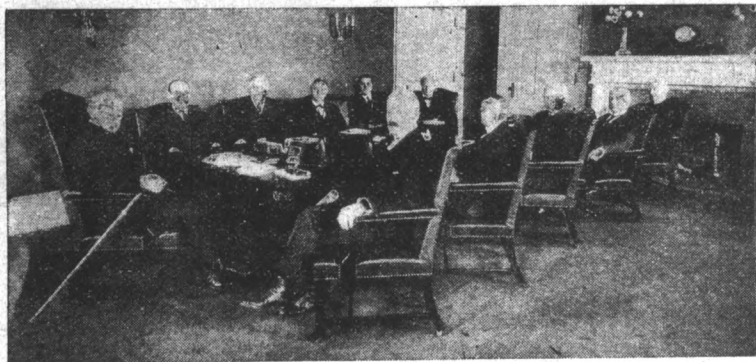
Halifax, N. S.



WORLD EVENTS IN PICTURES



During the recent blizzard which swept over the eastern states, New York quickly changed from a comfortable winter resort, and the city departments were given an opportunity to try out their recently acquired snow-handling equipment.



Remarkable picture of President Wilson surrounded by his cabinet at a meeting of that body on the afternoon of February 15.



New York health department inspector about to examine an immigrant's baggage for typhus-carrying vermin.



New ambassador of China to Washington will have important issues to handle.



Julia Marlowe, famous Shakespearian star, receives honorary degree from George Washington University.



American tennis champions return to the United States, bringing with them the Davis Cup which they won in tennis doubles in games played in Australia.



Lieut. W. D. Coney makes a record flight from California to Florida, a distance of 2,080 miles.



The National Woman's Party organized to aid in winning equal suffrage, officially disbands to take up other work for the fair sex.

THE VOICE OF THE PACK

By EDISON MARSHALL

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CHAPTER XVII.

DAN FAILING was never more thankful for his unerring sense of direction. He struck off at a forty-five degree angle between their late course and a direct road to the river, and he kept it as if by a surveyor's line. All the old devices of the wilderness—the ridge on ridge that looked just alike, inclines that to the casual eye looked like downward slopes, streams that vanished beneath the snow, and the snow-mist blowing across the face of the landmarks—could not avail against him.

A half dozen of the wolves followed him at first. But perhaps their fierce eyes marked his long stride and his powerful body, and decided that their better chance was with the helpless man and the girl beside the flickering fire. They turned back, one by one. Dan kept straight on and in two hours crossed Cranston's trail.

It was perfectly plain in the moonlit snow. He began to back-track. He headed down a long slope and in an hour more struck the North Fork. He didn't doubt but that he would find Cranston in his camp, if he found the camp at all. The man had certainly returned to it immediately after setting fire to the buildings, if for no other reason than for food. It isn't well to be abroad on the wintry mountains without a supply of food; and Cranston would certainly know this fact.

Dan didn't know when a rifle bullet from some camp in the thickets would put an abrupt end to his advance. The brush grew high by the river, the elevation was considerably lower, and there might be one hundred camps out of the sight of the casual wayfarer. If Cranston should see him, musing across the moonlit snow, it would give him the most savage joy to open fire upon him with his rifle.

Dan's advance became more cautious. He was in a notable trapping region, and he might encounter Cranston's camp at any moment. His keen eyes searched the thickets, and particularly they watched the sky line for a faint glare that might mean a camp fire. He tried to walk silently. It wasn't an easy thing to do with awkward snowshoes; but the river drowned the little noise that he made. He tried to take advantage of the shelter of the thickets and the trees. Then, at the base of a little ridge, he came to a sudden halt.

He had estimated just right. Not two hundred yards distant, a camp fire flickered and glowed in the shelter of a great log. He saw it, by the most astounding good fortune, through a

little rift in the trees. Ten feet on either side, and it was obscured.

He lost no time. He did not know when the wolves about Snowbird's camp would lose the last of their cowardice. Yet he knew he must keep a tight grip on his self-control and not let the necessity of haste cost him his victory. He crept forward, step by step, placing his snowshoes with consummate care. When he was one hundred yards distant he saw that Cranston's camp was situated beside a little stream that flowed into the river and that—like the mountaineer he was—he had built a large lean-to reinforced with snowbanks. The fire burned at its opening. Cranston was not in sight; either he was absent from camp or asleep in his lean-to. The latter seemed the more likely.

Dan made a wide detour, coming in about thirty yards behind the construction. Still he moved with incredible caution. Never in his life had he possessed a greater mastery over his own nerves. His heart leaped somewhat fast in his breast; but this was the only wasted motion. It isn't easy to advance through such thickets without ever a misstep, without the rustle of a branch or the crack of a twig. Certain of the wild creatures find it easy; but men have forgotten how in too many centuries of cities and farms. It is hardly a human quality; and a spectator would have found a rather ghastly fascination in watching the lithe motions, the passionless face, the hands that didn't shake at all. But there were no spectators—unless the little band of wolves, stragglers from the pack that had gathered on the hills behind—watched with lighted eyes.

Dan went down at full length upon the snow and softly removed his snowshoes. They would be only an impediment in the close work that was sure to follow. He slid along the snow crust clear to the mouth of the lean-to.

The moonlight poured through and showed the interior with remarkable plainness. Cranston was sprawled, half-sitting, half-lying on a tree-bough pallet near the rear wall. There was not the slightest doubt of the man's wakefulness. Dan heard him stir, and once—as if at the memory of his deed of the day before—he cursed in a savage whisper. Although he was facing the opening of the lean-to, he was wholly unaware of Dan's presence. The latter had thrust his head at the side of the opening, and it was in the shadow. Cranston seemed to be watching the great, white snow fields that lay in front, and for a moment Dan was at loss to explain this seeming vigil. Then he understood. The white

field before him was part of the long ridge that the three of them would pass on their way to the valleys. Cranston had evidently anticipated that the girl and the man would attempt to march out—even if he hadn't guessed they would try to take the helpless Lennox with them—and he wished to be prepared for emergencies. There might be sport to have with Dan, unarmed as he was. And his eyes were full of strange conjectures in regard to Snowbird. Both would be exhausted now and helpless—

Dan's eyes encompassed the room: the piles of provisions heaped against the wall, the snowshoes beside the pallet, but most of all he wished to locate Cranston's rifle. Success or failure hung on that. He couldn't find it at first. Then he saw the glitter of its barrel in the moonlight—leaning against a grub-box possibly six feet from Cranston and ten from himself.

His heart leaped. The best he had hoped for—for the sake of Snowbird not himself—was that he would be nearer to the gun than Cranston and would be able to seize it first. But conditions could be greatly worse than they were. If Cranston had actually had the weapon in his hands, the odds of battle would have been frightfully against Dan. It takes a certain length of time to seize, swing, and aim a rifle; and Dan felt that while he would be unable to reach it himself, Cranston could not procure it either, without giving Dan an opportunity to leap upon him. In all his dreams, through the months of preparation, he had pictured it thus. It was the test at last.

The gun might be loaded, and still—in these days of safety devices—unable to fire; and the loss of a fraction of a second might enable Cranston to reach his knife. Thus Dan felt justified in ignoring the gun altogether and trusting—as he had most desired—to a battle of hands. And he wanted both hands free when he made his attack.

If Dan had been erect upon his feet, his course would have been an immediate leap on the shoulders of his adversary, running the risk of Cranston reaching his hunting knife in time. But the second that he would require to get to his feet would entirely offset this advantage. Cranston could spring up too. So he did the next most disarming thing.

He sprang up and strode into the lean-to.

"Good evening, Cranston," he said pleasantly.

Cranston was also upon his feet the same instant. His instincts were entirely true. He knew if he leaped for

his rifle, Dan would be upon his back in an instant, and he would have no chance to use it. His training, also, had been that of the hills, and his reflexes flung him erect upon his feet at the same instant that he saw the leap of his enemy's shadow. They brought up face to face. The rifle was not out of the running, as they were at about equal distances from it, and neither would have time to swing or aim it.

Dan's appearance had been so utterly unlooked-for, that for a moment Cranston could find no answer. His eyes moved to the rifle, then to his belt where hung his hunting knife, that still lay on the pallet. "Good evening, Failing," he replied, trying his hardest to fall into that strange spirit of nonchalance with which brave men have so often met their adversaries, and which Dan had now. "I'm surprised to see you here. What do you want?"

Dan's voice when he replied was no more warm than the snow banks that reinforced the lean-to. "I want your rifle—also your snowshoes and your supplies of food. And I think I'll take your blankets, too."

"And I suppose you mean to fight for them?" Cranston asked. His lips drew up in a smile, but there was no smile in the tone of his words.

"You're right," Dan told him, and he stepped nearer. "Not only for that, Cranston. We're face to face at last—hands to hands. I've got a knife in my pocket, but I'm not even going to bring it out. Its hands to hands—you and I—until everything's square between use."

"Perhaps you've forgotten that day on the ridge?" Cranston asked. "You haven't any woman to save you this time."

"I remember the day, and that's part of the debt. The thing you did yesterday is part of it, too. It's all to be settled at last, Cranston, and I don't believe I could spare you if you went to your knees before me. You've got a clearing out by the fire—big as a prize ring. We'll go out there—side by side. And hands to hands we'll settle all these debts we have between us—with no rules of fighting and no mercy in the end!"

They measured each other with their eyes. Once more Cranston's gaze stole to his rifle, but lunging out, Dan kicked it three feet farther into the shadows of the lean-to. Dan saw the dark face drawn with passion, the hands clenching, the shoulder muscles growing into hard knots. And Cranston looked and knew that merciless vengeance—that age-old sin and Christless creed by which he lived—had fol-

AL ACRES—We Would Say Al is Some Student

—By Frank R. Leet



lowed him down and was clutching him at last.

He saw it in the position of the stalwart form before him, the clear level eyes that the moonlight made bright as steel, the hard lines, the slim, powerful hands. He could read it in the tones of the voice—tones that he himself could not imitate or pretend. The hour had come for the settling of old debts.

He tried to curse his adversary as a weakling and a degenerate, but the obscene words he sought for would not come to his lips. Here was his fate, and because the darkness always fades before the light, and the courage of wickedness always breaks before the courage of righteousness, Cranstons was afraid to look it in the face. The fear of defeat, of death, of Heaven knows what remorselessness with which this giant would administer justice was upon him, and his heart seemed to freeze in his breast. Cravenly he leaped for his knife on the blankets below him.

Dan was upon him before he ever reached it. He sprang as a cougar springs, incredibly fast and with shattering power. Both went down, and for a long time they writhed and struggled in each other's arms. The pine boughs rustled strangely.

The dark, gaunt hand reached in vain for the knife. Some resistless power seemed to be holding his wrist and was bending its bone as an Indian bends a bow. Pain lashed through him.—And then this dark-hearted man, who had never known the meaning of mercy, opened his lips to scream that this terrible enemy might be merciful to him.

But the words wouldn't come. A ghastly weight had come at his throat, and his tortured lungs sobbed for breath. Then, for a long time, there was a curious pounding, lashing sound in the evergreen boughs. It seemed merciless and endless.

But Dan got up at last, in a strange, heavy silence, and swiftly went to work. He took the rifle and filled it with cartridges from Cranston's belt. Then he put the remaining two boxes of shells into his shirt pocket. The supplies of food—the sack of nutritious jerked venison like dried bark, the little package of cheese, the boxes of hardtack and one of the small sacks of prepared flour—he tied, with a single kettle, into his heavy blankets and flung them with the rifle upon his back. Finally he took the pair of snowshoes from the floor. He worked coldly, swiftly, all the time munching at a piece of jerked venison. When he had finished he walked to the door of the lean-to.

It seemed to Dan that Cranston whispered faintly, from his unconsciousness, as he passed; but the victor did not turn to look. The snowshoes crunched away into the darkness. On the hill behind a half-dozen wolves—stragglers from the pack—frisked and leaped about in a curious way. A strange smell had reached them on the wind, and when the loud, fearful steps were out of hearing, it might pay them to creep down, one by one, and investigate its cause.

CHAPTER XVIII.

THE gray circle about the fire was growing impatient. Snowbird waited to the last instant before she admitted this fact. But it is possible only so long to deny the truth of a thing that all the senses verify, and that moment for her was past.

At first the wolves had lingered in the deepest shadow and were only visible in profile against the gray snow. But as the night wore on, they became increasingly careless. They crept up to the very edge of the little circle of firelight; and when a high-leaping flame threw a gleam over them, they didn't shrink. She had only to look up to see that age-old circle of fire—

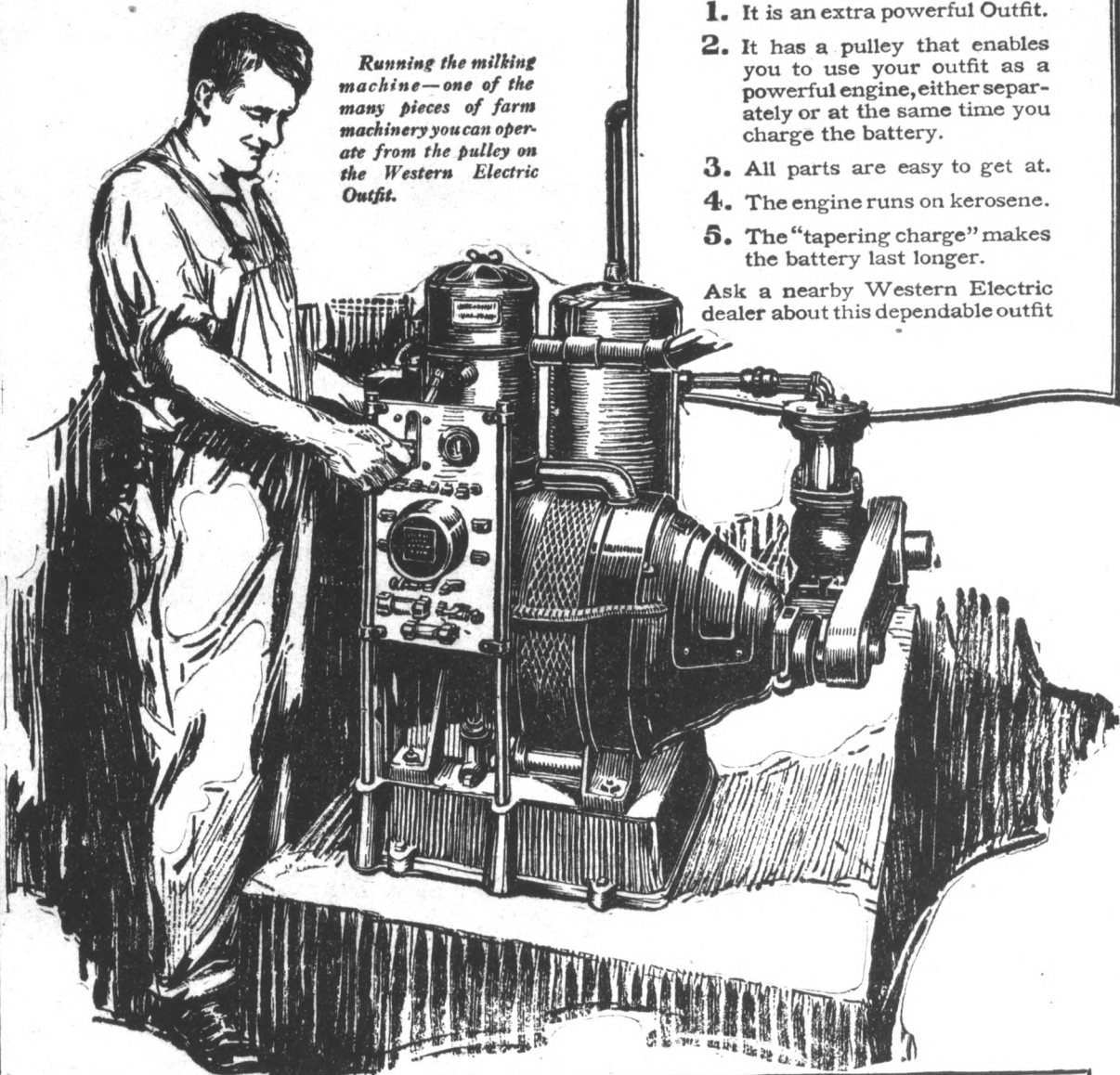
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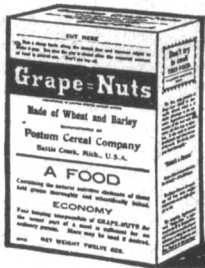
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bright dots, two and two—at every strength of desperation, and little by little she won back a tiny flame.

It is an instinct in the hunting creatures to remain silent before the attack. The triumph cries come afterward. But they seemed no longer anxious about this, either. Sometimes she would hear their footfall as they leaped in the snow, and what excitement stirred them she didn't dare to think. Quite often one of them would snarl softly—a strange sound in the darkness.

She noticed that when she went to her hands and knees, laboriously to cut a piece of the drier wood from the rain-soaked, rotted snag that was her principal supply of fuel, every wolf would leap forward, only to draw back when she stood straight again. At such times she saw them perfectly plainly—their gaunt bodies, their eyes lighted with the insanity of famine, their ivory fangs that glistened in the firelight. She worked desperately to keep the fire burning bright. She dared not neglect it for a moment. Except for the single pistol ball that she could afford to expend on the wolves—of the three she had—the fire was her last defense.

But it was a losing fight. The rain-soaked wood smoked without flame, the comparatively dry core with which Dan had started the fire had burned down, and the green wood, hacked with such heart-breaking difficulty from the saplings that Dan had cut, needed the most tireless attention to burn at all.

When Dan had gone, these little trees were well within the circle of the wolves. Unfortunately, the circle had drawn in past them. Nevertheless, now that the last of the dried dead wood was consumed, she shouldered her ax and walked straight toward the gray, crouching bodies in the snow. For a tragic second she thought that the nearest of them was going to stand his ground. But almost when she was in striking range, and its body was sinking to the snow in preparation for a leap, it skulked back into the shadow. Exhausted as she was, it seemed to her that she chopped endlessly to cut away one little length. The ax blade was dull, the handle awkward in her hand, she could scarcely stand on her broken snowshoes, and worse, the ice crust broke beneath her blows, burying the sapling in the snow. She noticed that every time she bent to strike a blow, the circle would plunge a step nearer her, withdrawing as she straightened again.

Books of woodcraft often describe with what ease a fire may be built and maintained in wet snow. It works fairly well in theory, but it is a heart-breaking task in practice. Under such difficulties as she worked, it became one of those dreadful undertakings that partake of a nightmare quality—the walking of a treadmill or the sweeping of waves from the shore.

When she secured the first length, her fire was almost extinguished. It threw a faint cloud of smoke into the air, but the flame was almost gone. The darkness dropped about her, and she worked furiously, with the go on but a few moments more. The

Her nervous vitality was flowing from her in a frightful stream. Too long she had tolled without food in the constant presence of danger, and she was very near indeed to utter exhaustion. But at the same time she knew she must not faint. That was one thing she could not do—to fall unconscious before the last of her three cartridges was expended in the right way.

Again she went forth to the sapling, and this time it seemed to her that if she simply tossed the ax through the air, she could fell one of the gray crowd. But when she stooped to pick it up—She didn't finish the thought. She turned to coax the fire. And then she leaned sobbing over the sled.

"What's the use?" she cried. "He won't come back. What's the use of fighting any more?"

"There's always use of fighting," her father told her. He seemed to speak with difficulty, and his face looked strange and white. The cold and the exposure were having their effect on his weakened system, and unconsciousness was a near shadow indeed. "But, dearest—if I could only make you do what I want you to—"

"What?"

"You're able to climb a tree, and if you'd take these coats, you wouldn't freeze by morning. If you'd only have the strength—"

"And see you torn to pieces!"

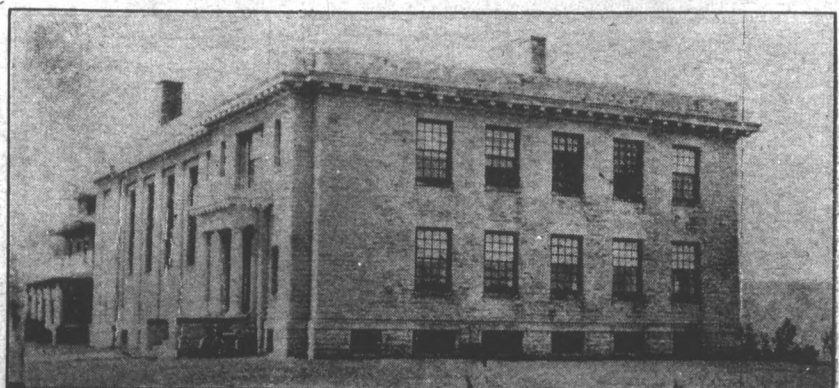
"I'm old, dear—and very tired—and I'd crawl away into the shadows, where you couldn't see. There's no use mincing words, Snowbird. You're a brave girl—always have been since a little thing, as God is my Judge—and you know we must face the truth. Better one of us to die than both. And I promise—I'll never feel their fangs. And I won't take your pistol with me either."

