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AND
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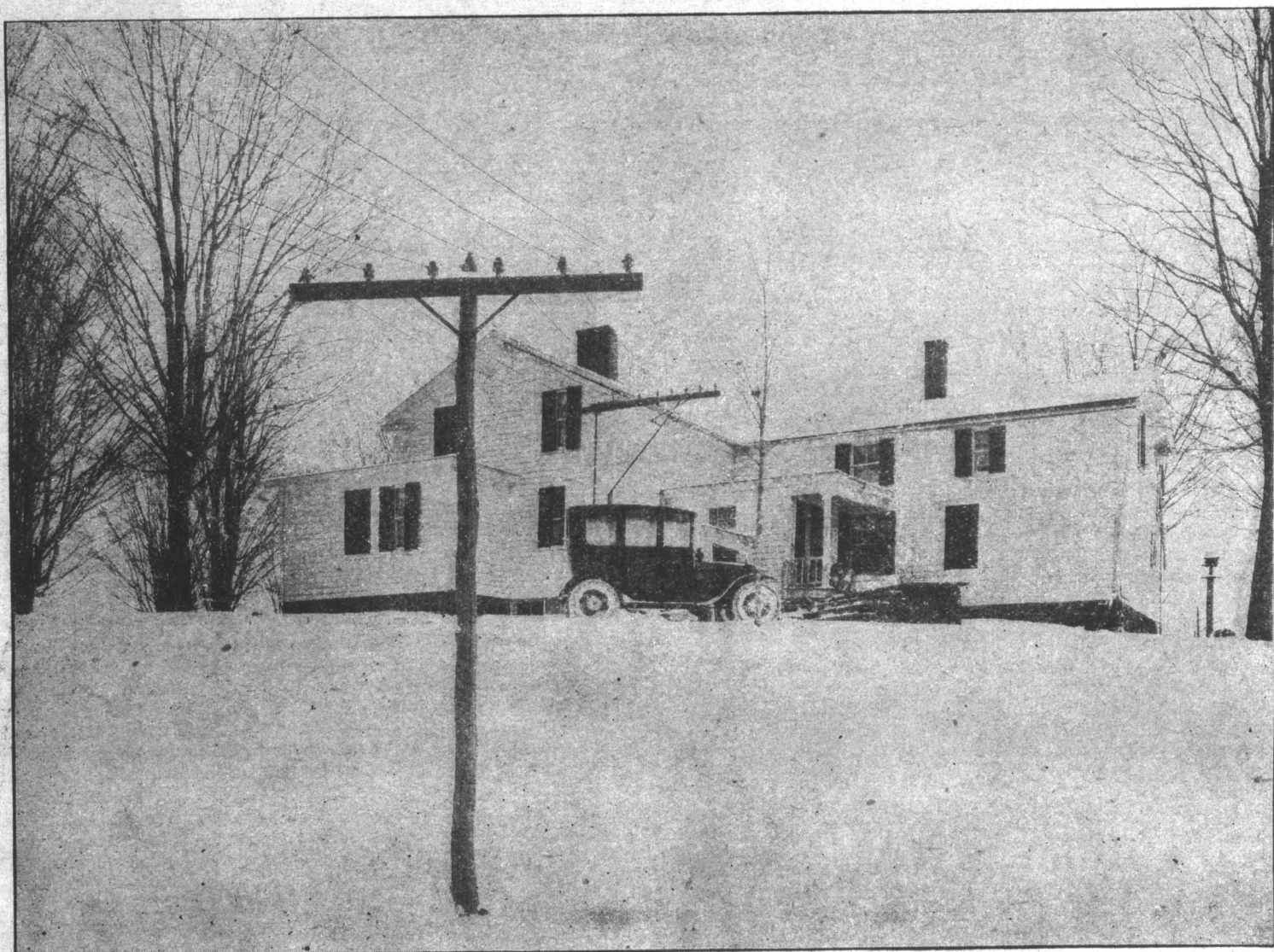
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Agriculture Now Sailing Uncharted Seas

PRECEDENT is the guidance for which wise men seek. It is a basis for sound thought on which to formulate a working plan. The year of 1920 opens before the farmer new problems for the solution of which he has no accumulative experience—no precedent. He is sailing uncharted seas.

Making precedents is risky. Rare, indeed, is the man who can launch a new business into unknown seas and steer it safely into the ports of Success and Profit. Christopher Columbus had little precedent to guide him when he steered his craft into unknown seas. He was making precedent.

Merely for a man to imagine himself capable of discovering new continents is good and sufficient reason for other men to sidestep his opinions. Wise men prefer to sail charted seas. Prophecy based upon past experiences has value.

It would be interesting if one could set down the collective experience of agriculture over a series of presidential years, and reasoning draw from it conclusions for 1920. But so many other influences heretofore unknown now enter that comparison would be valueless.

The railroads go back from the government to private hands early in January. If we could search the records for what happened when such a change was made before it might form a basis on which to base expectancy.

In 1920 things are going to be different, and it would be interesting to refer to what happened before in such cases. But these things did not happen before. Nor did a thousand and one things that the farmer has to think about ever happen before. He has no precedence for guidance.