Her thought flashed to the clasp hunting knife that he carried in his pocket. But her eyes lighted, and she bent and kissed him. And the wolves leaped forward even at this.

"We'll stay it out," she told him. "We'll fight it to the last—just as Dan would want us to do. Besides—it would only mean the same fate for me, in a little while. I couldn't cling up there forever—and Dan won't come back."

She was wholly unable to gain on the fire. Only by dint of the most heart-breaking toil was she able to secure any dry fuel for it at all. Every length of wood she cut had to be scraped of bark, and half the time the fire was only a sickly column of white smoke. It became increasingly difficult to swing the ax. The trail was almost at its end.

The after-midnight hours drew one by one across the face of the wilderness, and she thought that the deepening cold presaged dawn. Her fingers were numb. Her nerve control was breaking; she could no longer drive a straight blow with the ax. The number of the wolves seemed to be increasing: every way she looked she could see them leaping. Or was this just hysteria? Surely the battle could go on but a few moments more. The



The Country Club House at Munising—a Temple of Democracy.

wolves themselves, sensing the dawn, were losing the last of their cowardice.

Once more she went to one of the saplings, but she stumbled and almost went to her face at the first blow. It was the instant that her gray watchers had been waiting for. The wolf that stood nearest leaped—a gray streak out of the shadow—and every wolf in the pack shot forward with a yell. It was a short, expectant cry; but it chopped off short. For with a half-sob, and seemingly without mental process, she aimed her pistol and fired.

A fast-leaping wolf is one of the most difficult pistol targets that can be imagined. It bordered on the miraculous that she did not miss him altogether. Her nerves were torn, their control over her muscles largely gone. Yet the bullet coursed down through the lungs, inflicting a mortal wound.

The wolf had leaped for her throat; but he fell short. She staggered from a blow, and she heard a curious sound in the region of her hip. But she didn't know that the fangs had gone home in her soft flesh. The wolf rolled on the ground; and if her pistol had possessed the shocking power of a rifle, he would never have got up again. As it was, he shrieked once, then sped off in the darkness to die. Five or six of the nearest wolves, catching the smell of his blood, bayed and sped after him.

But the remainder of the great pack—fully fifteen of the gray, gaunt creatures—came stealing across the snow toward her. White fangs had gone home; and a new madness was in the air.

Straining into the silence, a perfectly straight line between Cranston's camp and Snowbird's, Dan Failing came mushing across the snow. His sense of direction had never been obliged to stand such a test as this before. Snowbird's fire was a single dot on the vast plateau; yet he had gone straight toward it.

He was risking everything for the sake of speed. He gave no heed to the fallen timber that might have torn the web of his snowshoes to shreds. Because he shut out all thought of it, he had no feeling of fatigue. The fight with Cranston had been a frightful strain on muscle and nerve; but he scarcely remembered it now. His whole purpose was to return to Snowbird before the wolves lost the last of their cowardice.

The jerked venison that he had munched had brought him back much of his strength. He was wholly unconscious of his heavy pack. Never did he glide so swiftly, so softly, with such unerring step; and it was nothing more or less than a perfect expression of the ironclad control that his steel nerves had over his muscles.

Then, through the silence, he heard the shout of the pack as the wolf had leaped at Snowbird. He knew what it meant. The wolves were attacking then, and a great flood of black, hating bitterness poured over him at the thought that he had been too late. It had all been in vain, and before the thought could fully go home, he heard the dim, far-off crack of a pistol.

Was that the first of the three shots, the one she might expend on the wolves, or had the first two already been spent and was she taking the last gateway of escape? Perhaps even now Lennox was lying still on the sled, and she was standing before the ruin of her fire, praying that her soul might have wings. He shouted with all the power of his lungs across the snow. (Concluded next week).

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Our Weekly Sermon—By N. A. McCune

IT was about eight days after this, when he took Peter, John and James, and went up the hillside to pray. While he was praying the appearance of his face altered and his dress turned dazzling white. There were two men conversing with him, Moses and Elijah." Luke IX:28-31. The big things of life take place in the line of our duty. Peter, James, John, were all hard at work, when they were called to become the companions of the Lord. Moses is mopping the sweat off his face, under a hot noonday sun, with hundreds of sheep under his care, when he sees the wonder of the blazing bush, and hears the mysterious voice. Zachariah is despatching his duties as a priest before the altar, when the angel of the Lord appears to him. And Christ goes apart to pray a while, and takes with him three chosen friends. While they are thus alone, there occurs that beautiful experience, the Transfiguration. The great acts of God are done in a quiet way. If men had been in charge of the transfiguration, they would probably have had the mountain decorated with flags and bunting, and there would have been a reception committee of prominent politicians and two brass bands. Even as it was, one of the men present urged that they build three buildings, to celebrate the event.

BUT the four men on the mountain were being watched, not by spies, but by unseen friends. For presently there are two men talking with them, two of the mighty men of old, Moses and Elijah. This is one of the passages of Holy Writ which speak in no uncertain sound of the fact of immortality. These giants of ancient time were alive. They were alert to the issues that faced the Christ. They were intensely interested in what lay before him. We are told that they "spoke of the decease that he was shortly to accomplish at Jerusalem." Is this a symbol of the fact that the blessed souls who have passed into the other world are cognizant of all that transpires on earth? At any rate, the Lord and his three companions found themselves not alone, as they had supposed, but in the presence of dwellers in the Celestial City. Is that not true often?

The stunted evergreens and pines on the mountain side were lit up with the glory of the Creator. The eternities are forever near. From the tiniest cottage one may look out on the ocean. I once served a church for a short time on Cape Cod. In winter it is a lonely place. Sand and sand hills everywhere. But standing on a hill one may see the steamships headed for South America, and those coming from Europe. One is continually within hailing distance of the commerce of the world. "If I take the wings of the morning, and dwell in the uttermost parts of the sea; even there shall thy hand lead me, and thy right hand shall hold me."

And what did these mighty spirits talk about? I imagine that they both offered to go to the Cross in place of Christ. Can you not hear Moses saying, "My King, let me die in your place. Of my own folly I never set foot in the land of promise. I never completed the work I was given to do. Let me, who have had fifteen hundred years of happiness in Paradise, go to Calvary in your stead. Let the crowd mock me. Let the rulers judge me. Let the unbelieving reject me." And then Elijah speaks. His voice has the resonance it had eight centuries before, when he challenged the priests of Baal. "Lord," he says, "Let me go. My record on earth was not perfect.

My temper at times was harsh, I was quick and unforgiving. You have already been pierced with more sorrow than all the prophets put together. I fear not these Jews. Let them do as they like with me. They cannot be more frightful than Jezebel." But I also think I hear the Master reply, "No, my brothers, it cannot be. I must go, as it has been appointed me. For your offers I have only the deepest thanks. I must tread the wine press alone. I cannot transfer my kingship to another, and I cannot transfer my duty to another. I cannot hide my face from shame, nor my cheeks from them that pluck off the hair. No man can go for me. For this purpose I came into the world."

MEN could not take the place of heaven's king then, as He faced the cross, and they cannot do so now, in this troubled world. Men need God, and judging by the declarations of people as we see them in the daily press, the nation is beginning to realize it.

It seems almost incredible that when this conversation was going on, between the Christ and two mighty men of the nation's history, that anyone should be sleepy. But such was the fact. The three disciples were so overcome with sleep that they almost missed beholding the glory of their Lord. What was the opportunity, not of a life time, but of many life times, they almost lost in drowsiness. As they went down the mountain, I suspect, the three fell to talking of what fools they had been, to allow their weariness to almost cheat them out of life's greatest experience. It is always dangerous to sleep during the sermon. The best things are always said while you are asleep. The truth that might have made a man of you, and changed the current of your life, was lost in your sleep-closed ears. We would not have been tempered to drowse, of course. Those were slow, stupid, unthinking men. They had no appreciation of the momentous event of that hour. But there are folk aplenty who lose as great opportunities as this. The seasons of the soul come and go, but they are not seized and utilized. There are openings for some useful work in the country, or in the town or village, but no one says, "Here am I, I'll try it." Unforgettable experiences await us, if we will but see them, reach out the hand to arrest them.

In Edwin Markham's poem, "The Great Guest Comes," he shows us a cobbler who believed that Christ was to come to his door on a certain day. But at sundown he realized that the day was gone, and the great Guest had not come. The cobbler was almost rebellious. He had done the best he could. That day he had given a beggar a pair of shoes, an old woman a loaf of bread, and had taken a lost child home to its mother. And the poem ends,

"And Conrad sighed as the world turned gray,
"Lord, why is it your feet delay?
Did you forget that this was the day?"
And soft in the silence a voice he heard,
"Lift up your heart, for I kept my word;
Three times I came to your friendly door,
Three times my shadow was on your floor.
I was the beggar with bruised feet,
I was the woman you gave to eat,
I was the child on the homeless street."

One kindly deed may turn the fountain of thy soul
To love's sweet day-star, that shall o'er thee burn
Long as its currents roll.—Holmes.

A REFUGE HOME.

FEW people who pass the large brick building on the corner of West Grand Boulevard and Fort street, Detroit, know what the building is used for. It is one of the Salvation Army's Homes for the uplifting of those unfortunate girls who are sometimes referred to as fallen women. Several years ago the army started these homes for this class of girls, and during the years they have been opened, 61,308 girls have passed through them in all parts of the world. Many are restored to parents, others are happily married, some placed in positions with friends who offer to take them and their child, as the Army does not favor the girls adopting their children,



Mrs. Brigadier Joseph Sheppard, who was known as "Ma. Sheppard" by the Boys in France.

feeling it is protection to the girl to have her own child with her. A few go back to the sinful life, but only a small percentage of them.

The Army has a competent staff of doctors and nurses, also special officers trained for this special work, to care for the girls. The most of the girls who come to the home are the victims of circumstances. They hear of the home and find refuge, are cared for till after their babies are born. During the year 1918-1919 over two hundred and fifty girls from twenty-seven cities and towns of Michigan passed through the home, while last year one hundred and thirty-five were received and helped, besides a large number who were sent from various societies to be protected for a few nights. In addition the army has a children's home on the same grounds caring for twenty-nine children from two years old up to sixteen. One girl was brought by her father when the child's mother died. This was nearly three years ago and he has never been to look at her since.

Brigadier and Mrs. Joseph Sheppard were recently appointed by Miss Booth to be the superintendents. They have been thirty-six years officers in the Army. Mrs. Sheppard went to France with the boys and proved herself a real mother to them.

Any girl in distress can find a friend by writing to Mrs. Sheppard, also any lady who would like to help a girl by giving her a position with her baby, with fair wages, is invited to call on Mrs. Sheppard. The Army maintains another home for girls in the western part of the state at 1215 East Fulton street, Grand Rapids. Visitors are welcome to inspect the Detroit home. Take any Fort street car, getting off at West Grand Boulevard.

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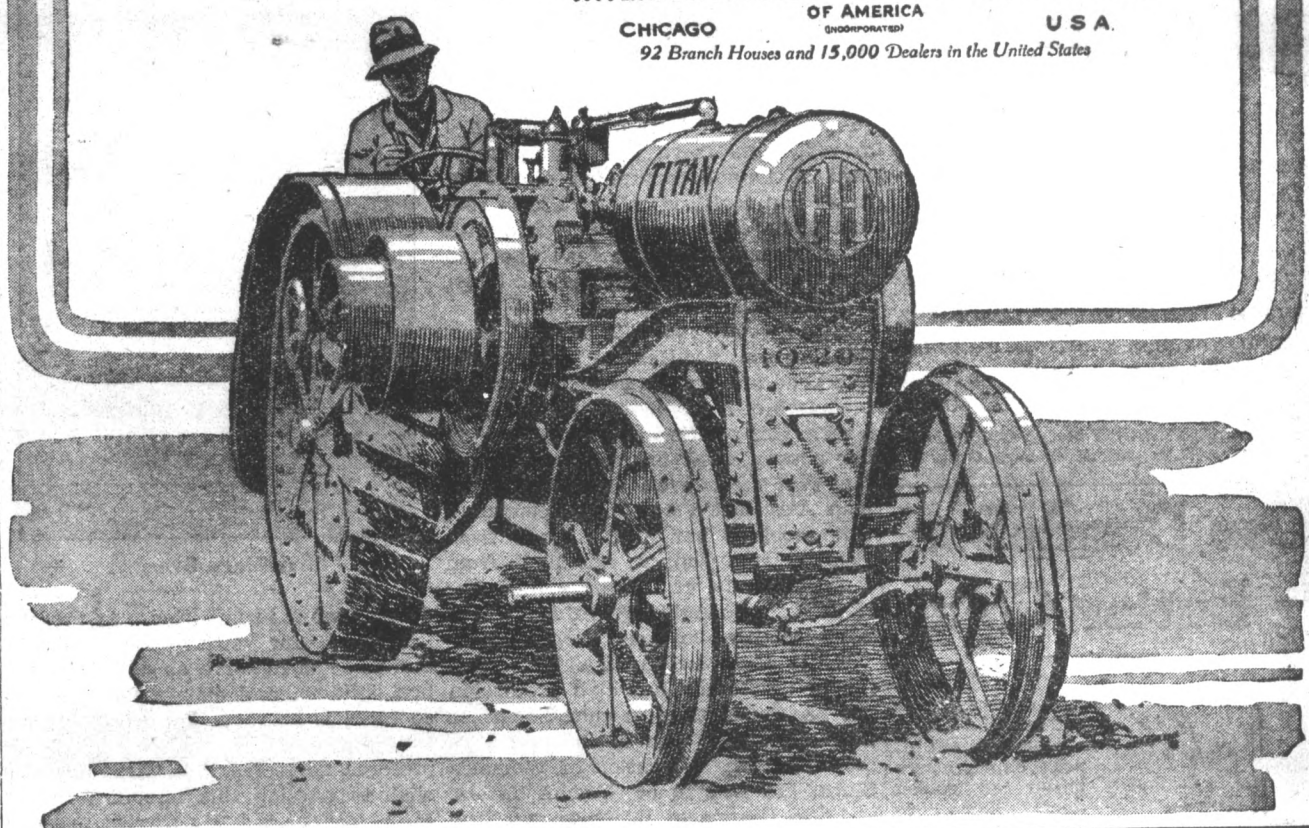
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A farmer's wife in Trumbull County, Ohio, wrote to ask,

"Why don't you tell us farmers' wives as much about Jell-O as you do the city women, and why not give us the same chance to get Jell-O when we want it?"

That was some time ago, and since then Jell-O has been placed on sale in practically every general store in America, including the one at the Corners and the Cross Roads, where it can be obtained as easily as at the groceries in the big towns.

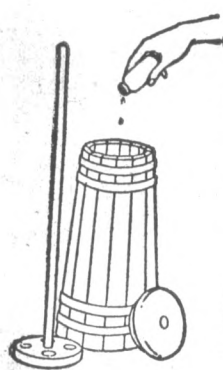
The Jell-O Book is free to every woman everywhere. It is full of recipes for the desserts and salads that are most popular just now, not only because they are cheaper than almost anything else that is worth serving, but are really better than any made at much greater expense. And most of them can be made in a minute.

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Woman's Interests

Our New Dean, Miss Sweeny

MICHIGAN Agricultural College is chuck full of traditions. There's the tradition that M. A. C. is not only the oldest but the best agricultural school in the world; that its campus is the most beautiful; its students the most ambitious; its girls the best home-makers, and its atmosphere the most democratic and home-like of any to be found. Some of our sacred traditions are scoffed at and denied by jealous outsiders. But we've one brand new tradition which we defy anyone to dispute, that our new dean of home economics, Miss Mary Sweeny, is the littlest, the wittiest and the "stirringest," to be found in any school in the good old U. S. A. Certainly wherever she appeared at Farmers' Week, things moved. And there was an undercurrent of humor through it all which made you feel that while "life is real and home economics is earnest" with the new dean, it isn't so deadly serious that we can't all stop and have a laugh occasionally.

Miss Sweeny comes to M. A. C. from the University of Kentucky, where she was head of home economics work and in charge of home economics extension work. Her position as an authority in her chosen work is evidenced by the fact that she is president of the American Association of Home Economics. She received her A. B. degree from Pennsylvania College; her M. S. from the University of Kentucky, and her M. A. from Columbia University, where she specialized in home economics.

While Miss Sweeny has been forging to the top in her own profession she has found time to cultivate other lines of work. She is interested in the American Federation of Women's Clubs, the League of Women Voters, and the League of Business and Professional Women. Besides she is a member of the American Chemical Society and of the Society of Biological Chemists, and was at one time vice-president of the latter society. Previous

to taking up her work with the University of Kentucky she had taught in the grades, in high schools, and in junior college.

Full of plans for broadening the work of the college, Miss Sweeny has already started nutrition clinics in the Lansing schools. When the new home economics building, which is now only a request to the legislature, becomes an accomplished fact, she will start to



Miss Mary Sweeny.

develop work in nutrition. At present hampered for space—the women's building has to serve as dormitory, office building, and class-room building, so there is no room for laboratories—research work in nutrition has been, perforce, neglected. It is Miss Sweeny's wish to develop this line of work at M. A. C. as it is being carried forward in similar schools. And in this ambition she is strongly supported by Mrs. Dora Stockman, woman member of the board of agriculture.

Need for nutrition clinics in the city

schools is shown by the fact that seventy-five per cent of the children were under weight. This work is being carried on under the direction of Miss May Pierson. The children are weighed and measured every week, taught the right things to eat, and started on a milk diet.

There are other things to home-making, however, so the girls are to be started on a scientific study of home management. They are to be taught how to do every single every-day task in the best and easiest and most time-saving way.

In order to work out methods Miss Sweeny plans to establish a "family" of women in a house where they will live exactly as the average American family. Their mission will be to establish standards of time in which to do all the household tasks, and to figure down to a workable budget the finances of a family. This is to be done in a separate house where the "family" must buy its own coal and manage a furnace. If possible the "family" is to include a child.

Then women are to be trained as consumers. Since women handle most of the money in America they must learn to do it in a way to get the most for their money. They are to be taught methods of marketing, both as buyers and sellers. They are to learn all about production, wholesale and retail methods of selling, how to preserve foods for winter use, and the value of canned foods as against fresh.

Whether the "Truth in Textile" bill goes through or not, they are to learn to judge textiles and care for them. They are to be taught efficiency methods in sewing, how to use sewing machine attachments, and how to use patterns.

Better homes, better babies, better children, and better adults, in health, in mind, and in spirit is Miss Sweeny's slogan. To use our agricultural college to help bring this about is her purpose.

Are We Fair to Our Feet?

By Cecile Van Steenberg

THE boot makers cater to feminine vanity and not to health, by building shoes which are very long and of ridiculous width—A, double A, and triple A. These shoes may be fully an inch longer than the foot, and because of the flexibility of the toes, they are crowded and lapped over each other, until the foot really is made to fit into the shoe. If this shoe were forced upon young girls as a means of punishment, we would regard the treatment as barbarous. The toes cannot play an important part in walking, as they should.

The small toes have two joints and the large toe, one, and it is the most important, largest and strongest. When we raise the foot from the ground to bring it forward, we raise the heel and let the weight fall upon the great toe. To execute this movement, the great toe must be placed in the shoe in such

a position that it can stretch itself directly forward. Narrow shoes bind the foot bones and muscles and prevent free foot action. They also crumple into folds the sole of the foot, and utterly put out of commission the "plantar fascia."

Another common evil of the ill-fitting shoe is the enlarged joint or bunion, which comes from wearing shoes or stockings that are too short. In buying shoes, be sure they fit well in the instep and that the large joint on the inside of the foot comes at the proper place. The ball of the foot should come just to the bend of the inside of the shoe and not in front or in back of it. One cause of heels which are run under is due to the fact that the foot tends to push out at the heel because of lack of room in the fore part of the shoe.

High heels throw the weight of the

body on the ball of the foot instead of distributing it equally, and they entirely destroy the action of the powerful ligament holding up the longitudinal arch. The entire mechanism of the foot is altered, and its motion becomes limited to the heel and toe movement. Girls who require a high-heeled shoe for comfort are really suffering from some structural defect of the foot and should consult an orthopedist.

High heels also cause considerable harm because of their effect upon the pelvic organs. Good posture is as much a mark of beauty as regular features. With the proper carriage the head is erect, the chin in, the chest forward, the abdomen flat and firm, the back straight and strong and the feet pointed straight forward. The woman who learns to stand and walk with her toes straight ahead or turned

a trifle in will have taken the first step away from fallen arches or flat feet. When the ankles and feet are weak, the whole position of the body is thrown out of poise. With high heels, the body is tilted forward, and to offset this, one bends backward from the waist, causing the hollow back and the forward thrust of the abdomen. Unless the hip joints are truly placed in the sockets of the pelvic bones and the spinal column flexibly held, the entire body is thrown out of plumb and the internal organs are thrown out of position. A train of very distressing symptoms is apt to follow, which medical treatment cannot remove, if due to high heels, and this is the case nine times out of ten.

High heels and ill-fitting shoes are general causes of lack of beauty of motion. Grace, freedom of action, rhythm are all absent in the majority of civilized women, while the Arab, the Indian and other barefoot people, walk and run with assurance, dignity and even majesty. If a girl refuses to wear hygienic shoes on the grounds that they are ugly, can we not in turn criticize her for ill-shaped shoes which make her hobble, instead of walking with swing and rhythm? Certainly our standards of beauty are much distorted if we consider such shoes beautiful.

The prevention and possible cure of the defects common to most feet are:

1. Exercise the feet barefooted—using exercises that involve the toes.
2. Exercises that stretch the large tendon in the back of the leg and develop the arch of the foot, such as walking barefoot on the outer border of the foot or standing on the heels and trying to raise the toes.
3. Correct, well-fitted shoes. The first requirement in a good shoe is the straight inner border, following the straight inner lines of the natural foot.

The shoe should not cramp the toes, especially the great toe, should be flexible enough to allow the foot to be moved freely in all directions, and should hold the heel and instep snugly without cramping the foot. The arch should be flexible. In the natural foot the arch is flexible and plays an important part in every step. The arch must be built high enough to fit under the curve of the foot and must be snug without being tight. The heel should be broad, low and straight, and should come directly under the heel of the foot. The same principle of freedom applies to the ankles and for this reason low shoes are better than high shoes.

The inside of the shoe should measure one inch more than foot length to allow for the pushing forward of the foot in walking. Many shoe clerks do not know how to fit shoes properly, and often, if they do, they are unscrupulous about selling shoes—just to make a sale. Experience teaches that one must know herself whether shoes fit well or not.

For extremely sensitive feet, kid shoes are preferable to calf skin. Most women should not wear very heavy calf skin. Kid is soft and allows more ventilation. Brown or tan shoes are more comfortable than black or patent leather because they allow ventilation and evaporation of moisture. Suede shoes are comfortable and soft.

Many women fail to remember that their feet are taxed the most while doing housework, consequently they often wear shoes which are too shabby for dress use, on their ten or fifteen-mile journey which they make as they do their day's work. Little injury can be done to the foot by wearing shoes with high heels for a very short while, but they should never be used while walking or working.

Even in dress shoes it is to be hoped that hygienic makes will be adopted.

Many low-heeled, round-toe shoes are bad for the feet. Too often low-heeled shoes are sold which do not

really follow the lines of the foot. They may be almost as bad for the foot as high-heeled shoes if they are not built with straight inner lines, because the foot is not properly supported. Hygienic shoes should also be purchased as a factor in national thrift, for good-fitting shoes will always wear longer than ill-fitting ones.

Of course, the first point to emphasize in economy in shoes is to select well-fitting comfortable shoes, which bear the strain equally all over the whole shoe, so that no one part wears out too quickly. These shoes must permit standing, walking, running and quick turning in comfort and safety and they will not retain good shape and appearance unless fitted properly. It must also be remembered that it does not pay to buy cheap shoes. High heeled shoes are more expensive than low-heeled ones, and they cost more to keep in repair. This is especially true of wooden heels, which wear down quickly, frequently break off, and are impossible to replace. Heels too high cause strain on the seams and uneven wear on both soles and uppers.

Rubber heels usually out-wear leather heels and afford comfort in walking. Shoes with welt soles always wear the best and can be repaired. The welt is a strip of leather, the inner edge of which is sewed to the outer sole. It usually extends one-fourth of an inch beyond the upper of the shoe. Welt soles are frequently imitated in cheaper shoes and this should be watched for in buying. Shoes with hand-turned soles are made in fine, soft kid dress shoes and are never made for hard service. They cannot be half-soled successfully.

Calf skin shoes wear better than kid but are not as comfortable. Suede shoes are comfortable and wear well, but are likely to become shiny when soiled. Kid shoes are worn by many people all the time, but are not so durable, and lose their shape rather quickly. However, they take a good shine and are the most comfortable of all shoes on sensitive feet. Canvas shoes with leather heels and soles of a fine grade will, with proper care easily wear two summers.

Shoes wear longer when two pairs are alternated frequently. They should be given a chance to dry out thoroughly, as perspiration rots the leather. Shoe-trees help greatly to preserve the shape when not in use.

There is a right and a wrong way to put on shoes. Laces should be loosened to three eyelets from the vamp. This prevents a strain on the lining and the backs of the shoes. Button shoes should be completely unbuttoned. A shoe horn should be used to put on oxfords or pumps. If the shoe is put on when only half unlaced or unbuttoned, it is likely to cause the back seam to rip and will invariably tear the lining. Nothing will cause stockings to wear out more quickly than roughness in the lining. If the foot is forced into the shoe, the counter will be broken down, thus shortening the life of the shoe.

A shoe's worst enemy is wet weather. Rubbers should be worn in wet weather as nothing ruins leather so quickly as to get wet, nor does anything spoil the shape of the shoe more quickly. Wet shoes should not be put in a very hot place to dry, as they shrink and become hard and misshapen. Shoes when thoroughly wet should have the heels and counters and vamp straightened, and should be stuffed with paper and allowed to dry in a warm place.

Shoes should be kept clean with a cloth and brush, and should be oiled occasionally to replace the normal oil in leather. Vaseline or castor oil, and neat's-foot oil are the best for this purpose. Oil and grease which waterproofs leather also makes the shoes more serviceable. Shoe polish also helps to preserve leather.

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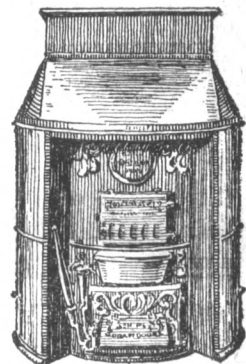
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Isbell's famous Sunshine Bedding Gladioli—10 white, 10 bright red, 10 pink. Sent prepaid to any postoffice. Order an assortment when writing for Catalog.

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Buy your Tea and Coffee from us, parcel post prepaid. We offer Old Colony Blend roasted daily at the following prices which will prove to you value of buying by mail. 3 lbs. for \$1.00, 10 lbs. for \$3.20. Or start a Coffee Club, we will mail you four 3 lb. packages of "Old Colony Blend." for \$3.80 5 lbs. of Choice Black, Mixed or Green Tea \$2.50.

Order today, try it and if not pleased we will refund your money in full. Send check or M. O. State if you want Coffee ground.

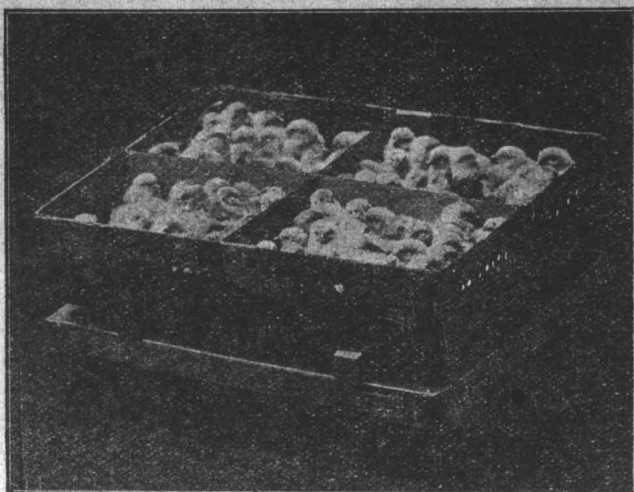
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200 Chicks Ready for Shipping

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Our Tenth Year

We hatch about 20,000 every Tuesday. White Leghorns and Brown Leghorns. Bred to lay, large white eggs. Stock has been improved considerably during the ten years, and is now some of the best. We ship everywhere by parcel post in lots of 25, 50, 100 and 1000 or more. Safe arrival guaranteed.

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Michigan's Largest Pedigree Poultry Farm

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From S. C. W. Leghorns, That have been carefully culled for heavy laying. Mated with PEDIGREE cockerels, whose records in the past five years are, the lowest in that time, 215 eggs, in one year, and as high as 290 eggs, in one year. We guarantee that every chick and breeder that we sell comes from Lakewood Farm only. Write for catalog. Grade A, 20c each. Grade B, 15c each.

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Baby Chicks Pure Bred 800,000 in 1921

To your door prepaid by us Guaranteed live delivery. We have the most modern methods of hatching and shipping methods and we ship you nothing but the best, our stock is of the standard Free range bred for heavy egg laying quality and our chicks are strong and healthy and will develop very rapidly. We have the following breeds S. C. White, Buff and Brown Leghorns, Anconas, W. and B. Rocks, R. C. and S. C. R. I. Reds, B. and W. Orpingtons, W. Wyandottes. Get our big bargain offer in CHICKS and BROODERS and save money on your ORDER and Maturity of your flock. Circular FREE.

WOLF HATCHING & BREEDING CO., Dept. M, Gibsonburg, Ohio.

Hubers Reliable Chicks—700,000 For 1921.

By Parcel Post Prepaid. By Special Delivery. Guarantee Live Delivery. Eggs for Hatching by Setting or 100.



We have installed the most modern features of the Hatching Industry, which will insure chicks as strong as Hen Hatched Chicks and full of pep. This is our 12th season. With the great increasing demand for our chicks and the fine Testimonials, Photos, Show Reports and Wonderful Egg Records we receive from our customers proves that our chicks from Stock of Good Quality, Bred for Heavy Egg Production and that they are Properly Hatched. To insure success buy our Reliable Chicks. We hatch all our chicks from pure bred, free range farm stock. S. C. White and Brown Leghorns, S. C. Anconas, Barred Rocks, R. C. and S. C. Reds, S. C. and R. C. Buff Orpingtons, S. C. Flack Minorcas and White Wyandottes. Special combination offer on chicks and brooder stoves. Before buying elsewhere send for illustrated catalog and prices. Place order at once and avoid disappointment in the rush of the season.

Hubers Reliable Hatchery, East High St., Fostoria, Ohio.

BABY CHICKS

We furnish pure bred chicks of the finest quality from high egg producing stock. Flocks built directly from laying contest winners. We have seventeen breeds. Write for free illustrated catalogue and price list.

J. W. OSSEGE HATCHERY, Glandorf, Ohio.

Anconas Bred-to-Lay and Exhibit, baby chicks and hatching eggs. Send for mating list. Manning's Ancona Farm, Coldwater, Mich.



Chicks

White Leg. 15c
Eng. Leg. 16c
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Sent Prepaid by Parcel Post

Special price on 1,000 lots. Get your order in for some of these high grade chicks, hatched from selected bred-to-lay breeders, kept on free range.

WE GUARANTEE SAFE DELIVERY

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B-A-B-Y-C-H-I-X

Crescent Strain S. C. White Leghorns, Black Leghorns, Brown Leghorns, Buff Leghorns, Black Minorcas, Rhode Island Reds, Barred Plymouth Rocks, (also White), Wyandottes, (Silver laced and White) and Mottled Anconas. WE HATCH eggs from flocks on range on separate farms. Send for booklet, containing much of value to poultry raisers.

CRESCENT EGG COMPANY, Allegan, Mich.

Baby Chicks from fine stock, to produce eggs, at utility prices. Catalogue FREE. Lee's Poultry Farm & Hatchery, Edison, O.

OVIE'S BABY CHICKS

High Quality--Moderate Prices

You can pay more and get less in quality but you can't get a bigger value for the same money. That's why once a customer always a customer.

25,000 Husky Chix Weekly

from free range, carefully selected stock, hatched by experts in a real up-to-date hatchery. We specialize in 14 leading breeds. Safe delivery guaranteed by P.P. prepaid. Write for catalog.

OVIE'S POULTRY FARM & HATCHERY
34 State Street Marion, Ind.



LOOK! 1,000,000 for 1921.

Postage PAID. 95% live arrival guaranteed. 40 breeds chicks, 4 breeds ducklings. Select and Exhibition grades. A hatch every week all year. Book your order NOW for early spring delivery. Catalogue free. Stamps appreciated.

NABOB HATCHERIES, Gambier, Ohio

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

Barred Plymouth Rock Cockerels Big boned, Rock type, well barred, bred to lay birds, with lots of pep. \$4.00 and \$5.00. **CHAS. H. WRIGHT,** Jones, Cass Co., Mich.

BEST Breeds. Chickens, Ducks, Geese, Turkeys, Guinea, Hares, Dogs. Stock for sale. Write your wants. Catalog free. **H. A. Souder,** Box 94, Sellersville, Pa.

Baby Chicks Good big healthy chicks of show room quality at utility prices. Catalogue free. **Sycamore Hatchery,** Sycamore, Ohio

BARRED Plymouth Rock cockerels for sale, some prize winning stock \$4 and \$5. **George H. Campbell,** R. 5, Box 70, Ypsilanti, Mich.

Finding the Best Egg Markets

(Continued from page 329).

table, but they naturally will not sell as well on the market as large, clean ones and if mixed in with good eggs will usually ruin the price on the whole lot.

No eggs should be washed, for the packers claim they will not keep well. All eggs from stolen nests, whose freshness is doubtful, and all incubator eggs, should either be thrown away, boiled for the little chicks or used at home. Rotten eggs need not be discussed. Any person who will send one to market deserves the penalty of the pure food law.

In hot weather eggs should be marketed two or three times a week, and in the fall and spring at least once a week. Many buyers have had trouble in October and November with eggs classed as "held eggs." These are common, because most farmers believe that after frost eggs will not decay so rapidly, but nevertheless they do evaporate and the air cells in them show the candler that they are stale.

THERE are two ways of buying and selling market eggs. One is by case count, where the eggs are simply counted, regardless of quality, and the other is by "loss off" where the eggs are candled and paid for according to quality. The last way is undoubtedly the fairest of all parties concerned, except perhaps that it is not quite so necessary during the months of December, January and February when eggs keep best.

The ideal way to grade eggs is as follows: Extras, weight 28-26 ounces; naturally and absolutely clean, fresh and sound; No. 1, weight 26-24 ounces, sound, fresh and reasonably clean; No. 2, shrunk or stale, washed, small, stained and dirty; No. 3, checks, cracked but not leaking; No. 4, rots, incubator and decomposed eggs. Although it may seem like a lot of bother to differentiate among eggs so carefully, this is undoubtedly the coming method, at least in the larger markets. It will really be a fine thing for every careful, conscientious egg raiser when this system becomes universal, even if the class called "extras" is eliminated as unnecessary, for then the honest producer will feel that he has the proper incentive and reward.

POULTRY HINTS.

It matters not how good an incubator, how persistent a sitting hen you have, unless the egg is fertile no chick can be hatched from it. The reverse is equally true—it makes no difference how fertile an egg is, it won't hatch if it is much abused in the hatching.

If there are floors to the chicks' coops see that they are kept dry and clean. Take them out occasionally, scrape them and dust with dry earth, ashes or sand. If the coops have no bottom, be sure they are moved often enough to always have the ground under them clean.

COOPERATIVE MILK MARKETING COMPANY ASSURED.

A TOTAL of \$200,000 worth of stock has been sold in the Southern Illinois Cooperative Milk Marketing Company at St. Louis. Dairymen of Clinton county purchased \$45,000 worth of the stock; Madison county \$55,000, and Washington county \$35,000. Solicitors from the Illinois Agricultural Association are now working in St. Clair, Montgomery, and Macoupin counties. As soon as the work is finished in these counties, stock selling will start on the Missouri side. This amount of stock having been sold, insures a marketing company. Plans are being made to have the permanent organization meeting about April 1.

Biggest Hatches Strongest Chicks

That's what you'll get with my Hatching Outfit, and I can prove it.

My new Poultry Book, "Hatching Facts," tells the whole story—gives newest ideas and easiest ways to make poultry pay—it's Free—write for it today. Learn the many advantages my Belle City has over the "old hen way," and the big money folks make using my

\$15⁹⁵ 140-Egg Champion

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Double Walls Fibre Board—Hot-Water Copper Tank—Self-Regulated Safety Lamp Thermometer & Holder—Egg Tester—Deep Nursery. \$9.95 buys 140-Chick Hot-Water Double-Walled Belle City Brooder. Or save \$1.95 by order—\$23⁹⁵ ing Both together for only

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And allowed to points beyond. I ship quick from Buffalo, Minneapolis, Kansas City or Racine.

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without cost or obligation. Get an early start—Save Valuable Time—Order Now, or write today for my Free Book, "Hatching Facts"

a complete guide to successful raising poultry. Jim Rohan, Pres.

Belle City Incubator Co., Box 14 Racine, Wis.

30 DAYS TRIAL Don't Take Any Chances! Find Out What an Incubator is Made of Before You Buy. We will gladly send you samples of materials we use. Get our Catalog and samples before buying. We give 30 Days' Trial—10-Year Guarantee. These two well-made, nationally known machines—

130 Eggs 130 Chicks

Both Freight Paid \$18²⁵ East of Rockies

Wisconsin are made of genuine California Redwood. Incubators have double walls, air space between, double glass doors, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc., ready to run. Send today for our new 1921 catalog, free and postpaid.

Large Size 180-EGG INCUBATOR AND BROODER, BOTH \$22.50.

WISCONSIN INCUBATOR CO. Box 82, Racine, Wis.

MONEY BACK IF NOT SATISFIED

You Take No RISK With An **Ironclad** 30 Days Trial 10 Yr. Guarantee Paid

Think of it! You can now get this famous Iron Covered Incubator and California Redwood Brooder on 30 days trial, with a 10-year guarantee, freight paid east of the Rockies.

150 EGG INCUBATOR CHICK BROODER

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 address. Money back if not satisfied or send for free catalog.

IRONCLAD INCUBATOR CO. Box 85, Racine, Wis.

103 DEGREE INCUBATOR

Regulates heat before it enters boiler. Not afterwards. Automatic; one regulation, even temperature, thorough ventilation, not just claims, but all guaranteed. No night watch. No roasted eggs. No blankets. More chicks with less attention. Patented two-circuit hot water heating plant. No incubator cellar needed. Room temperature may vary 66 degrees; 4 sizes. Send today for literature.

30 DAYS TRIAL FREE 103 Degree Incubator Company

103 EAST ST. Crown Point, Indiana.

\$12⁷⁵ FOR A BADGER 140 EGG INCUBATOR

140 CHICK BROODER \$6.75

Built of California Redwood with double walls. Insulate top covered with wall board gives double protection. Hot water—Copper Tank—Self Regulating—Thermometer—Deep Nursery. Set up and shipped COMPLETE with all fixtures. Order DIRECT or send for descriptive circular.

BADGER INCUBATOR CO. Box 130, Racine, Wis.

64 BREEDS Most Profitable chicks, hens, ducks, turkeys and geese. Choice pure-bred, hardy northern raised. Fowls, eggs, incubators at low prices. America's great poultry farm. 25th year. Send 5c for large valuable book and catalog.

R.F. NEUBERT Co., Box 824, Mankato, Minn.

POULTRY

For your best quality of CHICKS

Send Your Order to the

City Limits Hatchery,

Rt. 5, Box 11, Holland, Mich.

Our chicks are of the highest quality and our prices are within reach of everybody. We have S. C. W. Leghorns, S. C. Anconas, English White Leghorns, S. C. B. Leghorns, and Barred Rocks.

Chicks Baby Chicks

Single Comb White Leghorns Our Specialty
English-American strain. We are not operating a hatchery but have the largest most up-to-date Single Comb White Leghorn farm in Mich. All eggs going into our incubators are produced on our own farm from high quality stock nothing sold that is not good enough for our own use. Such chicks are worth more to you than those bought from the average hatchery, though our prices are practically the same. March, April and May chicks in lots of 50 to 200 per chick 16 1-2c. 200 to 500 16c, 500 to 1000 15 1-2c. 1st hatch comes off March 14. Our supply is limited order now. 8 weeks old April hatched pullets \$1.25.