Putting his hands to the plow that turns the furrows of 1920 the farmer must not look behind him, but press eagerly forward. The invoice of the nation's agriculture reveals a rich residue after the marketing season now closed. Inventoried above all else in value is confidence that enfolds every avenue of human activity.

Whoever believes that the order and standards of our agriculture are in danger of being upset may find safety in following the beacon lights of strong farmers' organizations to guide him safely over the uncharted seas of industry and commerce.

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DETROIT, DECEMBER 27, 1919

CURRENT COMMENT

Our Nation First

THE farmer occupies a more important position in the affairs of the nation than he has ever occupied before. It has been an uphill climb, but it has not taxed his strength or resources to reach the higher vantage ground. His present views of the economic and political situation give him a clearer vision of the things that are most needed to hasten the recovery to normal conditions. The farmer is the recognized balance-wheel of American ideas and ideals.

So long as he maintains this stabilizing influence and presents a united front to remove all barriers that are unjustly interposed between his unremitting toil and the fair reward which should attend it, he may live in hope and cease to speculate with fear. He has abundant assurance of fair profits in every line of staple production, and has so fortified his position among the great industries of the country that he may face the future with confidence. If he has not entirely removed his most serious handicaps, he has, at least, sensed their existence and is becoming prepared to meet them in a way that cannot fail to bring results. Nowhere else under the sun have pessimists so little reason for being as they have on American farms.

Farmers have many serious problems which cannot be dismissed with a wave of the hand or with sets of resolutions from organizations that may or may not represent the real farm sentiment of the country. Some of these problems are knotty and perplexing, and the solution of them may be neither swift nor painless, but they can be solved, and more happily solved, than like problems confronting other classes of people where class consciousness and aggressiveness is proving a menace to the orderly workings of other interests as well as to the affairs of the government. In this country the common-sense of the organized farmer is sure to prove a stabilizing influence and become a more strongly defined factor in overcoming radicalism in the affairs of the nation than it was before the war. It is the prelude of a better understanding among our people and will make for solidarity in the long run.

Never was it more important than it is now that our farmers, laborers, business men, professional men, capitalists and all others should think and act nationally. The war showed what we were capable of doing when we acted

as one powerful unit. Now that the war is over conditions can never be restored to normal unless we think and act nationally, no matter what our various ways of making a living may be or no matter to which class we may belong. We are all Americans first, and anything we may do to affect our country adversely is sure to affect us in the same way.

No matter how encouraging the present situation may be it is a mistake for the farmers of the great food-producing region of the middle west to assume that they have been authoritatively represented in their economic and political relations at Washington. The Michigan Farmer believes that the farmers of these great agricultural states owe it to themselves and to the nation to hasten the organization of strong state and national farm bureaus—the only organizations built upon the solid rock of the county unit and thence upward. Such an organization representing this great food-producing region can then cooperate with the Grange and other strong organizations in formulating a safe and sane national program of constructive legislation.

Grave responsibilities now rest upon the shoulders of the American farmer as well as upon the leaders of farmers' organizations. Great care should be exercised in the selection of capable leaders, and greater care must be exercised to see that they really reflect the thought and sentiment of the farmer in their dealings with economic and political problems. It is possible to take class organization too seriously and use it for a weapon to defeat the very purpose for which it was created. Too much power in the hands of aggressive class leaders is not always good for such organizations. It has proven a stumbling-block to some of the most powerful labor organizations, and there is danger of it proving a serious handicap to farmers' organizations if they fail to act nationally as well as agriculturally in all great questions that affect the welfare of the people of the nation as a whole.

Home Grown Seeds

FARMERS in many localities are finding that the northern-grown seeds of certain crops possess qualities far superior to the corresponding varieties produced in warmer climates. In the case of potatoes, barley, oats and certain legume crops several northern states have built up a large and growing seed industry. But there is a limit beyond which the claims of northern seed growers should not influence purchases of farm seeds. It is undoubtedly true that so far as a few of our farm crops are concerned seed grown in a colder climate is preferable to seed grown where the seasons are longer and warmer. Hardiness, or vitality and growing power, is one of the chief virtues of seed grown in a locality where the growing seasons are comparatively short. If hardiness is the quality which one wishes to secure, he can depend on northern-grown seeds but other qualities must be given proper consideration if we are to succeed in developing strains and varieties of standard farm crops adapted to our respective localities.

In common farm practice it will prove unwise for farmers to depend on seeds from a distance, so far as the bulk of our native crops is concerned. In the case of corn any farmer can by persistent, careful selection with reference to such characteristics as early maturity, yield, quality and dependability of the variety grow seed better adapted to his soil and climatic conditions than he can buy. In the winter wheat and rye growing regions farmers can in favorable seasons grow better seed for local requirements than they can buy. The increased yields of timothy and red clover resulting from

selecting and perfecting strains and varieties adapted to local conditions affords convincing proof of the value of home-grown seed over that purchased from localities where conditions are so widely different. If farmers could be induced to undertake the development of improved strains and varieties of some of our standard farm crops, greater progress would be made than could possibly result from depending upon seeds imported from other sections.

Another difficulty confronting farmers who depend upon seeds brought in from distant localities is the question of susceptibility to diseases when changed from one region to another. A variety which may prove resistant to certain diseases in one region frequently fails to retain such resistant powers when transferred to a region where soil, climate and moisture conditions are widely different. Outside of a few special crops the best seeds are grown where the largest and best crops from which they are obtained are fully matured during a normal growing season.