Macatawa White Leghorn Co.
R. 7, Holland, Mich.

DAY OLD CHICKS

HOMESTEAD FARMS
We are now beginning to ship chicks from our Pure Breed Practical Poultry

This is the stock that will pay on your farm. Ducklings and Hatching Eggs. High Quality Egg Leghorns and All Standard Breeds. Send for 64 page illustrated Catalog, which tells how to raise chicks. Delivered postpaid.

STATE FARMS ASSOCIATION,
Desk 1, Kalamazoo, Michigan

Crystal Poultry Farms
HIGH QUALITY
Baby chicks, eggs from heavy laying strains. Prize winners at 1920 New York and Ohio State Fairs. 35 Leading breeds. Prices reasonable. Safe arrival guaranteed. Circular free. **Shepard Strong,** Crystal Poultry Farms, 7901 Franklin Ave., Cleveland, O.

BABY CHICKS

Hatched from free range stock. Quality and live delivery guaranteed. Write for catalogue. **STILLWATER HATCHERY,** Covington, Ohio.

Baby Chicks and Eggs for Hatching

Barron's White Leghorns, Barred Rocks and R. I. Reds. Big sturdy chicks from free range stock with high egg records. Interesting catalogue free. **BRUMMERS POULTRY FARM,** Holland, Mich.

CHICKS English Strain White Leghorn. Bred to lay Brown Leghorn and Anconas. Bargain prices for our quality stock kept on free range. Order now for early deliveries. **Hillsdale Grove Hatchery Farm,** R. 1, Holland, Mich.

Cockerels and Hens: Leghorns, Minorcas, Reds, Rocks, Orpingtons, Wyandottes, Houdans. **Tyrona Poultry Farm,** Fenton, Mich.

BABY CHICKS R.I. Red, Barred Rocks, White Wyandotte, White Leghorns. Selected healthy chicks. Order early, have winter layers. First hatch Feb. 28th. Write for price list and circular. **DEER & ADAMS,** Litchfield, Mich.

Baby Chicks

FREE delivery. Superlative quality from select high-producing stock. All popular varieties. Reasonable prices. Write for catalog at once. **AERDALE POULTRY FARM,** Springfield, Ohio.

BETTER BABY CHICKS

mean Bigger Poultry Profits for you. Buy Mid-West Chicks and make real money with your poultry. 12 varieties. Safe arrival guaranteed. Write for catalog. **Frank B. White, Pres., MID-WEST HATCHERIES, Office,** 655 E. Dearborn Bldg. Chicago, Ill.

Baby Chicks Anconas 17c, Rocks 20c, B. Leghorns 15c, W. Leg. 15c. All S. C. 54 Dis. in lots of 1000 or more. Parcel Post Paid and safe delivery guaranteed. Catalog free. **KNOLLS HATCHERY,** R. 3, Holland, Mich.

Barred Plymouth Rock Cockerels, M. A. C. Strain \$5 and \$8 or 2 for \$15. **Mrs. JESSE F. BALL,** R. 9, Charlotte, Mich.

Barred P. R. Cockerels for sale. M. A. C. heavy laying strain. Sired by 1st pen cockerels at Detroit Show 1920. **Rosemary Farms,** Williamston, Mich.

CHICKS. We ship thousands each season. Send for prices and testimonials. **FREEPORT HATCHERY,** Box 12, Freeport, Mich.

DAY OLD CHICKS S.O. White Leghorn, Bred to lay Brown Leghorn and Anconas. Bargain prices for our quality stock kept on free range. Order now for early deliveries. **MACALWHITE POULTRY FARMS,** Alex. MacVittie, Proprietor, Caro, Mich.

BABY CHICKS. Eight im- proved varieties at lowest possible prices. A trial order will convince you of their superior quality. Catalogue free. **Ohls Poultry Yards and Hatchery,** Marion, Ohio.

BABY CHICKS Hatching eggs, Barred Rocks, Norman strain, trap-nested, bred-to-lay, expertly tested for many generations, large illustrated catalogue 25c, stamps for circular. **Norman Poultry Plant,** Chatsworth, Ill.

CAUSE OF POOR HATCHES.

Do you know why eggs set in incubators last spring did not hatch as well as usual, while those set under hens hatched all right? All through this section of country people had poor hatches from incubators which previously turned out good hatches. **Montcalm Co.** **Mrs. W. N.**

The poultry producers in our section seemed to have nearly as good success as usual with artificial incubation. When poor results occurred it was often due to a lack of vitality in the breeding stock due to the hard winter which they endured. Last winter was cold and long and many severe storms came in April when the poultry are usually enjoying the benefits of free range.

A lack of vigor in the breeding stock might show more prominently in artificially hatched and brooded chicks than in those that are hen-hatched and brooded. Many poultry producers are willing to admit that while incubators are economical and produce large flocks, there can never be a substitute exactly as good as the mother hen. For that reason there are many poultry owners who produce better chicks by hen-hatching and hen-brooding than they can produce artificially. The artificial incubation and brooding requires good equipment and very close and careful attention.

HOUSING THE BROODERS.

Have you any illustrations of a combined poultry and brooder house? **Sandusky Co.** **F. G. H.**

We have no photographs of a combined poultry and brooder house and do not know where we could obtain them for you. Such houses are not generally built now as they are not as practical as other arrangements. The best method of brooding is to use a coal burning brooder stove in a colony house. A house eight feet deep and ten feet wide, of the shed-roof type, will be all right for each brooder stove. They can be four feet high in the rear and six feet in front.

The fire risk is reduced when the brooders are in small buildings. The young chicks and the old birds need different ranges for the best results. If the laying flock and growing chicks are in the same house it is difficult to raise them unless the ranges are fenced apart, and the house is divided.

Any standard type of poultry house can be used for a brooder house by simply installing one or more coal-burning brooders in that house. On some large poultry farms they have large brooder houses which are only long laying-houses with a coal stove in each division of the house instead of roosts and nests for laying-stock. When the young stock do not need heat, the stoves are removed and roosts installed. Then the same house can be used as winter laying quarters. The modern way of brooding is to use coal stoves and any poultry house, regardless of the type, can be used as a brooder house when such equipment is installed.—**R. G. K.**

CONGESTION OF LIVER.

The combs and sides of the heads of our chickens are turning black. The chickens are apparently healthy but do not lay. We would appreciate very much if you would suggest a remedy. **Ingham Co.** **M. H.**

When the comb of a hen becomes dark or purplish, it indicates a congestion of the liver. You do not state the ration or amount of exercise the hens have had, but this condition is often due to an overfat condition. There is no cure but it can usually be prevented by feeding a balanced ration in a dry mash and giving the scratch grain in litter so the hens will have to scratch. All hens that seem weak or unpromising as layers should be culled out.—**R. G. K.**

"SUPERIOR" BABY CHICKS

Big Reduction In Prices



For 30 days we are offering day old chicks from our Purebred, culled and tested High Record Winter laying strains of ENGLISH and AMERICAN WHITE LEGHORNS, BROWN LEGHORNS AND ANCONAS, at greatly reduced prices.

Farm Raised Free Range Lowest Prices Highest Quality

Strong, Healthy, Full-Pep Chicks sent prepaid to your door. We guarantee you complete satisfaction or refund your money.

"A Square Deal Is Our Motto"

If you want the best send for our descriptive catalog and price list TODAY.

SUPERIOR POULTRY FARMS AND HATCHERY, Box 203, Zeeland, Mich.

Barred Rocks Hatching eggs from Parks 200-egg strain. Rich in the blood of Parks best pedigreed pens. \$2 per 15, \$3 per 50, \$12 per 100. Prepaid by parcel post in nonbreakable containers. **R. G. KIRBY,** Route 1, East Lansing, Mich.

White Wyandottes Official records, five hens 1074 eggs. Eggs 15, \$3.00 and \$10.00; 100, \$15.00. Catalog free. **G. W. SCHOTTSMANN,** Montrose, Ill.

Broad View Farm Big Type S. C. White Leghorns. Big long bodied birds. Heavy layers of big white eggs. Exhibition type eggs 15 \$2.50, 100 \$8. Post paid. **E. B. McKERCHER,** Hillsdale, Mich.

CHICKS CHICKS

Shipped safely everywhere by mail. S. C. White Leghorns and S. C. Mottled Anconas, the great egg machines. Strong, sturdy chicks guaranteed to satisfy. Order now for spring delivery. 13th season. Free catalogue. **W. Van Appledorn,** R. 7, Holland, Mich.

CHICKS English Strain White Leghorns the heavy laying strain at only \$15 per 100; prepaid by mail safe arrival guaranteed send cash with order special rates on 500 or more. **JAMESTOWN HATCHERY,** Jamestown, Mich.

DAY-OLD CHICKS

\$16.00 per 100 and up. Hatching eggs, \$2.00 to \$15.00 per setting and \$9.00 to \$15.00 per 100, from 25 varieties of pure bred, farm raised fowls: Chickens, Geese, Ducks, Turkeys and Guinea. Price list and circular free. Plenty of nice breeding stock. Book now for early spring delivery. **WILMINGTON HATCHERY & POULTRY CO.,** Wilmington, Ohio.

DAY-OLD CHICKS

Strong, vigorous fellows, the kind that live and grow. Carefully selected, open range, purebred utility stock. Price reasonable. Circular free. **SUNBEAM HATCHERY,** 2433 S. Main St., Findlay, Ohio.

Don't Buy Baby Chicks

Until you get our catalog and prices. Pure bred, heavy laying White and Brown Leghorns, Anconas. Write today. **Monarch Hatchery,** Zeeland, Mich.

Fowler's Buff Rocks Cockerels, hens and pullets. Write for prices. **R. B. FOWLER,** Hartford, Mich.

LOOK [Best Graded] CHICKS

Our Hi-Grade profit paying Bred-to-Lay, M. A. C. tested and exhibition chicks, at reasonable prices. Hatching eggs, 8 varieties. Circular FREE. **Lawrence Poultry Farm,** R. 7, Grand Rapids, Mich.

BABY CHICKS 25 for \$5.50 50 for \$10 and 100 for \$18.00. Prepaid, safe delivery guaranteed. Single Comb White Leghorns; White, Buff and Barred Plymouth Rocks; S. C. R. I. Reds and Anconas. **Fenton Chicken Hatchery,** Box 244, Fenton, Mich.

BABY CHICKS

English Strain White Leghorns. The heavy laying strain at \$18.00 per 100 for April; \$16 for May. Prepaid by mail. Safe arrival guaranteed. **LEO M. LOEW,** Dorrr, Mich.

BABY CHICKS Single Comb White Leghorn (To m Barron Red Anconas, White Wyandottes and Brown Leghorns 25 for \$5.50, 50 for \$10.00, 100 for \$17.00. Ross Wade, Meadow Brook Hatchery, Mt. Morris, Mich.

Barred Rocks 15 eggs, \$1.75; 100 for \$8; by prepaid mail. Flock average last year 133 eggs. **LEWIS B. AVERY,** Clinton, Mich.

Barred Rocks from Rocky Ridge Hatching eggs from bred to lay birds \$2.00 per 15. Prepaid by Parcel Post. **W. T. RICHARDSON,** Hanover, Mich.

Chicks! Chicks! Chicks!

5000 hatches March 14th. Exhibition and bred-to-lay Our Rocks, Reds, Leghorns, Wyandottes, Anconas, Minorcas, Orpingtons, grow and pay. Now is your chance for early chicks at 13c and up. Eggs are advancing and chicks will too. **Holgate Chick Hatchery,** Holgate, Ohio

CHICKS. Bred-to-lay S. C. W. Leghorn and Barred Rock quality chicks that please, guaranteed full count and to arrive to you "all ready made" in first class condition by parcel post paid. Leghorns \$15 per 100, Rocks \$18 per 100. Special prices on 500 to 1000. Circular. **Sunnybrook Poultry Farm,** Hillsdale, Mich.

Choice Baby Chicks English and American White Leghorns and Anconas. Catalog free. **M. D. Wyngarden,** R. 4, Zeeland, Mich.

CHICKS Pure-bred White and Brown Leghorns from free range heavy laying stock that is of large size with large egg capacity. Sent postpaid. Prices reasonable. Safe arrival guaranteed. Catalog free. **Royal Hatchery,** R. 2, Zeeland, Mich.

DAY OLD CHICKS

and hatching eggs from select heavy producing stock. Delivery guaranteed. **Wh. Leghorns, Bar. Rocks, W. Wyand., S.C. Reds, B. Orp. Cat. free.** **GOSHEN POULTRY FARMS, R-19 Goshen, Ind.**

Eggs from pure Toulouse geese. Ten for five dollars. Parcel post paid. **Mrs. Amy Southworth,** Allen, Mich.

Jersey Black Giants. Again the sensation at Madison Square Garden, the world's greatest Poultry show. The giant of poultrydom. If given free range will find the larger part of it's own living. For descriptive folder and price list on hatching eggs, write **MARCY FARMS,** Matawan, N. J.

Look! 100,000 for 1921. Day Old Chicks, Barred Rocks, S.C. W. Leghorns, American and English, and Anconas. Write for free catalog. **Fairview Hatchery,** R. 2, Zeeland, Mich.

Ohls Improved Leghorns

BABY CHICKS, bred from stock with high egg records and show room quality. None better for filling the egg basket. Catalogue free. **Ohls White Leghorn Farms,** Marion, Ohio

March Chicks Buy 'em Home

	100	50	25
S. C. White Leghorns	\$18.00	\$9.50	\$5.00
Bd. Rocks, R. I. Reds	20.00	10.50	5.50

Write for other varieties. With order please give date wanted and name second choice. Prepaid and guaranteed 97% live chicks
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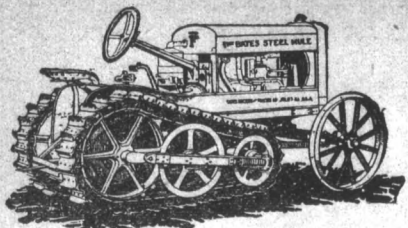
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Additional Farm Ads. on Page 365



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Our Boys' and Girls' Department

This Boy Used His Brains

And Went Back to School—By Chesla C. Sherlock

HE was just an Iowa farm boy, back in those trying days in the late eighties. The farmer was a "hayseed" then and mortgages hung like a pall over him. Farm products were almost valueless. Eggs brought only a nickel a dozen, and in trade. Money was not to be had, and everything the farmer produced was "traded" at the store for flour, and sugar and salt. Sometimes the boys got a little candy when they went to town on Saturdays, more often they got nothing. It was in these cheerless days that Henry C. Wallace was a farm boy. Last month it was announced that he had been selected by President-elect Harding to be the secretary of agriculture.

His father, also named Henry, had emigrated when a lad from the bonny hills of old Scotland. He had educated himself, and out of that passion for learning came the determination to give his boys a real schooling. In those days few boys could go to college. But Henry C. Wallace managed to eke out two years at the Iowa State Agricultural College at Ames.

IT was in the days when that college was just beginning its career. "Tama Jim" Wilson, later secretary of agriculture under McKinley, Roosevelt and Taft, had just taken a professorship there and was laying the foundation for the success which this great institution of farming has now achieved.

Henry C. Wallace was one of the first six or seven students to attend Iowa State under Secretary Wilson, a distinction in itself! But two years was all that his slender resources could afford, so he went back to the old neighborhood and began to farm. He married and two children were born.

"I farmed for four years," says Mr. Wallace, in speaking of those days. "I pinned my faith on pure-bred cattle and hogs. The things I had learned at Ames were of such tremendous advantage to me that I succeeded from the start.

"Then I began to write short pieces about my farming experiences for a number of farm papers. It added to my cash income, but the best thing it did was to attract the attention of Professor Henry of the Wisconsin Agricultural College at Madison. Professor Henry was the dean of all agricultural scientists and he had the kindness to write me a letter and urge me to come to the college as he thought I could make something better of myself if I had a thorough agricultural training.

"I replied that I had already taken two years' work at Ames but had been unable to graduate. Professor Henry wrote me again, insisting so strongly that I go back to college that I went to the expense of going to Madison to see him.

"Coming home from Madison, I stopped off at Ames between trains to revisit the old college. Secretary Wilson asked me what I was going to do in the future, and when I told him the facts I have just mentioned, he insisted that if I were going back to college, I must come back to Ames.

"I went home, held a farm sale, sold off everything I had in the world, turning everything into money, and I moved my wife and two children to Ames. I went to school the remaining two years and graduated."

Mr. Wallace considers that this was the turning point in his life, and that he owes all that he is today to the fact that he took the advice of such men as Secretary Wilson and Professor Henry and returned to college.

WHEN Mr. Wallace was graduated from his course, Secretary Wilson immediately made him professor of dairying and assistant to himself. For three years he remained at the college in this work and under the direct influence and the guiding hand of "Tama Jim" Wilson, who did more to chart out modern agriculture in those early days than any other man.

In the meantime Mr. Wallace's father, the venerable Henry Wallace, who had been editor of the Iowa Homestead and acquired a tremendous following among farmers throughout the



Our New Secretary of Agriculture.

country, decided to start a farm paper of his own. He went to Ames to see his two boys, Henry C. and John, who was then just finishing his first year at Ames.

All three of them decided to combine their fortunes in the new venture, which they called Wallace's Farmer. Then followed heartbreaking days. John, who was business manager, went out to solicit business on a bicycle, because he had no money for train fare! He obtained the first advertising in this way. Uphill work! But the three fought staunchly through those hard days, inspired by their belief in the worth of what they were doing. Today Wallace's Farmer is one of the most influential agricultural publications in the United States. "Just hard work and plenty of it," is the reason Henry C. Wallace, now editor gives for the success of the paper.

HARD work and plenty of it," has certainly helped to fit Mr. Wallace to act as secretary of agriculture, one of the most important members of the President's cabinet. By character, training, and experience, he is exceptionally well qualified for the place. He is credited with being one of the nation's foremost agricultural authorities. Farmers love him and respect his judgment. Every year he attends dozens of their gatherings all over the country.

A list of some of the offices that he holds or has held shows the confidence that the farmers of the country have in him. He has been secretary of the Corn Belt Meat Producers' Association for fourteen years; he is a member of the executive committee of the United

States Live Stock Industry Commission, was permanent chairman of the National Shippers' Conference, and a prominent worker in the farm bureau movement—all very influential farmers' organizations.

He is also an active worker in the Y. M. C. A. and other religious and charitable organizations. He is a member of the International Committee of the Y. M. C. A., and to chronicle all of his Y. M. C. A. work would fill more space than we have.

It is interesting to know that Mr. Wallace is a friend and has been host to some of America's most prominent and influential citizens. When famous people come to Des Moines, his home town, they almost invariably accept his hospitality because he is an old friend of theirs. His guest book for just one week contains among others, the autographs of Theodore Roosevelt, William H. Taft, Gypsy Smith and John D. Rockefeller, Jr.

COME from a family of farmers," says Secretary Wallace. "As far back as we can trace our family, every member has been a farmer with the exception of two, and they were dealers in foodstuffs back in Scotland about seventy-five years ago. I am still a farmer and still own the old homestead and breed pure-bred live stock." The sacrifices which this farm boy made in order to go back to school were not in vain. What he lost then has come back to him a thousand-fold in many ways. And he has regained the farm which he gave up then. The advice which "Tama Jim" Wilson gave him as a young man, to go back to school, still holds true as the best advice ever given a boy. Henry C. Wallace changed his whole career by listening to that hint from his elders.—American Boy.

Our Boys' and Girls' Club

OUR club in Menominee county was organized April 12, 1920. It is composed of eight members, six girls and two boys, as follows: Evelyn Hanson, president; Elsie Rivest, vice-president; Freida Fillis, secretary; Viola Holub, treasurer; Viola Kell, cheer leader; Lillian Holderoff, Ernest Fillis and Napoleon Rivest. Mrs. Theodore Hanson is the club leader. At the first meeting we elected our officers and selected our leader. We have named our club the Wide Awake Poultry Club. We hold meetings once a week during the summer at the school house. We have given a social to make money to help pay for the feed for our chickens that we are raising.

Each member of the club was to get three settings of eggs from the county agricultural school on conditions such that we would return one of the best pullets from our flocks in the fall. This we all willingly agreed to do. We are all keeping Barred and White Plymouth Rocks.

We have learned how to cull pullets and after we got through culling our own flocks we went about practicing on our neighbors' flocks. And when we were told that it was one of the Menominee county teams that was going to demonstrate at the Michigan

State Fair at Detroit we worked harder than ever practicing, handling the chickens and finding out all about them until our first try-out, which gave evidence that we were the team to make the journey.

Then the question of selecting the three members to make the journey and represent our club, arose. The second decision was that Viola Holub, Elsie Rivest and myself would go and represent Menominee county. We gave a social before we started, by means of which we raised enough money to pay for our meals at Detroit, as that was our only expense of the trip.

On September 6 we started for Detroit in full array and with the determination to do our best in representing our county. We went by way of Milwaukee and Chicago, and at four o'clock the next afternoon arrived at Detroit. The first thing was to find the street car that would take us to the fair grounds. We finally succeeded in finding it and after about an hour's ride reached our destination, and found a nice little ready-made cottage to stay in with club members from other counties. We demonstrated on the eighth day of September, in the morning and afternoon.

There were many things to see at the state fair and we all had a very enjoyable time. We started on our return journey Friday, September 12, and came by way of Bay City and the Straits of Mackinac. We arrived home Saturday and all were satisfied that we had had the most interesting and pleasant journey of our lives and felt ready for good hard work at school.

And right here I want to give a bit of friendly advice to boys and girls who do not belong to clubs. Get busy and organize a club of some kind. It need not necessarily be a poultry club, but the kind that is the best suited and most convenient to have in your community. If you don't get a trip the work itself is worth the effort. A club member always has a big advantage.

VIOLA KELL.

UPPER PENINSULA CLUB NOTES.

THE number of garment and hot-lunch clubs so far organized in the upper peninsula has far exceeded the expectations of the Boys' and Girls' Club Department. Many requests have come from teachers and schools which never before have had clubs.

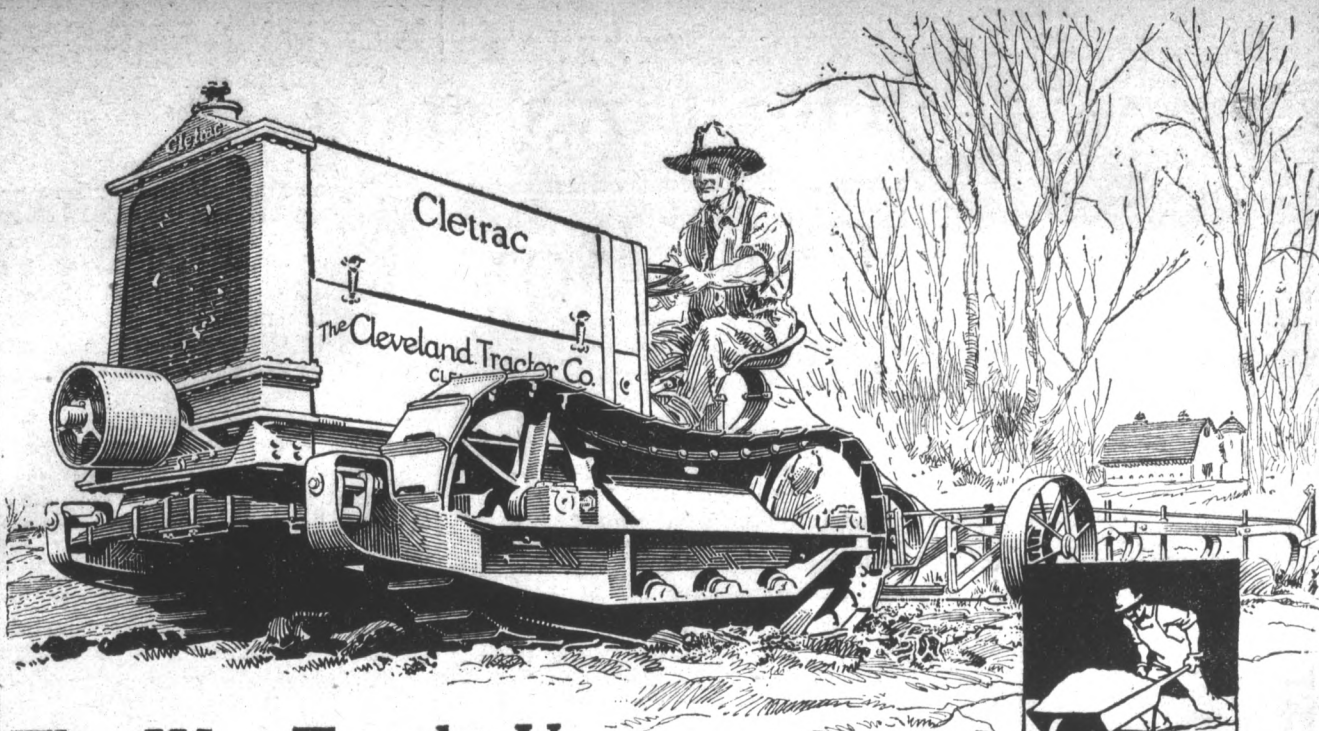
Last year Michigan clubs made garments valued at nearly \$11,000, of which the upper peninsula produced one-half. This high figure gave our state the leading place of all the states in the Union.

The following extracts from letters written in by club secretaries show the spirit which will again give Michigan the garment club championship of the United States.

Our "Nimble Fingers" had a basket social and used the proceeds to buy lamps and sash curtains for the school. We also rented an organ. Now we are trying to earn a big picture of Lincoln by selling lead pencils.—Angeline Lotto, Secretary, Hermansville, Menominee County.

"The Little Sisters' Club." On October 11, 1920, our teacher, Miss Larsen, organized a garment-making club. We have made an apron and drafted a pattern for a nightgown. We believe that all work and no play makes Jack a dull boy, so we have learned several club songs. The officers are: Ethel Gulbransen, president; Mildred Anderson, vice-president; Hannah Gronmark, secretary-treasurer. At our first meeting we named our club, "The Little Sisters' Club."—Mildred Anderson, Vice-president, Carney, Menominee County.

"The Evergreen Branch" Club, of Ewing township, began its work this year with eleven members, in contrast to last year's five. The very first thing the girls decided to do was to raise money and make curtains for the school. The money was raised by a "Penny Collection," which brought good returns.—Tyne Mattila, Club Leader, Rock, Marquette County.



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WHEN power is needed over soft, wet or rough ground—on the battlefield or on the farm—only the tank-type tractor can "deliver the goods." The Allied Armies learned that lesson well in France and tens of thousands of farmers the world over have taken it to heart.

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Do not continue to pump and carry by hand all the water needed in and about the home. A Hoosier installation will free you from this drudgery.

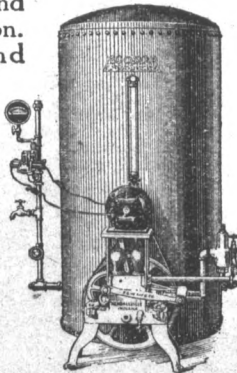
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Healthy, vigorous young from your breeding stock—
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Our Money-Back Guarantee protects you

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BUY FENCE POSTS direct from forest. Prices delivered your station. M. M. care of Michigan Farmer

Keeping the Highways Open

Snow is an Asset if it Doesn't Make Our Roads Impassable

By Warren J. Hoyt

A FEW weeks ago many of us were of the opinion that the matter of keeping the roads clear was one which could be dismissed until another winter. But the closing days of February have shown us what a versatile climate we possess and that we might have heeded Washington's advice during his birth month, at least, and remembered that in time of peace we were to prepare for war. We may in a measure have been persuaded from doing so by those who contend that the climate is growing milder and the snowfall lighter as the years go by.

There is really very little to justify a change-of-climate theory if weather records, which have been kept in this country for a little over a century, are

miss. They are deeper in some places than in others for a reason. A drift will form where the velocity of a car-rying wind is checked by an obstruction. If there are prevailing west winds an obstruction on the windward side is apt to cause drifts more readily than one on the east side. Fences, hedges, brush, and weeds frequently serve as obstructions—the closeness of the objects to the road determining whether a drift will be formed there. If it is far enough away it will prevent the drift rather than cause it. This principle is made use of very extensively by railways in the constructing of snow fences, which may be made of boards nailed together similar to a gate, or can be made of any material



Making a Passage Through Deep Snowdrifts.

consulted. The old-fashioned winters were quite like the modern kind—sometimes they were severe and sometimes they were mild. We remember the severe ones because they impress themselves a little more forcefully upon our minds. However, accurate instruments properly exposed and properly read do not forget the mild ones, and are not like us in being able to recall only the time we were snowbound for a couple of weeks and had to again draft old Dobbin to get the groceries and mail.

We charge an account like that against the snow man so hard that it rather injures his reputation as an agricultural asset. In fact his standing in the community seems to depend upon his not remaining in the wrong place at the right time. Everyone agrees that if during freezing weather he covers the fields, checking winter-killing, moderating the effects of extreme temperatures, excessive evaporation and destructive winds, mellowing the soil, replenishing soil moisture, and checking the run-off, he is at least a benefit to the grasses and a protection to the wheat. But he is far from an agricultural resource if he piles on the roadways, impeding the movement of foodstuffs, fuel and materials, preventing the marketing of produce and rendering impossible the "ship by truck" program. If the benefits outweigh the disadvantages no one will admit it while that condition is fresh in their memory. It sometimes seems that snow prefers to camp on the highways, nevertheless it possesses no organs of locomotion. It goes where it is put, which does not make it follow that it stays there. In fact, the two chief movers, wind and man, have engaged in some lively competitions with the wind having all the best of the argument.

THE wind has never been completely tamed, still the effect which a certain action on its part will produce is a fairly constant quality. In other

or in any way which will serve as an obstruction. They may be portable or stationary but they should be placed so that they are eight or ten feet back per foot of height of fence. The shape of the top of the obstacle is a deciding factor in the proper gauging of this distance.

Different surfaces cause different kinds of wind eddies to be formed. A flat surface, as the top of a hedge trimmed evenly, will cause the eddies to whirl horizontally and form drifts. An uneven surface, say a variation in height of one foot in every two or three causes the eddies to rotate vertically and carry the snow. A hedge, or practically any kind of a fence but wire, should not be closer than fifty or sixty feet to the center of the road. However, if the road bed is high drifts will be less liable to form upon it.

Having thus a reasonable understanding of the cause we can tell approximately where the drifts will be. If it is impossible to eliminate this cause we can either build up another obstruction to decrease the effect of that already there, or we can let the frozen moisture pile where it will, and then move it or go over the top. The going over works fairly well if everyone uses vehicles with runners or if it is packed down by a huge roller five or six feet in diameter. This builds up the surface to such an extent that there is less drifting on the traveled part. The compacting is only recommended for northern sections.

AS a usual thing, if we wish to travel between the fences the removal method is about the only one that proves satisfactory. The tools to do the moving with is not so easily determined unless we wait until the storm is upon us and are forced to use what we have at hand. Some communities have taken up the problem in time and have made attempts to prepare. Were expense not to be considered there is certainly a wide range of devices and snow-fighting machinery to

choose from. The large cities have experimented with snow tanks, flame throwers, motor trucks, locomotive cranes, steam shovels, snow melting machines and all manner of plows. New York City has found the tractor pushing a blade attached in front, or pulling a road grader to be so satisfactory that they recently purchased one hundred and fifty such outfits. Graders are not now as scarce as they were at one time, and there are few localities which have not been invaded by the tractor. It seems, then, that we have some machinery at hand besides the shovel, which we can get in readiness for a little work during its customary idle season.

The grader and tractor combination is always of valuable assistance and is highly satisfactory if it is in readiness and can be started with the storm. Iron shoes may be placed on the bottom of the blade to prevent gouging if any trouble is encountered on that score. A medium weight grader is not easily shifted sideways, but the hitch should be as short as it can be conveniently made.

Providing the road officials wish to equip more completely, some form of rotary plow would, perhaps, be a wise selection. These are being used successfully in the cities and on the country roads of this country and of Canada. They throw the snow fifty or sixty feet and spread it evenly on the adjoining fields where it will do good rather than piling it in huge mountains at the side as a shoveling gang finds it necessary to do. The cutters are driven by a gasoline motor and discharge the snow as a fine dust on one or both sides. It has the advantage of working fast and at a cost per mile of about fifty per cent what hand-labor would be. A level snow bed may be left behind so that sleigh traffic is not interfered with. Machines of this type work with the graders very successfully and can be used to remove the compacted banks which are formed by the pressing back from the roadway with the blade of the scraper.

If an occasional farm where a tractor is possessed can be loaned a grader during the winter season and with the highway divided into sections which are each to be looked after by their respective outfits, there is little reason why motor traffic need be blocked for very long periods at a time. When the storm does get the upper hand on one of the sections the rotary plow can be taken to that locality until the tractor is again master of the situation.

THE STATUS OF SUGAR BEET CONTRACTS.

MICHIGAN sugar beet growers' association contracts will be placed in the hands of twelve thousand growers within the next few weeks, according to officers of the association. The beet growers are making a great effort to enable the producing end of the industry to speak as one man to the manufacturers, an undertaking which entails the signing up of nine thousand organized members and three thousand who are unorganized.

The association's contract, drawn up on behalf of the members, makes the association the sole representative of the producers before the manufacturers. It provides for the 1921-22 seasons a schedule for \$6.45 a ton to the producer on the basis of five-cent sugar, with an additional \$1.20 per ton for each one-cent increase in the price of sugar. The paper is of the nature of a crop contract and is air-tight, insuring the confidence of the growers in one another standing by their respective agreements.

The contract follows the negotiations of the Utah and Idaho farm bureau sugar beet growers with their manufacturers, which closely ap-

proaches a fifty-fifty split, based on the wholesale price of sugar. The price schedule is the same. The negotiations were approved by the national conference of beet growers held at Chicago under the auspices of the American Farm Bureau Federation.

Beet factorymen are said to be offering \$6.00 a ton for beets on the basis of six cent sugar as against \$7.42 a ton, sought by the association on the basis of six cent sugar.

SHORTHORN SALE AT EAST LANSING.

THE Michigan Shorthorn Breeders' Association Sale and Show at the Michigan Agricultural College, at East Lansing, on February 25, drew a large crowd. The cattle were of mixed breeding and the quality of the offering, with a few exceptions, was very good. An encouraging indication is that many of the cattle were absorbed by new breeders. The forty-six head sold brought \$9,280, an average of \$202, thirty-seven females averaging \$201.50, and nine bulls averaging \$203. Lady Belle, consigned by H. B. Peters & Son, Carland, Michigan, topped the sale at \$1,000, going to Whitney Bros., Onondaga, Michigan. Commonwealth, offered by C. H. Prescott & Sons, Tawas City, Michigan, was the top bull and went to M. J. Downs for \$290.

Following is a list of the winners at the show which preceded the sale:

Bulls calved before September 1, 1919: First, H. B. Peters & Son, Carland, Mich., on Fairfield Pride.

Bulls calved after September 1, 1919: First, John Lassiters' Sons, of Clarkston, Mich., on Glory Lad; 2nd, John Schmidt & Sons, of Reed City, Mich., on Bransbys Jupiter; 3rd, C. H. Prescott & Sons, Tawas City, Mich., on Richland Diamond.

Cows calved before September 1, 1917: First, A. J. Adams, Litchfield, Mich., on Grace; 2nd, Lessiters, on May Queen; 3rd, J. M. Hicks & Sons, Williamston, Mich., on Diamond's Ramsden.

Cows with calves by side: First, Peters & Son, on Lady Belle; 2nd, S. H. Hicks & Sons, Lansing, Mich., on Lady Lilac; 3rd, W. S. Adams, Litchfield, Mich., on White Rose.

Cows calved between September 1, 1917, and September 1, 1918: First, Peters & Son, on Viscount Lady 4th.

Heifers calved between September 1, 1918, and September 1, 1919: First and 2nd, Peters & Son, on Red Rose of Lexith 2d. and Nora; 3rd, W. S. Adams, on Village View Maid.

Heifers, one year old: First and 2nd, Lessiters, on Doris and Lady Mina; 3rd, Prescotts, on Morning Star.

Heifer calves: First, Schmidt & Son, on Monarch's Jubilee; 2nd, Peters & Son, on Beauty Spot 2d; 3rd, A. J. Adams, on Red Rose.

The following is a list of buyers and the animals purchased:

Bulls.

E. B. Salisbury, Shepherd, Mich., Richland Diamond, calved September 14, 1919, \$205.

M. J. Downs, Ada, Mich., Commonwealth, calved October 28, 1919, \$290. Owen Todd and L. E. Cass, Flint, Mich., Fairfield Pride, calved July 10, 1919, \$205.

Simpson Bros., Charlotte, Mich., Bransby's Jupiter, calved May 8, 1920, \$215.

Henry Lynch, Mayville, Mich., Glory Lad, calved December 22, 1919, \$240.

Cows and Heifers.

H. C. Wheaton, Charlotte, Mich., Rosanna, calved September 28, 1919, \$240.

L. C. Kelly & Sons, Plymouth, Mich., Lady Mina, calved August 9, 1919, \$225; Lady Maud, calved March 15, 1920, \$235; Monarch's Nonpareil 3rd, calved November 11, 1917, \$265.

Edwin Hoffman, Elkton, Michigan, Doris, calved January 24, 1919, \$350.

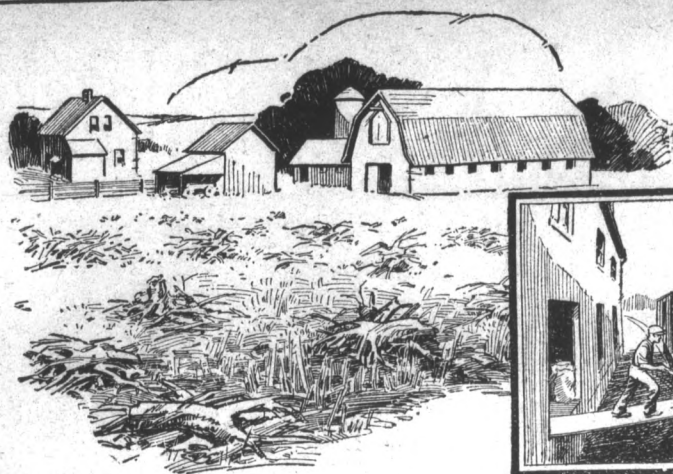
S. H. Pangborn, Bad Axe, Michigan, Jenny Lind 2d, calved January 28, 1919, \$250; Monarch's Jubilee, calved February 20, 1920, \$300.

Thomas Barr, Mason, Mich., Urys Queen 2d, calved April 29, 1915, \$215. Whitney Bros., Onondaga, Mich., Lady Belle, calved April 8, 1914, \$1000.

E. D. Snyder, Ovid, Mich., Fairfield Lass 2d, calved September 29, 1918, \$250.

C. H. Miller & Son, Saline, Mich., Village View Duchess, calved September 12, 1917, \$240.

Ford & Arndt, Big Rapids, Mich., Lady Lilac, calved August 7, 1914, \$205.



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Mid-State Farmers' Activities

By James C. Mills

INITIAL steps in the organization of a farm bureau cooperative association to take over the milk condensary at Elsie, Clinton county, and to convert it into a modern dairy, were taken by farmers of Clinton, Shiawassee, Gratiot and Saginaw counties on February 23, at Elsie. A working capital of \$25,000 was raised and a committee appointed to arrange for the incorporation of the farmers' organization. As soon as this is accomplished the new association will offer to purchase the condensary property now owned by the Waterloo Company of Toledo.

Gratiot Farmers Organize Marketing Association.

At a public meeting held in St. Louis, Gratiot county, on February 24 a local branch of the Gratiot County Farm Bureau was organized. About one hundred members joined the local branch and about thirty agreed to take stock in a cooperative elevator if the plans of the progressive farmers to that end were realized. Harry Cook, county agent employed by the farm bureau of Gratiot county for the coming year, was present to assist in the organization.

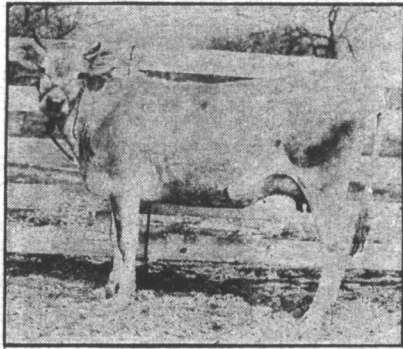
The main purpose of the meeting was to establish a cooperative elevator at St. Louis, for the direct benefit of

The association's plans include the establishment of a cannery at Clare, Clare county, for the canning of rabbit and chicken meat. The Clare Chamber of Commerce has taken the project in hand, and at a meeting held during the week of February 26 a proposition was presented by J. H. Reed, of Saginaw, whereby a plant would be established there, providing a building would be furnished rent free for three years. The David Ward building on McEwin street had already been arranged for, and can easily be adapted to the use of a cannery with slight alterations.