Encourage the Farm Boy

BIG business concerns are becoming more favorable to the distribution of profits among their employees, according to the report of conferees of ten big corporations who have made a thorough investigation of all profit sharing and profit distribution plans in operation in this country and in Europe. Among the benefits said to be derived from profit distribution are: To allow the employees to share in the prosperity of the business; to encourage thrift; to promote efficiency, especially in those departments where it is impractical to measure the work done by individuals; to encourage economy in operation; to promote stability and length of service; to encourage a spirit of cooperation making for industrial peace; to stimulate capable and effective supervision and to insure its continuance.

Practically all of these results are what a hundred thousand farmers of Michigan would like to see in connection with the farm labor situation in the state. If profit distribution to laborers in the industries bears such desirable fruit, is it not probable that the farmer's son or his hired man would respond to the same treatment? A more direct interest in the rewards of farming is quite certain to promote efficiency, stability and length of service on the part of the farmer's sons and encourage a fuller cooperation between the farmer and his help. To our knowledge success has attended such an arrangement and we believe the plan of having the laborer participate more directly into the fruits of his work deserves thoughtful consideration on the part of agricultural employers.

Farming Sandy Land

ABOUT one-fifth of the area of Michigan is classified by soil students as sand, sandy loam and fine sand. Proper methods of cultivation, the use of the right crops, judicious fertilization and wise management will make all of these soils except the poorest, available for farming. But nature has laid down certain rules which we must follow if we are to secure the maximum results from farming, and she is more particular it seems in the handling of the lighter soils than in dealing with rich alluvial plains. To succeed on sandy soils it is necessary that one break away from many of the established practices followed on other types of land. Here special attention must be paid to the incorporation of humus in order to bind the particles of soil more closely together, to prevent blowing and to hold moisture. Early plowing, deep seeding, corrugated rollers and

windbreaks are all important matters to the sandy land farmer. Since it has been easier to secure a living upon clay loam soils, the lighter lands have generally been neglected, and as a result less is known of the requirements for successful production on these soils. For this reason the editors of this journal have made arrangements for the services of one of the best authorities in the country to provide readers with a series of practical articles on the management of sandy land.

Arthur J. Anderson

IT is with the deepest regret that we announce the most untimely death of Arthur J. Anderson, editor of Pennsylvania Farmer, which occurred at his old home in Michigan on December 10, 1919. He had been ailing for some



time but his trouble was not considered serious until about four months ago.

Mr. Anderson was born near Shelby, Oceana county, Michigan, on December 3, 1878. He was the youngest of a family of eight children born to Christian and Rose Anderson. The parents immigrated to this country from Norway and settled upon the farm where Arthur died, in 1866. Mr. Anderson was only two years old when his mother died and his father passed away six years later. Arthur then made his home with his oldest sister, Mrs. R. H. Taylor, who purchased the old homestead and who filled the part of mother to him until he started in life for himself.

Mr. Anderson's early education was obtained in the district school of the neighborhood. After completing the grades he taught two or three terms and then decided to attend the Michigan Agricultural College. In order to secure the necessary funds for this purpose he went to work on a lake steamer with his brother Andrew, sailed the lakes for two years, and then entered the M. A. C. in 1901, graduating with the class of 1905.

His first newspaper work was done on the Detroit Tribune. This paper being sold a short time after, Mr. Anderson went to Cleveland to fill a position on the editorial staff of the Ohio Farmer in the fall of 1905, and continued on that paper until the firm purchased the Pennsylvania Farmer in the fall of 1911, moving it to Philadelphia in January, 1912.

Mr. Anderson was united in marriage with Mary Tawney, of Cleveland, in 1908. His wife and two children, Elizabeth and Arthur, are left to mourn the loss of an exceptionally devoted husband and father. Although cut short in the prime of life Mr. Anderson's contribution to agricultural progress has been a substantial one. In his death the cause of Truth loses a champion, and Humanity a sympathetic brother. The highest possible compliment may truthfully be paid him by saying he was a friend to man.

Some farmers spend too much money for buildings and farm equipments; others spend too little. One extreme is quite as bad as the other.

How We Get Winter Eggs

By Briant Sando

EGGs are plentiful in the spring simply because natural conditions are then most favorable for heavy laying. What we try to do, therefore, is to provide as nearly spring-time conditions as we can in the winter. In addition we want good quarters, and good management.

While our market flocks are forced for all the winter eggs we can get out of them, we have a separate pen of fowls which we are going to breed from in the spring. These breeders are not forced, because forcing always eventually lowers vitality and causes poor fertility.

For heavy laying alone we prefer Leghorns, Minorcas or Anconas. However, regardless of variety, all the fowls should be of at least fair standard bred quality. They will look better, lay better and pay better.

We have our houses as warm as is consistent with proper ventilation, without having any artificial heat; this latter we believe to be a needless expense, if not a positive danger. If the fowls are made to exercise sufficiently, they will need no supplied heat.

Where the weather is more or less changeable during the winter, the fowls should be protected from sudden changes, because they have a more disastrous effect upon egg production than has extreme cold. In warm winter weather, we throw the houses wide open during the day, and after night

provide somewhat more than the usual amount of ventilation. Then when the weather turns cold, we close up the houses as tightly as we can and still maintain good ventilation, according to the severity of the weather. Of course, we use muslin curtains in the front of our house so that the fowls are always sure of fresh air.