The cannery as planned will have a capacity at the start of eighty thousand cans a day, and employing about thirty men and girls. Fruits and vegetables will be canned in season, and rabbit meat and poultry in winter. It is said there are only three or four such canneries in the United States. Mr. Reed, the principal organizer of the association and its president, was for a time connected with government experimental work in stock breeding.

Well Pleased with Winnings.

Saginaw county walked away with the county sweepstakes in the improved grain exhibit and the local association exhibits at the state shows during farmers' week at Lansing, besides earning second place for the greatest number of prizes and making the most entries. Saginaw county scored ninety-eight points in the improved grain exhibit, leading its nearest rival, Ingham county, by twenty-one points. Ingham county, where the state show was held, was the only county of the second district that entered more exhibits and won more prizes than Saginaw, but Saginaw county farmers captured the "cream of the prizes," winning the pennant for the best association exhibit of grain. The second district includes all of Michigan except the four southernmost counties, in which exhibits are classified separately.



Majesty's Oxford Pearly, Owned by Miss Bolden, of Capac.

farmers in this vicinity, and was the first project undertaken by the local unit. At the meeting a board of directors was elected comprising the following members: Frank Peach, Chauncey Hall, Charles Curtis, Frank Sontey, Paul Burnham, Frank Kehl and George Hurst. The board then met and elected officers for the ensuing year, as follows: Frank Peach, president; George Hurst, vice-president; Chauncey Hall, secretary-treasurer. The next meeting was set to be held in St. Louis on Thursday, March 10.

The directors of the St. Louis Cooperative Creamery Company have elected the following officers for 1921: T. A. Bush, president; Charles F. Hoyt, vice-president; Fred C. Pernert, secretary-treasurer. With the officers, J. W. Campbell and William Vanderbeck complete the board of directors. A six per cent dividend was declared on the capital stock and the following bonuses were remitted to all stockholders who had contributed to the business of the company: Butter-fat, two cents per pound; eggs, two cents per dozen; poultry, five per cent of amount sold during 1920.

The St. Charles Cooperative Farm Bureau Shipping Association shipped its fourth carload of live stock on Wednesday, February 23.

Will Can Rabbit and Chicken Meat.

The Michigan-United Breeders is the name of a new association formed to protect the interests of breeders of registered stock by the furtherance of protective legislation. It has for its object not only the registering of stock in a way to prevent fraud, but also to aid stock raisers in marketing commercial grades of live stock.

Lawrence Bannan, of Burt, represented the Saginaw County Farm Bureau, having in charge the selection and exhibiting of the county products. About one hundred and twenty-five farmers from this county attended the state grain show, pronounced the largest exhibit of its kind ever held in the state.

Will Continue to Hold Wool.

Decision to hold their wool until a natural market develops was reached by about thirty wool growers of Saginaw county, who recently met at the farm bureau office. The consensus of opinion among the growers was that there is no actual demand for wool and that the present market prices are offered by speculators. Rather than sell their product to these sharpers, who eventually sell to users at a much higher price, the local growers feel that they are justified in storing their wool until it is really needed.

"It is estimated," said Arthur G. Bovay, county agent, "that the farm bureau can store and insure the wool for one year at a cost of one cent per pound. Under the local farm bureau cooperative plan the wool was assembled, graded and stored for the Saginaw growers last year at an approximate cost of three cents per pound.

About one hundred and fifty leaders of the Boys' and Girls' Clubs of Saginaw county gathered together on Saturday, February 26, at the Y. M. C. A., for their annual conference. Nathalia Vasola and Elda Robb, assistant state club leaders, and Harold Schur, secretary of the Caro Red Cross Chapter, gave short addresses. County Farm Bureau and school officials also addressed the meeting.

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Pure Bred Stock

A Good Time to Start

THE live stock business has its ups and downs. But the best time to start the breeding of any class of live stock is when good foundation stock may be obtained at reasonable prices, advises specialists cooperating with the Michigan State Farm Bureau. Yet often that isn't the way things are done in practice. A man will usually wait until he sees his neighbor making money in some branch of the live stock game and then get a start while prices are high.

This is a period of depression and low prices in the sheep industry. The Bureau of Crop Estimates of the United States Department of Agriculture in its February report says: "The lack of demand for and the low market of wool has discouraged many sheep owners and large flocks have been reduced while many small flocks have been sold." There is certainly no doubt that this is true with reference to feeding lambs and probably it applies to a limited extent to breeding flocks as well. However, Mr. Don Williams, extension specialist in sheep husbandry, who is cooperating with the wool department of the State Farm Bureau, is inclined to discount the statement that there has been any marked decrease in the number of breeding sheep in Michigan. In fact, he states that he has seen many signs of renewed interest in sheep raising in Michigan.

"Certainly," says Mr. Williams, "this is an excellent time to get into the sheep raising business, but it is a ruinous time to get out. The sheep raiser should not become unduly alarmed at present price conditions. This is the thirteenth period of depression through which the live stock industry has passed." This sentiment is corroborated by a recent statement made by Herbert E. Powell, of Ionia, retiring president of the Michigan Breeders' and Feeders' Association, who is a prominent sheep breeder and an acknowledged authority on the live stock situation in Michigan. Mr. Powell stated that this is a favorable period for farmers to undertake the breeding of sheep and to get into the pure-bred game, and for established breeders to improve the quality of their flocks.

There are very few farms in Michigan where a small flock of sheep cannot be kept to advantage, according to Mr. Williams. Since sheep keep down weeds and thrive on cheap pasture, they rank next to goats as the farmer's best scavengers and may be kept very economically during the summer months.

Michigan farmers might realize much more from their sheep by giving a little attention to a few details, according to a statement made by the animal husbandry department of the Michigan Agricultural College. Native lambs usually undersell western lambs, say the college authorities, because eighty per cent of the native lambs go on the market undocked and uncastrated. Then, too, farmers are slow to realize that small, well fattened lambs are the market toppers, while lambs weighing ninety pounds or over are not wanted by the killers.

The M. A. C. extension service is now putting on demonstrations showing the farmers the best methods of docking and castrating their lambs, states Mr. Williams.

Figures compiled by the Michigan State Farm Bureau indicate that even with the present unfavorable conditions, sheep raising should prove profitable in Michigan. The work done by the extension service in Indiana covering approximately one thousand sheep in twenty flocks shows that in 1919 the cost of keeping sheep per year was \$8.64 and that the average fleece is



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NOTICE

The Winwood Herd

on Nov. 1st will move their Herd of Pure Blood Holsteins to their new home, 1½ miles south of Rochester, Mich. and for the next 30 days we will sell what bull calves we have cheap as we will be unable to get our buildings complete before winter. So get busy if you want a son of Flint Maplecrest Boy at your own price.

JOHN H. WINN, (Inc.)

Roscommon, Michigan

FOR SALE Registered Holstein-Friesian bull calf, ready for service extra choice breeding and individuality. King of the Pontiac breeding. Henry S. Rohlf, R. 1, Akron, Mich.

FOR SALE

Reg. Holstein cows and heifers. Two very fine cows five yr. of age. One is fresh the other one will soon be fresh bred to a 33 lb. bull price \$350 each. Also three well bred heifers 2½ yr. of age two are fresh other one will soon be fresh price \$300 each from federal accredited herd. WM C. SCHOOF, R. 2, Washington, Mich. Telephone 41F13, Washington Exchange.

33.60 lbs. butter average of gddams of 8 mo. old bull. Can have him for present cost of service. Liberty Bond or note.
M. L. McLAULIN, Redford, Mich.

Holstein or Guernsey calves, practically pure, 7 weeks old, \$25.00 each, crated for shipment anywhere. Satisfaction guaranteed. Bonds Accepted. Edgewood Farms, Whitewater, Wis.

THE PONTIAC HERD

"Where the Champions Come From"

Offer special prices for 60 days to Michigan dairymen on bull calves from tested dams, sired by Sir Clothilde Concordia or Flint Hengerveld Lad. Send for extended pedigrees and prices.

Pontiac State Hospital
Pontiac, Mich.



Messrs. H. D. & A. T. Bogg,
Woodland, Cal. write:

"Holsteins are the heaviest producers of milk and fat. The demand for Holstein-Friesian cattle is growing each year. It is easier to fill a demand than to create one. We have always sold our surplus cattle without much trouble at good prices."

Send for Free Booklets

The Holstein-Friesian Association of America
164 American Bldg., Brattleboro, Vermont

For Sale \$475.00

A Young Bull. Cash or Terms
From Junior two year old A. R. O. Heifer, 17.68, born February 10, 1919, sired by
MODEL KING SEGIS GLISTA
Whose grand dam, GLISTA ERNESTINE, has six times made better than thirty pounds of butter. This bull is bound to transmit high milk production.
GRAND RIVER STOCK FARMS
315 N. East Ave., Corey J. Spencer, Owner Jackson, Mich.
Under State and Federal Supervision

"Top Notch" Holsteins

Buy a "milk" Bull of Quality from the Breeders of the world's only cow to produce 800 lbs. milk in 7 days, having an 800 lb. daughter.
Our herd is rich in the blood of Colantha 4th Johanna, the only cow that ever held all world's records in every division from one day to one year at the same time. She produced 631.70 lbs. milk in 7 days. We are offering for sale a bull, whose dam exceeds this record by over 7 1/2 lbs. in 7 days.

His dam's records are:
Milk 7 Days 100.1 lbs.
Butter 7 Days 69.3 lbs.
Butter 7 Days 26.31 lbs.

His name is
KING VALE CORNUCOPIA WAYNE, No. 312599
Born February 6, 1920

His dam and sire's two nearest dams average
Butter 7 Days 33.02 lbs.
Milk 7 Days 607.3 lbs.

Handsomely marked about one third white.
\$250.00 f. o. b. Howell.

McPHERSON FARMS CO., Howell, Mich.
All herds under U. S. Supervision.

Cluny Stock Farm

Offers

Cluny Konigen Colantha Silver 326205

Born May 29, 1920

A white bull with a few black spots.
His sire a 30 lb. son of King Segis Pontiac Konigen.
Sire's 7 nearest dams average 32.301 lbs. butter 624.1 lbs. milk in 7 days.

His dam has a Jr. 3 year old record of 17.683 lbs. butter from 418.7 lb. milk and is a granddaughter of Colantha Johanna Lad.

2nd dam—a 21 lb. cow that our barn records show milked over 145,000 lbs. in 14 milking periods producing 15 calves.

Pedigree on application.
Price \$250.00. Federal Accredited Herd.

R. Bruce McPherson, Howell, Mich.

HEREFORDS

Cows with calves at side, open or bred heifers of popular breeding for sale. Also bulls not related.

Allen Bros. Paw Paw, Mich.

616 So. Westnadge Ave.,
Kalamazoo, Michigan

Dispersion Sale

20 Registered Holsteins 20

Tuesday, March 22, 1921, at So. Lyon, Mich.

Of the 18 females in the sale ten are by 30-lb. sires and 14 have A. R. O. records or are from record dams.

My Long Distance Herd Sire

KING ONA CHAMPION 257513

Is included in the Sale. He is a fine individual, kind and gentle, two years old. Under State and Federal Supervision. License No. 7439.

Farm Sale at 10.00 A. M. Cattle Sale at 2.00 P. M.

Catalogs ready March 10th.

Joseph L. Ziegler, South Lyon, Mich.

JERSEY BULLS

Sired by **Majesty's Intense 127191** who is a double grandson of the famous **Royal Majesty** and who is out of the cow **Majesty's Iris 265701** the second highest cow to be tested in the state of Michigan.

All of these bull are out of Register of Merit dams.

Brookwater herd is on the Federal Accredited List as **TUBERCULIN FREE**. There never has been a suspicious case of tuberculosis on the farm.

PRICES are the lowest that they have been for this class of stock and lower than they will be again in the next few years.

Description and pedigrees furnished upon request.

Brookwater Farm,

H. W. Mumford, Owner,

Ann Arbor, Michigan

J. B. Andrews, Manager

O. I. C. BOARS

Choice individuals; shipped to you c. o. d. express paid and guaranteed right or your money refunded. All stock registered in buyer's name.

J. CARL JEWETT, Mason, Mich.

O. I. C. HOGS

all ages sired by Callaway Edd 1918 world's grand champ. boar and C. C. Schoolmaster 1919 world's grand champion also Wonder Big Type and Giant Buster. Write your wants, all stock shipped on approval.

CRANDELL'S PRIZE HOGS,

Cass City, Mich.

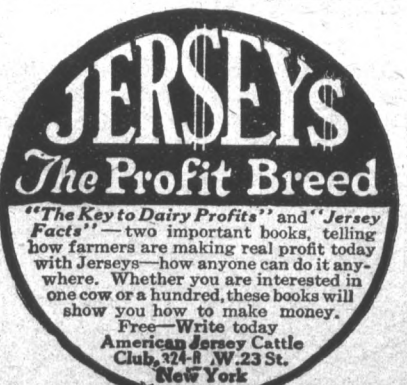
"Economy is the Basic Principle of Success"

From Michigan Farmer, page 195, Feb. 12 issue. The farmer never voiced a truer statement. The Jersey is the most economically producing dairy cow; she has proven it. Therefore she is the **Basic Principle of Successful dairying**.

"Economy means prudence, keen judgement, good management and the avoidance of waste." Therefore grading up your dairy herd with a pure bred Jersey sire is economy.

"Expenditure is oft-times an Economy." Therefore buying a pure bred Jersey sire is economy.

"An investment should have your favorable consideration when it will aid in your chosen work." Buying a pure bred Jersey sire will be an aid in your dairy work. "You are practicing economy" when you invest in a pure bred Jersey bull.



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

SHORTHORN

SALE

Tuesday, March 22 1921, 2 P. M.

15 head, registered, cows, calves, heifers and young bulls. Dual purpose breeding Rose of Sharon, Duchess, and Clay families. 3 miles southeast of Jackson on Napoleon Road.

ALTON V. SHEAP

R. 7, Jackson, Mich.

BIDWELL SHORTHORNS

BUY A BULL

that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. We guarantee every animal to be a breeder. Federal Test. One hour from Toledo, Ohio, N. Y. C. R. R.

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

Bloomdale Shorthorns

See our cattle get our prices and breeding before buying. Both bulls and females for sale.

CARR BROS. & CO., Bad Axe, Mich.

Milking Shorthorns, bulls and heifers 5 mo. to 1 year old for sale at reduced prices to make room for younger stock. E. H. KURTZ, Mason, Mich.

Stop! Look! Listen!

Have you a catalog of the Shorthorn Sale to be held at M. A. C. Feb. 25th at 1 P. M. We are listing four valuable females and two show bulls.

Richland Farms,
C. H. Prescott & Sons, Tawas City, Mich.

The Maple's Shorthorns

Kirklevington Lad, by Imp. Hartford Welfare, in service. Stock for sale.

J. V. WISE, Gobleville, Mich.

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

Branch County Farm

Breeders of

Polled Shorthorn Cattle

Young Bulls For Sale

Several well bred herd bull prospects.
GEO. E. BURDICK, Mgr., Coldwater, Mich.

VALLEY VIEW FARMS

Choice young Shorthorn cows and heifers for sale at all times, bred or open, or a carload, also a few young bulls strong in Sultan Blood. Write
S. H. PANGBORN & SON, Bad Axe, Mich.

Shorthorns Scotch and Scotch topped. Herd bull prospects 1 roan 16 mo. old; 1 red 8 mo. Also four yr. old roan cow. All stock registered and guaranteed right.
J. A. WILK & SON, Alma, Mich.

Central Michigan Shorthorn Breeders Association offer for sale 75 head; Both milk and beef breeding, all ages. New list ready Jan. 15.
M. E. MILLER, Sec., Greenville, Mich.

Registered Shorthorn bulls ready for service for sale or trade. Apply
THE JENNINGS FARMS, Bailey, Mich.

Milking Shorthorns. Bull calves \$100.00 each. Federal accredited Herds. Davidson and Hall, Beland and Beland, Tecumseh, Mich.

Shorthorns Imp. Royal Pioneer in service bred by J. Durno first five sires bred by V. Duthie.
J. A. BARNUM, Union City, Mich.

For Sale Young Reg. Shorthorn bulls. Ready for service. Avondale breeding. Tested herd. Bedell and Wheatlake, Big Rapids, Mich.

Reg. Red Polled cattle choice young bulls from 6 to 18 mo. old for sale.
FRANK KEBLER, R. 1, Grand Ledge, Mich.

Reg. Red Polled bull calves, from 3 mos. to 1 year old, sired by Famous Charmer, 75% same blood as Charmer 1919 International Grand Champion. Our herd State and Federal tested. Westbrook Bros., Ionia, Mich.

HOGS

Registered Berkshires for sale. My herd boar, 2 sows, pigs of either sex farrowed Oct. 2. Satisfaction guaranteed. Also S. C. Ancona eggs for hatching. John Young, Breckenridge, Mich.

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

DUROC JERSEYS

Bred gilts, service boars and fall boar pigs at Bargain prices. Your correspondence or personal inspection is cordially invited.
RUSH BROS., Oakwood Farm, Romeo, Mich.

Duroc Jersey boars from 8 mo. to 1 yr. old. Select young sows mated to maintain size and correct type. Prices reasonable, shipped on approval and guaranteed right. W. E. BARTLEY, Alma, Mich.



Spring pigs by Walt's Orion, First Sr. Yearling
Detroit, Jackson, Gd. Rapids and Saginaw 1919
Phillips Bros. Riga, Mich.

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

JERSEY BULLS Ready for Service, Raleigh—Oxford and—Majesty breeding. Meadowland Farm, Waterman & Waterman, Packard Rd., Ann Arbor, Mich.

Lillie Farmstead Jerseys Bull calves from R. of M. cows, \$150 each. COLON C. LILLIE, Coopersville, Mich.

Jersey Bulls from R. of M. dams \$75 to \$150 each. NOTTEN FARM, Grass Lake, Mich.

Jersey bulls for sale: From Marguerite's Premier a grandson of Pogue 89th and R. of M. dams, SMITH & PARKER, R. 4, Howell, Mich.

Meridale Interested Owl No. 111311 heads my herd bull calves from this great sire and out of R. of M. dams for sale. Leon E. Laws, R. 6, Allegan, Mich.

SHORTHORN DURHAM CATTLE

Auction Sale

Mar. 18 at 1 o'clock P. M.

Dual purpose Shorthorn Beef and Butter bred

27 HEAD

Registered	Unregistered but highly bred.
12 head	15 head
5 cows	4 cows
4 heifers	3 heifers
3 bulls	3 bull calves
	5 fat steers.

Herd Tuberculin Tested. Also a few Big Type Poland Chinas gilt out of Hazel No. 631334 an exceptionally fine specimen of the breed at the Frank I. Stephens farm 4 miles north 1 mile west of Berlin or 3 miles south 1 mile east of Conklin.

Frank I. Stephens, Prop.
R. 2, Conklin, Mich.

Registered Shorthorns, Bulls and heifers, prices within reach of all.
G. B. DESHETLER, R. 4, Tecumseh, Mich.

Both Books FREE

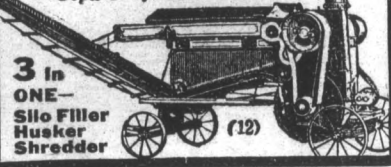
Fill Your Silo and Save Your Ear Corn

STOVER SILAGE will winter cattle at half the cost of regular corn silage. You save ALL your ear corn to sell or feed. Drop us a postcard for these two books. Find out how to save hundreds of dollars with a

Jenney Silo-Filler-Husker

the new way of handling your corn crop, and make bigger profits. Husks fast and clean, either green or ripe corn. Fills the silo and husks the ear corn at the same time. Send for books today.

HALL MANUFACTURING CO.
Dept. O, Cedar Rapids, Ia.



Public Auction

on the Emanuel Hawley Farm

8½ miles northeast of
Munith, Jackson Co., Mich., at

9 A.M. Wednesday, March 16, 1921

98 Exceptionally Good Standard Bred Hereford Heifers 98. 40 Durham steers 40. 200 Black Top Delaine ewes-200.

10 horses. And a splendid equipment of farms tools and machinery including a Fordson Tractor. A 20x34 Port Huron Grain Separator, Rosenthal Corn Husker and a Ford one ton truck with extra high-gear transmission.