In regard to the number of fowls that may safely be kept in a house of a certain size—we prefer six to eight square feet of house room per fowl. Five feet per fowl is the minimum for best results. Our houses are divided into pens ten by twelve feet each, and we keep fifteen fowls in each, thus giving each bird eight square feet of floor space.

The feed is important, for the hen is like every other being in the respect that she cannot produce something from nothing, and she must be provided

with the proper materials for converting into eggs. The natural food of poultry is grain, insects, bugs and worms, and green stuff. This makes such a well balanced ration that about the best thing we can do is to try to match it.

We feed twice a day, morning and evening, with green food supplied at noon. Our morning feed always consists of a variety of dry grains scattered in a deep litter so that the birds will have to hunt and scratch for all they get. Exercise is necessary, for it is the busy hen that visits the nest and the lazy hen that gets fat and persists in living the "simple life" when it comes to producing eggs.

At noon we supply some kind of green food, giving as great a variety as possible. Any kind of grass or green stuff is all right! so are vegetables, roots, bulbs and tubers of any sort that

the birds will eat. If no supply of fresh green food is available, the next best thing is to use alfalfa or clover hay freely. It can be fed dry but should also be steamed and fed as mash occasionally.

The evening mash, fed the last thing before the fowls go to roost, is a moist mash, consisting mainly of cracked corn, middlings, bran, etc. Sometimes on very cold days, we also give a feed of whole corn that has been thoroughly heated because it helps keep the fowls warm. The water we use in mixing up the mash is always warmed in winter.

Some people prefer to feed the mash in the morning, with the grain feed at night. This is all right if it is more convenient, although we find that the fowls take more exercise if they are fed grains during the day. Birds usually fill up pretty freely on soft food, being able to fill their crops in just a few moments without exercise. This makes no difference in the evening when the fowls are about ready to go to roost, but in the daytime we want them to scratch and rustle around and exercise while eating.

Animal food in some form is necessary to take the place of bugs, worms, insects, etc. We use either ground beef scraps or green cut bone. Of course, grit, shells, charcoal and good drinking water are always accessible to the fowls.



More Money in Winter Dairying

By Earle W. Gage

A GOOD many fellows are toiling away sixteen and eighteen hours a day on the farm because their system of farming is wrong. By equalizing the crops and farm herds, they could be busy less hours all the year, and not half kill themselves during the hot summer months. And they would make more real money, too.

To illustrate: Dairy farmers have just passed through a period of very strenuous field activities and of heavy milking with their herds. Now, when field work is lax, many will be idle one-third of the time, because their herds will not freshen. In fact, on some farms the term idleness might be used instead of freshen. A more even balance in the year's work can be brought about if the cows are bred to calve in the fall. The logic of this is very plain; as the work of caring for the cows draws to a close, the busy time in the barn opens. The cows will be coming fresh at that time. There will be plenty of time for giving them any needed attention, and for looking after the young calves.

Records show that under the system of having cows calve in the fall from twelve to twenty per cent more milk is secured during the course of the year. The price received is higher, too. High profits are insured, because under this sort of management the cows are yielding their maximum production at the season of highest prices. It is true that milk and milk products cannot be as cheaply produced on high-priced feedstuffs as on pasture, but the increased price and greater ease of handling the milk during the cool season, with the subsequent saving in labor, far outweighs the advantage of the grass.

One of the greatest arguments in favor of fall freshening is that it balances the work of the farm to a nicety. The cows commence to come fresh about the time the heavy work on the farm is completed for the year, or along about the middle of November or the first of December. The dairy-

man is in a position to devote all his time to making the herd pay profits. In this manner the farmer provides himself with productive and profitable work for the entire year, and does not "kill himself" with work for a few months.

Usually the milk flow begins to fail by the time the spring farm work opens, the dairy work is consequently lighter and can give place to field work. By June the cows start to go dry and by the time the blue grass pasture fails in the fall there is very little "cow work" and plenty of farm work. The dairyman, however, can make good use of the pasture while it lasts, for the cows respond to it and the dairyman is rewarded with an extra flow of milk before the cows go on their summer vacation.

It is highly important that the dairy cow be encouraged to do her best during the first part of the lactation pe-

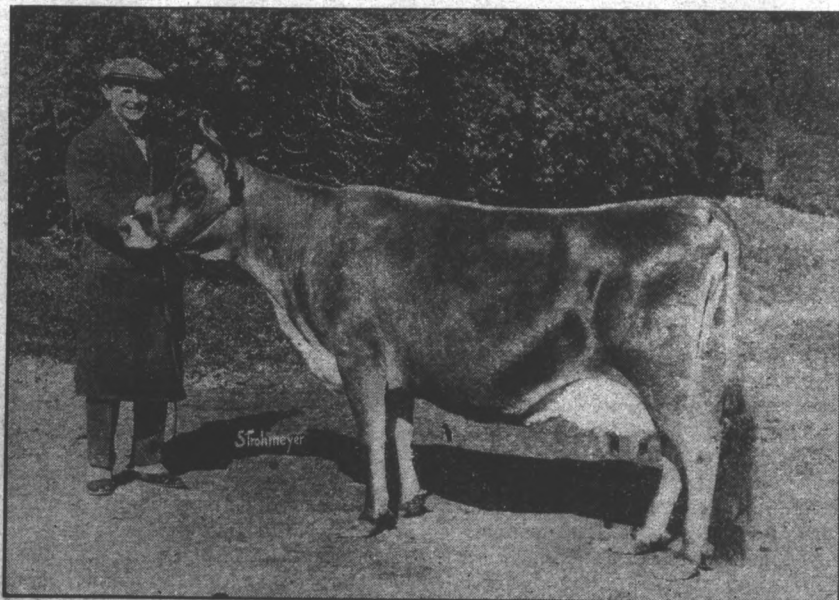
riod, for to a certain extent she will strive to maintain the pace set during the first few weeks. The dairyman, for this reason, should be prepared to give the cows the best of care at this time, as his future season profits depend upon it. More can be accomplished toward producing the very highest flow of milk in the fall or early winter than in the spring. This theory is based upon the fact that the cow's system becomes sluggish through the winter, due to artificial feed, close confinement and other abnormal things, and that she cannot respond in the spring like she can after a summer's rest on pasture and under more normal circumstances. And it sounds reasonable, while the profits of the men who follow this type of herd management demonstrate that is it.

The farmers who have made comparisons advise that calves dropped in the fall are easier to raise and make

better cows than those born in the spring. The first six or eight months are the most important period of the dairy cow's life. The farmer may devote more time to his stock in the fall than in the spring, without neglecting other pressing work. Besides, it is far easier to prevent such disastrous diseases as scours, and other digestive troubles among the young heifers during the cool weather, because the farmer should be better able to supply a uniform quality of skim-milk and to combat all forms of disease-producing germs. Calves carried through the winter on a skim-milk, grain and clover hay diet are ready to be turned on the pasture grass in a slick and growthy condition. Contrast this with the old method of allowing the heifer calf to struggle along during the summer as best she can with lack of care and attention until winter, when she has all she can do to hold her own, even on good feed, because she has received a poor start. Several farmers attribute the increased quality of their herd to the fact that they were able to properly care for the calves, fall born.

But winter conditions bring their own problems and difficulties, yet there are also some possible advantages beside those mentioned. While the herd has to be kept under artificial conditions, these are usually more likely to be under the control of the feeder than is possible at other seasons. One would be the manure, which is more valuable during the period of feeding concentrated feeds. None need be wasted, since all may be spread directly upon the land, instead of the cows carrying this valuable fertilizer to the pasture, and then buying commercial fertilizer to replace its value for the meadows.

The ideal dairy ration for winter feeding must possess succulence. The silo solves the problem best and from all points of view silage is to be preferred. The second choice would be roots. These are quite satisfactory, either alone or as supplementary to



Oxford's Wexford Spot with Record of 16,361 Lbs. of Milk and 958 Lbs. Fat.

(Continued on page 819).

News of the Agricultural World

FORMAL NOTICE OF 1920 CENSUS GIVEN OUT BY PRESIDENT.

PRESIDENT WILSON publishes his proclamation giving formal notice of the census. While the proclamation named January 2 as census day, actual counting will not begin for several weeks.

Thousands of enumerators now are being assigned to work by the census bureau. All information collected by enumerators will be on January 2.

This census is expected to show the United States has a population of 110,000,000, and will be used as the basis of a new alignment of the house of representatives. It is expected to result in an increase of at least seventy members.

The proclamation calls attention to the census law, which requires all citizens to answer fully and truthfully all questions by enumerators or be subjected to penalty. The President also emphasizes that the information so obtained would be held confidential by the government and enumerators and may not under the law be used in connection with taxation, military or jury service.

IOWA'S FARM BUREAU MEMBERSHIP GROWS RAPIDLY.

WITH bitter winter weather to contend with the special Farm Bureau drive being put on in Johnston county for new members to the county farm bureau has not been slackened to any great extent. About two hundred new members are being secured each day of the drive, which will net more than one thousand new adherents to this fast growing organization.

\$24.50 SET AS FAIR PRICE FOR A SUIT OR OVERCOAT.

TWENTY-FOUR dollars and a half is a "fair price" for a man's suit or overcoat, the federal price-regulating commission, working under direction of Charles Clyne, district attorney of Chicago, announced recently. Officials of five of Chicago's biggest retail stores prepared the price list, which follows:

Article	Price.
Men's suits	\$24.50
Men's overcoats	24.50
Men's shoes	5.95
Men's hosiery	.25
Men's underwear	1.35
Women's suits	25.00
Women's dresses	15.25
Women's coats	18.90
Women's shoes	4.95
Women's hosiery	.25
Women's underwear	1.25
Boys' suits	5.90
Boys' overcoats	8.50
Children's hosiery	.40
Children's underwear	.75
Children's shoes	3.95

The first effect of this list is supposed to bring about a drastic decrease in the price of suits, overcoats, hats, shoes and all other staple articles of clothing, the committee said.

FARM CROPS VALUED AT \$14,092,740,000.

THE value of the country's important farm crops this year totals \$14,092,740,000, the Department of Agriculture estimates in its final report. That compares with \$12,600,526,000, the value of last year's crops. The total area planted in these principal crops is placed at 359,124,473 acres, compared with 356,497,162 last year.