O. F. MOECKEL
Stockbridge, Mich.

AUCTION SALE

Of Farm and Personal Property
Including 400 Pure Bred Sheep

327 acres known as the A. A Wood Farm near Saline, Mich., will be sold at public auction on March 18, 1921, also all personal property including the well known band of Pure Bred Rambouillet Sheep. The Farm is one of the best known and one of the best in Washtenaw Co., Mich. is 3 mi. N. W. of Saline, 8 mi. from Ann Arbor and 40 mi. from Detroit. Good roads to all points. For detailed information write F. O. Behymer, care of O. C. Hagen, 1946 Conway Bldg., Chicago, Ills.

HOGS

Reg. Duroc boar pigs 10 wks old \$20.00 reg. and del. Don't wait, fine stock. J. R. HICKS, St. Johns, Mich.

Write Me at once I have just what you want heavy bone registered Duroc Jersey boars ready for service. W. H. MAYES, L. B. 505, Durand, Mich.

DUROC JERSEYS

Carey U. Edmonds, Hastings, Mich.

Brookwater Duroc Jerseys

BOARS—Ready for Service
Bred Sows and Gilts

Write us for Prices and Pedigrees
Mail orders a Specialty. Satisfaction guaranteed.
BROOKWATER FARM, Ann Arbor, Mich.
H. W. Mumford, Owner J. B. Andrews, Mgr.

DUROC SOWS and gilts bred for March, April, May farrow. Also a few spring boars. Best of blood lines and splendid individuals. Satisfaction guaranteed. Write for pedigree and prices, or better come and see, visitors welcome. Thos. Underhill & Son, Salem, Mich.

Duroc Jersey Sows and Gilts bred for March, April, May farrow. Also a few spring boars. Best of blood lines and splendid individuals. Satisfaction guaranteed. Write for pedigree and prices, or better come and see, visitors welcome. Thos. Underhill & Son, Salem, Mich.

Buy Pigs Now. Reg. Duroc pigs crated and delivered to express station for \$20 each. Choice stock sired by State Fair winners and weighing near 100 lbs. each. Write for particulars. Michigan Farm, Pavilion, Mich.

DUROC Jerseys. Boars for spring service, heavy boned type, from the most popular blood lines at reasonable prices. Partridge Rock eggs from best laying strain \$2 per k. Drott & Berns, Monroe, Mich.

DUROC JERSEYS few gilts bred for April farrow. Good ones. E. D. HEYDENBERG, Wayland, Mich.

DUROCS Bred sows all sold. A few choice fall boars for sale. W. O. TAYLOR, Milan, Mich.

seven and nine-tenths pounds. These figures were obtained during the period of peak prices and are altogether above the cost under present Michigan conditions, in the opinion of the M. A. C. Animal Husbandry Department. Even under 1918 conditions, a Michigan firm that raises sheep extensively was able to keep them for \$4.60 per head and bought practically all of their feed.

More accurate figures relative to Michigan conditions will be available next September, according to the college authorities, when the first returns from a survey now being conducted by the United States Department of Agriculture and the M. A. C. Extension Service will come in. A yearly record book has been sent out to several prominent Michigan sheep breeders and these representative flock-masters are keeping accurate financial records of the expenses and income from their sheep. Among other figures which will be obtained by these reports are: The net profit from the flock, the net profit per head, and the per cent profit on the capital invested in sheep.

Boys of Michigan are not only interested in sheep but are enthusiastic advocates of pure-breds and are urging their dads to keep the pedigreed animals. One of the most successful boys' sheep clubs is that at Harland in Livingston county. This club is led by Sheldon H. Latourette and is composed of ten boys who each have a pure-bred Shropshire ewe. These boys are not novices at sheep raising, for they have all had experience with grade sheep. There are several successful "boys' sheep clubs in the upper peninsula which are spreading the gospel of "more and better sheep for Michigan."

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer. Initials only are published. When a reply by mail is requested the service becomes private practice and \$1 must be enclosed.

Ringworm in Cattle (Tricophytosis).—My cattle are nearly all troubled with ringworm, the yearlings first had it, now my older cattle have it. M. F. Bad Axe, Mich.—The disease is transmitted from animal to man and from individual to individual of same species; rarely from one species to another species among animals. It is best to clip the hair about the patches. First soak crusts in oil and remove them with green soap and water. Burn hair from diseased parts. Paint the diseased area with tincture of iodine, or apply one part iodine crystals and eight parts of goose grease daily. Don't treat the whole body at one application.

Indigestion.—Have a hog that is out of condition and his droppings have a disagreeable odor; part of the time he acts as if crazy. U. G. S., Hillsdale, Mich.—Give him fifteen grains of salol and a dessertspoonful of powdered charcoal at a dose in-ground feed two or three times a day. Feed some roots.

Heaves in Horses—Pig Has Piles.—What can be done for horse that has heaves? Ever since my sow was bred she is troubled with piles. C. A. W., Goodrich, Mich.—Feed no clover or dusty, musty, badly cured fodder, and not much bulky food. Give three drams of Fowler's solution at a dose in soft feed or in drinking water three times a day. Give any one of the commercial heave remedies that are regularly advertised in this paper. Keep the pigs' bowels open; constipation is a cause of piles. Apply one part oxide of zinc and eight parts wool-fat twice a day.

Partial Paralysis.—Last fall my sow lost the use of her hind quarters. At first it was not so bad, but now it is chronic, but she eats and drinks well. I would like to know the nature of the disease, and the remedy. J. D. Niles, Mich.—Feeding too much fat-producing food, damp, filthy quarters, and too little exercise are common causes of loss of power in swine. Your sow is incurable. Her flesh is perhaps fit for food.

Dispersion of Fully Accredited Herd

On Account of Dissolving Partnership

BEESON and HOLDEN

will disperse their entire herd of

65 Choice Reg. Holsteins 65 at Three Oaks, Michigan Monday, March 21, 1921

Good udders and straight rumps characterize the cows and the entire offering is in A-1 condition.

The sale includes:

17 young cows sired by a grandson of King Segis.
20 high-class heifers sired by

Sir Ormsby Banostine Beets, No. 246320 a three-year-old grandson of the world's record cow, Duchess Skylark Ormsby, and 35 cows and heifers in calf to him.

This young sire is a splendid individual and his daughters are exceptionally fine and of uniform type. All these heifers of breeding age are bred to

King Ormsby Inka Korndyke, No. 310701 a yearling grandson of Ruby Karen Mercedes, the 35-lb. four-year-old daughter of Sir Pietertje Ormsby Mercedes 14th, out of Johnston Inka, a 28.5 lb. cow, with two yearly records averaging 932.1 lb. butter and 21,112.8 lb. milk. This young sire will be sold also.

If you are interested in clean, healthy cattle of good type and high producing quality.

Attend This Sale

Under the Management of

Michigan Holstein-Friesian Association

H. W. Norton, Jr., Secretary
Old State Block, Lansing, Michigan.

O. I. C's. One last fall boar wgt. 4½, two last fall gilts, bred lots of spring pigs and this fall pigs either sex, good growthy stock ½ mile west of Depot. Citz's, Phone 124. Otto B. Schulze, Nashville, Mich.

O. I. C's Fall pigs by O. C. Big Callaway have size and quality and are priced right. C. J. THOMPSON, Rockford, Mich.

O. I. C. Bred Gilts for Mar. and Apr farrow also a few choice service boars. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C. Gilts bred for April and May farrow. Shipped C. O. D. H. W. MANN, Dansville, Mich.

O. I. C's Choice gilts for April and May farrow, also fall pigs. Booking orders for spring pigs. A. J. BARKER & SON, Belmont, Mich.

We Are Offering at special low prices O. I. C. fall pigs sired by State Fair winners. WEBER BROS., Phone 408, Royal Oak, Mich.

Raise Chester Whites

Like This
the original big producers

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

For Sale O. I. C. Swine, Strictly Big Type with good boars and gilts left of same type and blood lines, that won for us at Ohio and Michigan State Fairs. Priced very cheap. Write us before you buy. NEWMAN'S STOCK FARM, MARLETTE, MICH.

Central Mich. O. I. C. Swine Breeders Ass'n.

Hogs of all ages of popular blood lines. Every sale guaranteed by association.

DR. H. W. NOBLES,
Sales Mgr. Coral, Mich.

O. I. C's. Big Type Gilts, bred for Mar. and April farrow. Boars all ages. Write me for prices. G. P. ANDREWS, Mason, Mich.

Saginaw Valley Herd. Prize winning O. I. C's. Jan. and Feb. pigs, priced reasonable. J. Gibson, Fosters, Mich.

Big Type Polands Some very choice fall boars, ready for spring service for sale. They are sired by The Clansman; dam, the \$1025 Miss Columbia, a littermate to the \$4000 The Yankee. Also a few choice boars by The Clansman, son of The Clansman. WESLEY HILE, Ionia, Mich.

Big Type Polands. Bred sows all sold, but have some good herd boar prospects, fall boars weighing 175 lbs. Sired by the Arctic. Call or write: DORUS HOVER, Akron, Mich.

L. S. P. C. a few choice boars at farmers prices, gilts bred to Black Giant one of the best pigs out of Ill. this fall. Also a grandson of The Clansman and Harrison Big Bob. H. O. SWARTZ, Schoolcraft, Mich.

Big Bob Mastodon Spring gilts bred for March and April and some sows bred to Big Bob his sire was champion of the world, his dam's sire was Grand Champion of Iowa State Fair. C. E. GARNANT, Eaton Rapids, Mich.

L. T. P. C. 70 head of Poland Chinas at private sale. Am offering spring boars from \$40 to \$50 and gilts the same price. Summer and fall pigs \$25 each. The first check will bring you the first choice. HART, FULCHER & CLINE, Address F. T. Hart, St. Louis, Mich.

Francisco Farm Poland Chinas Offering a dozen choice gilts and a few tried sows bred to such boars as Michigan Mastodon and Michigan Clansman. P. P. POPE, Mt. Pleasant, Mich.

Big Type P. C. some very choice boars double im- Bmune, out 1100 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

Big Type Poland Chinas at lowest prices. Both sows and gilts, G. A. BAU-GARDNER, R. 2, Middleville, Mich.

Large Type Poland Chinas. Nothing for sale at present. A. A. FELDKAMP, R. 2, Manchester, Mich.

L. T. P. C. If you are looking for something good, in bred gilts at a right price. Write W. J. HAGELSHAW, Augusta, Mich.

POLAND China Bred Sows and Gilts at bargain prices, also spring boars and fall pigs, either sex. CLYDE FISHER, R. 3, St. Louis, Michigan

Leonard's Big Type P. C. Sows bred to Orange Clansman, Fall boar pigs weigh 175 lbs. Real herd boar prospects. Call or write. E. R. Leonard, R. 3, St. Louis, Mich.

PINE GROVE HAMPSHIRE

We are offering a few tried sows bred for March and April farrow. These sows are all closely related to our winning show herd and of popular blood lines, and the price! Way Down! Geo. Couper & Sons, Marlette, Mich.

Hampshires Bred gilts all sold. Spring and fall boar pigs at a bargain. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Bred Sows and Gilts \$50 and up, for April, May and June farrow. Also a few good fall pigs at reasonable prices for sale. M. G. MOSHER & SONS, Osseo, Mich.

SHEEP.

SHEEP WANTED

Will trade big black registered Percheron Stallion 12 years; sure, sound, gentle, good worker and show horse. George Pardee, Galien, Mich.

Wool-Mutton Shropshire Rams. Good strong individuals, royally bred, priced right. A. H. FOSTER, Allegan, Mich.

Shropshires Choice ewes, all ages, bred to imported ram. Also a few rams. W. B. MCQUILLAN, R. 7, Howell, Mich.

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

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Tuesday, March 8.

Wheat.

Detroit.—Cash No. 2 red \$1.82; May \$1.75; No. 2 white and No. 2 mixed \$1.80.

Chicago.—No. 1 red \$1.77½; No. 2 hard \$1.71; March \$1.67½.

Corn.

Detroit.—Cash No. 3 yellow 71c; No. 4 yellow 68c.

Chicago.—No. 2 yellow 68½¢@69c; No. 3 mixed 64½¢@65¼c.

Oats.

Detroit.—Cash No. 2 white 48c; No. 3 white 46½c; No. 4 white 43½c.

Chicago.—No. 2 white 45½¢@46¼c; No. 3 white 44½¢@45¼c.

Beans.

Detroit.—Immediate and prompt are lower at \$3.85 per cwt.

Chicago.—White beans steady. Hand-picked beans choice to fancy \$4.50@4.75; red kidney beans \$9@9.25 per cwt.

New York.—Market is dull. Choice pea \$4.75; do medium at \$5.50@5.60; red kidney \$9@9.10.

Rye.

Detroit.—Cash No. 2 rye \$1.56.

Seeds.

Detroit.—Prime red clover \$12.50; alsike \$15.30; timothy \$3 per bushel.

Toledo.—Prime red clover, cash and March \$12.10; alsike \$15.30; timothy \$2.77½ per bushel.

Hay.

No. 1 timothy \$20@21; standard and light mixed \$19@20; No. 2 timothy \$18@19; No. 1 clover mixed and No. 1 clover \$17@18; rye straw \$13@14; wheat and oat straw \$12@13 per ton in carlots at Detroit.

WHEAT

Private reports show farm reserves of wheat around 190,000,000 bushels, or about 25,000,000 bushels more than on March 1 last year, reflecting the tendency of growers to withhold the crop. This is made more striking when the fact is considered that the 1919 crop was larger than that of 1920. The increase in farm stocks is more than offset by smaller stocks in mills and elevators which total about 110,000,000 bushels compared with 170,000,000 bushels last year. Total supply in all positions, including the amounts needed for spring seeding is around 300,000,000 bushels compared with 335,000,000 bushels last year.

CORN

Prices are holding within a comparatively narrow range so that for the time being the markets have been stabilized. Shipments from country points have fallen off sharply and the run of a week ago may represent the last heavy run of the winter season.

OATS

The strength in wheat, the fact that farmers have been too busy to ship, and the export sales have induced a slight advance. Stocks at the terminal markets are large and an increase is likely to be shown in the next report.

SEEDS

The favorable weather of the past ten days which permitted spring seeding resulted in a decided improvement in the demand for clover and grass seeds. The same influence coupled with the decline in prices which culminated a week ago checked sales by producers and the market scored a substantial advance. The demand still remains somewhat below normal and the situation cannot be interpreted as exceptionally favorable for the market.

FEEDS

Feed markets show little change as compared with a week ago. Most of the recent advance has been held. Bran displayed slight weakness and with the spring demand from hog producers for the heavier wheat offal bran is likely to sell at bigger discount.

POTATOES

Potato markets advanced about 20c per 100 lbs. the past week. Shipments increased, but part of these represent seed stock so that markets were not affected. The low price throughout the winter apparently has increased consumption and the high price of flour has had a similar effect so that the large crop may be well cleaned up by the end of the season. Consuming

markets are quoted as follows upon carlots. Chicago.—Northern white stock U. S. Grade No. 1, \$1.25@1.40 per 100 lbs; Pittsburgh \$2.25@2.40 per 150-lb sack; New York \$2.25 per 180-lb. sack; Detroit \$2@2.10 per 150-lb sack.

BEANS

Bean markets were firm at the close of last week, due, it is reported, to buying by Hoover for famine relief. Price for choice hand-picked stock, f. o. b., Michigan beans were mostly \$4 at the close of the week. Growers are being paid around \$3.25 for beans in the dirt.

EGGS AND POULTRY

Egg prices receded still further during the past week to a point below that of early February when the previous sharp break struck bottom. The weakness was due largely to an increase of about 30 per cent in receipts at leading cities compared with the preceding week. Receipts of dressed poultry are still running slightly lower than those of last year.

BUTTER

The steady advance in the butter markets of about 10@12c a pound which has been under way since February 10, reached its crest the middle of the past week, since which time the market has been nervous and has moved to a slightly lower level. The underlying situation shows but little change as yet. Receipts have not increased materially. American Creamery Butter Manufacturers' Association reports an increase of 20.3 per cent in the make at 78 plants compared with a year ago. The spring increase in production is not many weeks ahead. Prices for 92-score fresh butter as reported by the Bureau of Markets on March 5 were: Chicago 49c; New York 53c; Boston 52½c; Philadelphia 53½c.

FARM BUREAU MARKET REPORT.

All coarse grains are lower today, due to a lack of export demand. Flour orders are scarce. Wheat is depressed and corn and oats have declined in

sympathy. Rye is weak. There are rumors that a 1,500-ton order for beans has been placed by Hoover. Organization of California growers may hold prices down in Michigan temporarily. Hay continued down during past week. Clover seed scored a remarkable raise from \$11.15 to \$12.55. Future wheat market is lower. Indications point to sudden decline when demand lessens. Alsike advanced 30c per bushel. Timothy is unchanged. Northern Michigan is set for a heavy season beginning the middle of March. Seeding is well under way in southern counties.

COMING LIVE STOCK SALES.

Herefords, Durhams and Delaines.—March 16, O. F. Moeckel, Stockbridge, Mich.

Guernseys.—March 18, Jas. A. Lewis, Eaton Rapids, Mich.

Rambouillet Sheep.—March 18, F. O. Behymer, Saline, Mich.

Holsteins.—March 21, Beeson & Holden, Three Oaks, Mich.

Holsteins.—March 22, Joseph L. Ziegler, South Lyon, Mich.

NEWS OF THE WEEK.

(Continued from page 328).

urging the Japanese diet to apply a portion of the appropriations for armament to educational and social improvement.—Panama disavows the decision of the United States Supreme Court regarding the boundary between Panama and Costa Rica, according to press reports.—The churches of the United States made a net membership gain of 667,000 members in 1920.

Tuesday, March 8.

NEGOTIATIONS over the German indemnity have been broken and the army of invasion is on the move.—President Harding announces that a special session of congress will not be called before April 4.

DETROIT AUTOMOBILE SHOW.

The big Detroit Automobile Show will be held at the Morgan & Wright

Live Stock Market Service

Markets for March 9.

BUFFALO

Hog prices are steady, heavy hogs bringing \$10.50@10.75; medium hogs \$11@11.25; light weights \$11.75@12; lambs are higher at \$11; calves \$14.50.

DETROIT

Cattle.

Market steady.
Best heavy steers \$ 8.50@ 8.90
Mixed steers and heifers 7.00@ 8.00
Best handy wt bu steers.. 7.00@ 7.75
Handy light butchers 6.50@ 7.25
Light butchers 6.00@ 6.50
Best cows 6.00@ 6.75
Butcher cows 5.00@ 5.50
Common cows 3.50@ 4.50
Canners 2.50@ 3.00
Choice bulls 5.50@ 6.50
Bologna bulls 5.00@ 5.75
Stock bulls 4.00@ 5.00
Feeders 7.00@ 7.25
Stockers 6.00@ 6.25
Milkers and springers.... \$ 50@ 100

Veal Calves.

Market steady.
Best \$12.50@13.50
Others 5.00@ 9.00

Hogs.

Hogs 15@25c higher.
Mixed hogs \$10.25@11.00
Pigs 11.50

Sheep and Lambs.

Market strong.
Best lambs \$ 9.75
Fair lambs 8.00@ 8.75
Light to common 5.00@ 7.00
Fair to good sheep 5.00@ 5.50
Culls and common 1.50@ 3.00

CHICAGO

Hogs.

Estimated receipts today are 18,000; holdover 10,564. Market 15@35c higher; lights up most and active; others slow. Bulk of sales \$10@11.25; tops

\$11.35; heavy 250 lbs up medium, good and choice \$10@10.50; medium 200 to 250 lbs medium, good and choice at \$10.25@11.20; light 150 to 200 lbs common, medium, good and choice at \$11@11.35; light lights 130 to 150 lbs common, medium, good and choice at \$11.10@11.35; heavy packing sows 250 lbs up smooth at \$8.90@9.80; packing sows 200 lbs up rough \$8.65@8.90; pigs 130 lbs down medium, good and choice \$10.50@11.25.

Cattle.

Estimated receipts today are 6,000. Market is strong to 15c higher. Beef steers medium and heavy weight 1100 lbs up choice and prime \$10.25@11; do medium and good at \$8.50@10.25; do common \$7.75@8.50; light weight 1100 lbs down, good and choice at \$9.50@10.75; do common and medium \$7.50@8.50; butcher cattle heifers, common, medium, good and choice at \$6@9.75; cows common, medium, good and choice \$5@8.10; bulls bologna and beef \$4.75@7.25; canners and cutters cows and heifers \$2.75@5; do canner steers \$4.25@6; veal calves light and handy-weight medium, good and choice at \$9@12.25; feeder steers common, medium, good and choice \$7.50@9.50; stocker steers common, medium, good and choice \$6.25@8.25; stocker cows and heifers common, medium, good and choice \$4.50@6.