The total production and value, based on prices paid to farmers December 1, on the various crops follow: Production in bushels, except where otherwise specified:

Corn 2,917,450,000 and \$3,934,234,000.
Winter wheat 731,636,000 and \$1,543,452,000.

Spring wheat 209,351,000 and \$485,020,000.

Oats 1,248,310,000 and \$895,603,000.

Barley 165,719,000 and \$200,419,000.

Rye 88,478,000 and \$119,041,000.

Buckwheat 16,301,000 and \$24,026,000.

Flaxseed 8,919,000 and \$39,145,000.

Rice 41,059,000 and \$109,613,000.

Potatoes 357,901,000 and \$577,581,000.

Hay (tame) 91,326,000 tons and \$1,839,967,000.

Hay (wild) 17,340,000 tons and \$289,120,000.

Tobacco 1,389,458,000 pounds and \$542,547,000.

Cotton 11,030,000 bales and \$1,977,073,000.

Cottonseed 4,898,000 tons and \$355,840,000.

Sugar beets 6,396,860 tons and \$68,750,000.

Beet sugar 1,527,696,000 pounds (value not given).

Maple sugar and syrup (as sugar) 41,506,800 pounds, and \$11,172,000.

Beans (six states) 11,488,000 and \$49,181,000.

Onions (twenty-two states) 12,833,500 and \$27,307,000.

Cabbage (twenty-nine states) 443,400 tons and \$24,955,000.

Cranberries (three states) 541,000 barrels and \$4,520,000.

Apples 147,457,000 and \$275,463,000.

Peaches 51,340,000 and \$97,528,000.

PRICE OF FARM LANDS WILL NOT DECLINE TO PRE-WAR FIGURES.

FARM products will not be sold again at pre-war prices, according to C. E. Cameron, president of the Iowa state board of agriculture.

"A few years ago I made the prediction that land in Iowa in the near future would be selling at from \$300 to \$500 per acre. That has come true. No doubt the war brought this condi-

tion about sooner than natural conditions would have done. However, it is here and it is here to stay. People ask me if I think this land will stay at that price, and I say it certainly will. It may not go higher for some time, but I do not think it will go back.

"Do you expect farm products to go back to the same level as they were before the war? I do not. Wages and everything else that enters into the production of the farm have gone up. In my opinion the farmer will continue to sell his hogs for \$10 per hundred and over and his corn for \$1.00 per bushel and other things in proportion for some time to come."

SEED WAREHOUSE FOR KANKAKEE FARMERS.

A NEW seed warehouse equipped with cleaning mill, storage room and facilities necessary for the proper handling of the small seeds to be used by members, is the latest project taken over by the Kankakee Soil and Crop Improvement Association, of Kankakee, Ill., according to Adviser Collier. A livery barn was purchased and will be remodeled to fit the association's needs.

DRY LAW UPHELD BY HIGHEST TRIBUNAL.

WAR-TIME prohibition is constitutional, the supreme court declares. Enforcement of the act must continue until peace is proclaimed. The decision was a sweeping victory for the contentions of the prohibitionists and the government. It means that the millions of gallons of liquors now stored throughout the country and valued at about one billion dollars would be a nearly total loss unless peace is proclaimed before constitutional prohibition becomes effective.

OGEAW BREEDERS ORGANIZE.

ABOUT thirty farmers of Ogemaw county, Michigan, met at the farm bureau office at West Branch, Saturday, December 6, and formed a Live Stock Improvement Association to boost the breeding of purebred stock. Ogemaw county is well spotted with the purebreds now, and those who have bred their herds up realize more than all others what it means to have good stock, and with the spirit of co-operation have started a movement to pass the good thing along to their neighbors. They are going to try to make it possible for every man who wants to take advantage of it to breed to good stock, and are going to keep after it until the scrub will be the exception rather than the general thing.

Among the pure-blood stock now in the county are several of the present popular breeds. Holsteins seem to be the leaders in the dairy breeds, with some Jerseys and Guernseys. The county is well adapted to the raising of beef and pork. Shorthorns, Durhams, and Red Polls are plentiful, while in the pork animals Poland-Chinas and Durocs predominate.

This is one of the first organizations of its kind in this part of the state and much good will no doubt be done through it for the animal industry.

The officers are: Wesley Walker, president; Roy Gillies, vice-president; W. E. McCarthy, secretary-treasurer.

We should do everything to build up a strong and vigorous constitution and a healthy frame during the first year of the calf's life, for unless this is being done we are doing exactly the other thing. There is no middle course in growing a calf.

Potato Growers at Milwaukee

THE Potato Association of America held its sixth annual meeting at Milwaukee, Wisconsin, during the week of the Wisconsin Potato Exposition. The program was brief and consisted mostly of business although a few men of national reputation gave addresses. The writer is unable to report these because at the time they were being given he was busy judging the county displays.

This organization has held meetings in Washington, D. C., Grand Rapids, Mich., and two in Milwaukee, Wis. There has never been a large attendance, although the Washington meetings drew a much larger attendance than any of the others. It would seem that with so important a crop as the potato there should be a general interest in the national organization. Those who have been connected with the organization have not as yet, it seems, worked out a plan which seems to appeal to the potato growers as a class. During the coming year a committee will work with a view of trying to formulate some definite plans with the thought in view of interesting and reaching a large number of potato growers. This committee will be glad to receive any suggestions from parties who may have such to offer.

The officers for the ensuing year are as follows: C. W. Waid, East Lansing, president; Justus Miller, Toronto, vice-president; J. G. Milward, Madison, Wis., secretary-treasurer. The executive committee consists of the officers and Lou D. Sweet, Denver, Colo.; F. H. Douthitt, Chicago, Ill.; and Dr. Wm. Stuart, Washington, D. C.

The Wisconsin Potato Exposition has developed to such an extent that those who are behind the movement advertise it as the largest single crop exposition in the world. No doubt they have just cause to make this statement. Anyone who has not had the opportunity to see this show can hardly appreciate the extent of it nor the quality of the potatoes shown.

There were seventeen county displays, each put up in an attractive form. The maximum number of potatoes in each booth is supposed to be ten bushels. In addition to the county displays there are a large number of individual bushel displays of the various standard varieties grown in Wisconsin. Over one thousand bushels of certified seed stock was shown. The

principal object of showing the certified seed was for advertising purposes, the growers showing the stock just as it came from the field or as it would be delivered when purchased. A very large number of orders for seed were taken at this exposition.

The writer, together with two Wisconsin men, acted as judge of the exhibits and bushel entries. Each judge scores each booth independently. After the scoring is completed the average is taken of the three scores and this gives the placing for premiums. That there was close competition between the counties can be seen from an examination of the scores which follow:

Oconto 93.1; Barron 92.8; Oneida 92.1; Waupaca 91.1; Price 90.8; Lincoln 90.3; Shawano 89.6; Marinette 88.0; Rusk 87.8; Sawyer 85.1; Vilas 85.0; Forest 84.0; Langlade 80.3; Taylor 72.0; Chippewa 68.0; Dunn 64.6; Washburn 60.0.

The Wisconsin implement dealers put on a large exhibit of implements in conjunction with the potato show. This made a good combination and brought many men to the exposition who would not have come otherwise. It is estimated that at least five thousand people attended the exposition during the week. From the standpoint of advertising this exposition is one of the best things which the potato growers of Wisconsin have ever undertaken. It does not seem, however, in its present location to draw very heavily in attendance from the potato growers of the state. A very large percentage of those who attended this year were interested in machinery or were from other states. The Milwaukee people did not turn out to any extent. Many of the potato growers believe that it would be better to hold this meeting in the northern part of the state in the potato growing centers. However, if this is done, it will mean that the exposition will have to be staged on a much smaller scale.

The state legislature appropriates three thousand dollars for the work of the Wisconsin Potato Association. With a similar amount of money it would be possible to have such a show in this state, but without it is doubtful whether it would pay to attempt anything in the way of a potato exposition in the state of Michigan. C. W. WAID.



Michigan State Grange

ON Monday evening, December 8, for the first time in two years Michigan State Grange assembled at Saginaw for a four-days' session.

Nearly all the subordinate and Pomona Granges throughout the state were represented by delegates, the average being at least four or more from each county, and double that number from the stronger Grange sections.

All the officers were present at the opening except the gate-keeper, Peter Klees, who was sick at his home in Crystal.

As usual the first day was devoted to registration, examining credentials of delegates and listening to the Master's address. Master John C. Ketcham read this during the Tuesday afternoon session and it seemed to even more than satisfy the large assembly of officers, delegates and visitors. Very briefly we quote therefrom:

"The Grange organization in every possible way rendered service during the war. Our halls were used as centers for Red Cross work, and as rallying points for patriotic gatherings of every kind. Our local Grange members served as chairmen of committees and as leaders of every sort of 'drive.' Our speakers gave up their time almost exclusively to the constantly recurring publicity campaigns in bond issues, war funds and food conservation. Several of our leaders were called to high places of trust in state and nation and added honor to the Order and earned lasting credit for themselves by the splendid service they rendered. Liberty Bonds and War Savings Stamps were purchased by State, Pomona and Subordinate Granges. Boys, girls and women answered the call for increased acreage in food and feed crops and one hundred and three per cent of a normal acreage measured the result. But greatest of all was the gift of Grange sons to the cause of liberty and freedom. Service flags on the walls of many Grange halls tell the story of service and sacrifice in their stars of blue, and not a few gold stars speak of the supreme investment made by stalwart sons that might may reign supreme.

"Two Grange accomplishments in 1918: One was a better minimum price for sugar beets after a sharp controversy between the growers' committee and the manufacturers. Direct appeal was made to the food administration of both state and nation. The demands of the growers were met and the price of beets this year is to average \$12 per ton. This means an increase in Michigan of at least two and a half million dollars. The price was \$6 per ton when the Grange took up the fight in 1918. Every beet grower in Michigan ought to be an ardent champion of the Grange.

"The Grange rallied to the support of women suffrage and Grange women,

with their training as public speakers, proved that women can be the equal of men in public places of honor and responsibility. The large vote for equal suffrage is partly due to the Grange.