Sheep and Lambs.

Estimated receipts today are 11,000. Market 25c higher. Lambs 84 lbs down medium, good, choice and prime \$8.75@10.75; do 85 lbs up medium, good, choice and prime \$8.50@10.50; do culls and common \$6.50@8; spring lambs medium, good, choice and prime \$6.75@9; ewes medium, good and choice at \$4.75@6.25; ewes cull and common at \$2.25@4.25; yearling wethers medium, good and choice \$7.50@9.

Building on Jefferson avenue, near the Belle Isle bridge, on March 19-26. This promises to be the most interesting display of automotive machines ever exhibited in Detroit.



Aspirin

Then It's Genuine

Unless you see the name "Bayer" on tablets, you are not getting genuine Aspirin prescribed by physicians for 21 years and proved safe by millions. Always say "Bayer."

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.

U.S. Army Munson Shoe

Guaranteed to wear 6 months. Made by Endicott - Johnson Co., of pliable Chrome Leather. Broad Solid Oak Leather Heels. Double thick soles. Dirt and Water Proof. Bellows Tongue. Size 7½ to 12. Value \$6.40

\$4.45



GUARANTEED You must be entirely satisfied or we will refund your money.

Pay the Postman

Send no money with order. Merely send your name, address and size wanted. Your shoes will be sent by return mail. Pay Postman \$4.45 and postage when shoes arrive.

CIVILIAN ARMY & NAVY SHOE CO. Dept. 46, 45 W. 34th Street, New York

KEEPS EGGS FRESH

Remarkable Discovery Keeps Eggs Fresh For One Year

C. G. Knight, a prominent druggist of Chicago, has discovered a wonderful new preparation that is guaranteed to preserve all fresh eggs perfectly for one year. He calls it the K. & G. Egg Preservative. It is not liquid glass but comes in powder form. One package mixed with three gallons clean water will preserve 25 dozen eggs. Makes a safe solution to put eggs in for winter. No change whatever takes place. No odor—no taste. Eggs can be used for all purposes: poaching, boiling, pastries. The yolks do not break down. Eggs always fresh.

Mrs. A. Kisselbach, E. St. Louis, says: "Can honestly say I have had great success with K. & G. Preservative." Mrs. I. M. Liljedahl, Essex, Iowa: "I have found your egg preservative entirely satisfactory." Mrs. S. R. Shinkel, Mitchell, S. D.: "My eggs kept just fine. Shall use your preparation next year sure." Mrs. E. S. Summerlick, 4935 Calumet Ave., Chicago: "I have used your preservative two years. Have used many egg solutions but find K. & G. more satisfactory."

Now is the time to begin preserving eggs. April eggs will be worth as much to you next winter. Begin right now and let K. & G. Egg Preservative make money for you. Write today to the K. & G. Laboratories, Dept. F., 338 E. 51st St., Chicago, Ill. Send 50c and get big package prepaid. Enough to preserve 25 dozen eggs. Write today—Now.

Agents Wanted in Every County

WOOL

Wool buyers during the past week appeared willing to run chances of the passage of the tariff bill. Since the measure has been vetoed the one immediate bullish influence of importance has been removed. Large shipments of foreign wool have been arriving to avoid the tariff and the absorption of these may induce an easy market for a brief period. Values at foreign wool auctions are irregular. The sale at London early the past week was more active, especially for Merinos, but a decline of five to fifteen per cent was reported at the Sidney auction on the same day. The woolen goods trade appears healthy upon the new scale of values which is thirty to thirty-five per cent under last fall's price. Sales of the products of the American Woolen Company for fall delivery have been satisfactory in the light of general conditions. Prices are mostly steady with a week ago and are quoted by Boston as follows: Ohio and Pennsylvania fleeces, delaine unwashed 40@42c; fine unwashed 31@33c; half-blood combing 33@35c; three-eighths-blood combing 30@31c. Michigan and New York fleeces, delaine unwashed 39@40c; fine unwashed 29@30c; one-half-blood unwashed 32@34c three-eighths-blood unwashed 29@30c.

PHOSPHATE AND QUALITY

Rock phosphate is mined in Tennessee. Its value to you depends upon the processes by which it is prepared for your use. Its particles are minute but encased in enamel covered cells. Its thorough drying and fine grinding are of great importance.

The plant in which Four Leaf Phosphate is prepared was designed by special engineers. Every step in its process has the direct object of making the rock phosphate more quickly available. Four Leaf value, accordingly, far surpasses ordinary phosphate rock.

Order now to be sure of securing your supply.



**FOUR LEAF
PHOSPHATE**

THOMSON PHOSPHATE COMPANY
721 Fisher Building Chicago, Ill.

Auction Sale

March 17 at 10 o'clock
Shorthorn and Holstein Cattle
Scotch and Scotch Topped

25 Head

Cow, Heifers and Bulls

The Flushing Shorthorn Breeders' Association will hold their second annual sale of Pure Bred Cattle at the Rino Feed Barn, Flushing, Mich. A few head of Pure Bred Holsteins also registered hogs will be offered in this sale. 13 miles north of Durand on the C. S. and M. 10 miles west of Flint on the Buss line.

W. J. Hinkley, Sec.

Registered Seeds

At Association Prices

Oats, Barley, Soy Beans, Corn, etc., registered by the

Crop Improvement Ass'n.

These proven, Michigan-grown seeds, inspected by the association, are supplied

At Association Prices

Oats \$.60 to \$1.25 per bushels; Barley—\$.15 to \$1.75 depending on size of orders. Equally attractive prices on clover, alfalfa and other field seeds.

SEED DEPT.

MICHIGAN STATE FARM BUREAU
221-7 N. Cedar Street, Lansing, Mich. (1)

Fistula Poll Evil

10,000 horses successfully treated last year with Fleming's Fisteform \$2.50 a bottle postpaid. Money back if it fails. Send for FREE VETERINARY ADVISOR. Describes Fistula and 200 other Horse and Cattle Diseases. FLEMING BROTHERS, 262 Union Stock Yards, Chicago

EVERGREENS For Windbreak Hedge and Lawn All hardy, vigorous and well rooted. Wash up everywhere. Write for free Evergreen book. Est. 1855. World's Largest Grower. The D. Hill Nursery Co., Inc., Box 230, Dundee, Ill.

ROYSTER'S FERTILIZERS



Pay 3 Ways
More Grain
Better Grades
Less Labor

Agents wanted in unoccupied territory

F. S. Royster Guano Co.

Dept. D-19

TOLEDO, OHIO

NEVINS SUCCESS WITH SMALL FRUITS

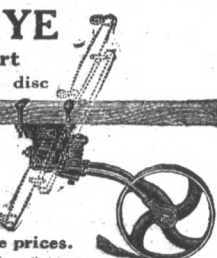
Do you know that you can obtain more health, pleasure and profit from a garden of strawberries and raspberries than from any other equal amount of land on your place? My beautiful new Catalogue greets you with a smile, and tells you something about ourselves and our favorable location where soil and climate combine to produce plants of superior quality. It tells: How to select varieties best adapted to your soil and needs. How to prepare the soil for planting. When to plant. The different systems of small fruit growing. How to plant. How to care for the patch. How to pick and market the fruit so as to obtain the highest prices. How to renew the patch. It is a Fruit Grower's Guide and whether you buy your plants of us or not you will need this helpful book—"Ne vins Success with Small Fruits." Send for your copy today. A postal will bring it.

ELMER H. NEVINS, Ovid, Mich.

The BUCKEYE

Tongue Support

for binders, mowers, disc harrows, manure spreaders and corn harvesters. Agents wanted in every county in the U. S. except where represented. Write for circulars and testimonials and wholesale prices. The Milford Mfg. Co., Mansfield, O.



\$24.95 **AMERICAN CREAM SEPARATOR**

On Trial. Easy running, easily cleaned. Skims warm or cold milk. Whether dairy is large or small, get handsome catalogue and easy monthly payment offer. Address AMERICAN SEPARATOR CO., Box 5061 Bainbridge, N.Y.

NEW—SALTED FISH—

Barrels	Kegs	Kegs
Lake Herring 200 lbs.	100 lbs.	50 lbs.
Back Split, Hds. \$9.00	\$5.00	\$3.15
Genuine Fat 200 lbs.	100 lbs.	50 lbs.
Holland Herring \$15.50	\$8.50	\$4.90
Bluefish (Claro) 200 lbs.	100 lbs.	50 lbs.
Back Split, Hds. \$9.00	\$5.00	\$3.15
Canned Salmon 1 lb. Tall Cans. 48 cans to case. Per case \$5.40. 1-4 American Sardines in Cotton Seed Oil, per case of 100 cans \$4.50. We guarantee safe arrival in perfect condition or your money refunded. Write for price list on other varieties Salted and Canned Fish. Address JOHNSON FISH CO., Green Bay, Wis.		

LEARN AUCTIONEERING

at the World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog. JONES NAT'L SCHOOL OF AUCTIONEERING 28 N. Sacramento Blvd., Chicago, Ill. Cary M. Jones, Pres.

CABBAGE PLANTS

Fulwood's frost proof, will stand a temperature of fifteen degrees above zero. Plant now and have early cabbage. All leading varieties. Prices by express 1000 to 4000 at \$2.00 per 1000. 5000 and over at \$1.50 per 1000. By parcel post prepaid 100 for 50c; 500 for \$1.50; 1000 for \$2.50. Greater Baltimore Tomato plants same prices as cabbage. Satisfaction guaranteed, or money refunded. P. D. Fulwood, Dept. 1, Tifton, Ga.

Safety Razor Blades Sharpened

Don't throw away your safety razor blades, we will sharpen any kind better than new. Single edge 3c, double edge 4c. A trial will surprise you. Blades returned to you C. O. D. less charges. Blades can be sharpened several times. Mail blades to DETROIT SHARPENING CO. 826 Merrick Ave., Detroit, Mich.

Holmes, Stuve Co., 2429 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. 2887

HAY Ship to The Old Reliable House Daniel McCaffrey's Sons, 623-625 Wabash Bldg., Pittsburg, Pa.

HAY Apples, Potatoes Wanted Highest prices paid. The E. L. RICHMOND CO., Detroit, Mich.

HORSES

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

FARM HELP

DAIRY FARM HELP WANTED

Single Farm hand experienced \$45.00 per mo. room and board. Man and wife no children. Wife to assist with house work, man for dairy and route work. \$60 per month room and board modern home 3 miles from Ann Arbor. None but clean, honest, christian principled well recommended folks need apply or reply G. E. EMSTROM, The Meadows, Ann Arbor, Mich.

WANTED married man who has farming tools and equipment to work 200 acre farm on shares. Good land and buildings. Near Clarkston, Oakland County. P. S. WRIGHT, 229 Gratiot Ave., Detroit, Mich.

FARMER WANTED Single man who as a steady experienced man to work for the season. O. NIELSON JERSEY FARM, Farmington, Mich.

WANTED position on farm, single, one year at agricultural college, also practical experience. B. H. Stickle, Three Oaks, Mich.

Farm Hand Wanted For general farming. State age wanted. Address R. F. D. 3, Box 41, Rochester, Mich.

Wanted a middle aged 35 or 40 lady for housekeeper on small farm. For particulars write L. H. ROBBINS, Box 164, Tower, Mich.

FARMS AND FARM LANDS

FARMERS ATTENTION

I have buyers for farms in Wayne, Oakland and Macomb Counties. If you have a farm that you want to sell or trade call at my office or write me. A. BABIARZ, 5852 Chene St., Detroit, Mich.

Farm Lands For Sale

Choice Heavy Clay Loam Soil underlain with limestone in Michigan's wonderful Clover Seed Belt—Price \$10.00 to \$30.00 per acre on time—near Onaway, Presque Isle County. These are Beech and Maple Lands from which the timber has been removed.

Let Clover and Alfalfa Seed Crops pay for your land—it is doing it for others HERE—Why not for you? (Entire forties often paid for out of a single crop of seed—the product of one bushel of seed.)

A small cash payment exacted, (and if desired only the interest the first and second years.) The amount of payments the third year and thereafter until land is paid for—is measured entirely by returns from seed yields harvested yearly at the rate of 5 acres for every forty purchased. Do you catch the point?

What you receive for your Seed Crops year by year—be it big or little—establishes the amount of your yearly obligation on interest and payment from third year on.

While building the farm home you are not confronted with a fixed yearly cash payment that, if not paid promptly, often endangers the loss of your property, and in many cases discourages would-be settlers.

Your responsibility is limited to seeding stipulated acreage yearly—harvesting and marketing the seed crop and applying proceeds upon payment of land yearly until land is paid for.

Paying for a farm in Clover Seed Belt where Seed Crops average \$100.00 per acre, entails no hardship for the dairyman or stockman—as the hay and chaff crops more than pay the expense, leaving the seed Crops as the mortgage lifter.

THAD. B. PRESTON
ONAWAY, MICH.

FOR SALE

In looking for farm land, think of this! Presque Isle County ships Alsike Clover Seed by the car load, yielding 5 to 9 bushels per acre.

In no section of Michigan has the dairy interests developed so rapidly in recent years—as in the Clover Seed Belt.

\$17.50 an acre buys 320 acres heavy clay loam, hardwood cut overlaid on Dixie Highway, 3½ miles from Millersburg.

\$10.00 buys 560 sandy clay loam, hardwood and pine land, 10 miles from Onaway. Small clearings, house and shed.

\$6.50 buys 3,000 acres sandy clay loam, ¾ths hardwood and pine cut over, balance swamp and beaver meadow. 10 miles from Millersburg. A club and ranch proposition.

15% off for cash or, 5 to 10% balance payable in Clover Seed Crops, harvested annually from 3 to 5% of acreage purchased.

Payments on Contract yearly, depends entirely upon returns after 2nd year from either June-May-moth, Alsike, Sweet Clover, Alfalfa or Vetch seed crops—as purchaser elects to grow.

Settler is not haunted with payment and interest—that must be paid yearly—crop or no crop.

There can be no foreclosure of contract as long as settler harvests seed crops yearly as stipulated, and applies returns upon payment of contract until land is paid for. Interest 6%. Seed crop here, sure as death.

JOHN G. KRAUTH
MILLERSBURG, MICH.

120 Acres Clay Farm

We have for sale in the rich Saginaw Valley an ideal grain, livestock or sugar beet farm. Every foot clay. Buildings are extra good consisting of 10 room house with basement, 6 room house with basement, large gambrel roofed barn, new chicken house and tool shed. Situated 1 mile from elevator, school, bank and shipping station. Milk route and mail delivery past the door. \$15,000.00 buys everything. The buildings alone are worth \$12,000.00. Terms to right party. BROWN & GRANT, Saginaw, Mich.

120 Acres, \$2300; With Horses, 4 Cows and

Heifers, 4 hogs, wagons, sleighs, threshing machine, implements, vegetables, hay, wood, etc.; everything to quick buyer for \$2300, easy terms; edge town in famous farming section, heavy cropping fields; brook-watered pasture; large quantity wood, timber; maple-shaded 6-room house overlooking river; big barn, silo, garage, etc.; Details page 8 Stron's Spring Catalog; just out. FREE. STROUT AGENCY, 814 B O Ford Bldg., Detroit.

160 ACRES, 140 acres cleared, twenty nearly level, well drained, close to school and town. One fine cobblestone house modern, one ten room frame house for tenants, new silo, barn 50 x 100, basement, buildings alone worth \$15,000. Price \$100 per acre, \$6000 down any reasonable time on remainder. Write W. F. UMPHREY, Evart, Mich.

FARM FOR SALE

120 acres in Kent County, Mich. on State Highway, has lake frontage, soil level and fenced. Good two story house, two barns, silo and tool shed. Price \$110.00 per acre—one half cash, balance reasonable terms. This ad will appear but once. Address owner, care Michigan Farmer, Detroit, Mich.

VIRGINIA FARMS AND HOMES

FREE CATALOGUE OF SPLENDID BARGAINS. R. B. CHAFFIN & CO., Inc., Richmond, Va.

125 A. Stock Farm for sale ½ mile to Linden, 18 mi. to Flint. Good orchard 80 A. plow land 10 A. 2nd growth timber, balance pasture, good bldgs., good well. Easy terms. MRS. SCOTT WILCOX, Linden, Mich.

FOR SALE—Opening a new tract of fertile farm lands well located in the great potato and dairy district of Wisconsin and Michigan. Secure first choice now. Liberal terms. Write for free booklets, etc. Sanborn Company, No. 29, Sanborn Bldg., Eagle River, Wisconsin.

Farms and Homes in Delaware where the lands productive and prices reasonable. For information write, State Board of Agriculture, Dover, Del.

For Sale 80 acres all under plow. 2 horses, 4 cows, 5 hogs, 60 chickens, and full line of farm implements. Good buildings. Orchard. At \$4100. Easy terms. Write John Conant, Grand Haven, Mich.

Small Farm For Sale or Trade near town. Willis Bradley, Bedford, Va.

FOR SALE: By owner a farm in Michigan, about one half improved, with buildings, Clara Moffitt, Gen. Delivery, Flint, Mich.

For Sale at once a good farm home of 40 or 80 acres, good land, good buildings. W. Clements, Six Lakes, Mich.

WANTED To hear from owner of land for sale. O. K. HAWLEY, Baldwin, Wis.

Big Bargain: 100 acres, fine house, large barn, creek, only \$1500 needed, write for pictures. DeCoudres, Bloomington, Mich.



Write

for this Free Book on "Corn-Saver" Cribs & Bins

We want every farmer who reads this paper to have a copy of our valuable new book—the biggest and finest book ever published on how to store your corn and grain for profit and without losses. It tells how the better marketing plans, urged by the Farm Bureau, will increase your profits. How thousands of farmers are getting the biggest prices for their crops every year. This book reveals how millions of dollars worth of corn and grain is destroyed each year by rats, mice, fire and thieves on farms where the ordinary wooden structures are used. Our free book shows how a Martin "Corn-Saver" Crib and Bin will enable you to get bigger profits from your crops and put a stop to this enormous loss and waste.

Write for your copy of this free book that explains how the patented construction of a Martin Combination Crib and Bin really gives you two indestructible store houses for the price of one. It describes how these modern structures are built, so that you can store wheat, oats or rye in them as well as corn—it tells all about the Martin Cribs and Bins in detail, and shows how this up-to-date method of storing corn and grain will enable you to make a fair profit and save enough of your crops to pay for itself within a year or two.

Martin CORN SAVER Cribs and Bins

Safe Storage for All Your Corn And Grain

Disease carrying rats and mice that destroy your good corn and grain will not stay on a farm where the Martin "Corn-Saver" Crib and Bin is used. It shuts off the food supply of these dirty pests and starves them out. With your corn and grain stored in a Martin, you stop your losses. Birds cannot get in—thieves cannot steal it—lightning or fire cannot damage it—not a single bushel of your crop will be destroyed or wasted.

Built of heavy, corrugated, galvanized steel, it will never need painting or

repairs—cheaper than a wooden building to start with and will last a lifetime. A Martin comes in sections and is easily erected in a few hours time—no special tools required—once erected on your farm it is there to stay—no more trouble or bother for years to come, and absolute protection for every bushel of corn and grain you raise. Martin Combination Cribs are made in Circular, Oblong, or Double-shed style, in sizes to fit the needs of any farm, from 100 to 10,000 bushels capacity.

Send for Our FREE Book and Special OFFER

Every keen, wide-awake farmer in this state will want a copy of this valuable book that explains about these modern all metal cribs and bins. This book tells how Martins are bringing greater profits and are saving crops and making money for thousands of other progressive farmers throughout the country.

Use the Coupon

Write for this big free book today, and our liberal offer for early orders. It costs only a postage stamp to get it—fill out the coupon and send it to us at once, and we will send the book by return mail. Send coupon NOW.

(5) **Martin Steel Products Co.**
Dept. 2505 Adams St.
Mansfield, Ohio

FREE BOOK COUPON

Martin Steel Products Co.
Dept. 2505 Mansfield, Ohio

Gentlemen: Please send me your free book and special low prices on Martin Cribs and Bins. This does not obligate me in any way.

Name.....

Post Office.....

State..... R. F. D.....

I desire storage for..... bu. corn..... bu. grain



The Capacity of this Martin is 2110 bushels of corn or 3325 bushels of wheat or oats.