"Another drawback to Grange work in Michigan for the past two years has been the startling number of removals from the farms, due to the wonderful development of Michigan's motor industry, and the consequent demand for labor. It is doubtful if another state is affected in this regard as is Michigan. Her great manufacturing centers are clamoring for houses, rents are sky-high and any sort of habitable quarters are almost impossible to obtain. People are living in tents, shacks and all sorts of make-shifts for a home, while empty farm houses are becoming all too common. Farm auction sales crowd the days. Where such conditions develop in a Grange community the effect is disastrous.

"The high wages in the motor industries have drawn away the young men from the farms so that long hours and steady application to business has been required from those who remain. Tired bodies and discouraged minds are not the best material from which to build or maintain a thriving Grange. These conditions have likewise made it impossible to marshal the faithful workers to go to the aid of Granges needing help. Crops must be planted, cultivated and harvested and stock must be cared for. Home work must be done—first things first.

"The year being legislative year, unusual attention was paid to this important part of Grange work. Brother J. W. Hutchins, chairman of the State Grange executive committee, was designated to give personal attention to pending legislation and to give aid and support to those legislators who introduced bills in which the Grange had any interest. His former experience as a state senator made his services particularly valuable in the preparation of material for hearings, in arranging hearings and in keeping track of the progress bills were making. Special acknowledgement is likewise due Senator T. H. McNaughton, chairman of the farm organizations' legislative committee for invitation to appear before that organization and present the Grange views upon legislation.

"The Grange joined with the Gleaners and Farmers' Clubs in the formation of a federated committee of nine members for the purpose of securing more effective legislative work. Later on the Farm Bureau organization was asked to join in the work.

"The warehouse amendment was drawn in absolute good faith after consultation with consumers. It was designed to help both producers and consumers and to mark a real constructive step in the perplexing problem of

(Continued on page 822).



Mrs. F. D. Saunders, Miss Jennie Buell and Dora Stockman, Michigan Grange Leaders.



Winter Hauling Means Economy for You

The highest single cost in making an application of limestone is the cost of hauling.

This hauling cost is most expensive during the spring of the year—least expensive in the winter, when the roads are hard, when the horses are idle, when your time can best be spared for this work.

In order to reduce your hauling expense to a minimum we will make a special offer to you, so that you may

Buy Now—Pay Later

We will deliver promptly during the months of December, January and February, all orders for Solvay Pulverized Limestone, Arcadian Sulphate of Ammonia and "U-S" Potash.

We will not bill this material until April 1st. If the billing is paid by April 10th, you are allowed a 3% discount—or you may settle with a net cash payment before July 1st, 1920.

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GET GALLOWAY'S 1920 BARGAIN BOOK

See this great book of finest quality Agricultural Implements. If there ever was a time to stretch your dollars and take advantage of Galloway's Direct-to-you saving by "Dividing the melon," this is the time. It means that when you buy from Galloway you get "half the melon" in actual savings on Galloway goods—20 to 35 cents less on every dollar—because they come right off the factory floor straight to you.

**So I say: Buy Direct from Factory
Save on Separators, Engines, Spreaders**

Every Galloway Implement is guaranteed to satisfy or your money comes back. You can have 30, 60 and 90 days' trial. Choice of five easy buying plans. Get this 1920 Book now.

Separators Thousands of users say it's the best ever. Is simple, strong and absolutely sanitary. Skims close. Easy to run and clean. All working parts run in oil spray. Every drop of milk gets full skimming force of the bowl. 90 days' working trial on your farm will prove everything I say is so. Compare the Galloway—see how it outskims all others.

Engines New 1920 models for any farm power work, portable or stationary style. Develop way above rated horsepower. Big bore, longstroke. Valves in head like automobile engine. Extra heavy counterbalanced fly wheels. Every part standardized and interchangeable. Frostproof—works winter or summer.

Spreaders The new No. 8 is low down, easy to load, with unsurpassed roller feed, insuring light draft—all-steel V-rake—extra strong beater teeth that tear manure to shreds—automatic stop—uniform clean-out pushboard—spreads from 4 to 24 loads per acre. Two horses pull load easier than 3 or 4 horses can handle old style spreader. My new No. 8 Low Down Model will pay for itself in increased crops. Turns the soil into a gold mine.

WRITE NOW. Don't hesitate. I urge you to get my new 1920 Book. See how you can pay only one price for your implements and get the best made. We ship promptly from points near you and save you on freight. Send Coupon Now.

WM. GALLOWAY, Pres.
Wm. Galloway Co.
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Is easy to operate. Our No. 1 is the best and cheapest saw made to which a ripping table may be attached. Guaranteed 1 year. Money refunded if not satisfactory. Write for catalog.

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Order your silo now. Pay next summer when silo arrives. Send for catalog No. 9

W. S. DICKEY CLAY MFG. CO.,
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POTATO BAGS Sound and free from holes. Sold direct to growers at wholesale prices. WRITE

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A HORSE CAN TRAVEL WHERE AN AUTOMOBILE CANNOT GO

Often in the deep snows of winter an automobile cannot get through the drifts, but the horse can travel anywhere if he can secure footing. There is just one thing will insure safe footing on any road anywhere any time, no matter how icy or slippery, and that is the

Never Slip Red Tip Horse Shoe Calk

Whatever the occasion; a hurried trip to the doctor, an important call to town, a load of produce to be delivered—your horse is ready when you are ready. The wise horse owner will go to his horse shoe early and have the safe, reliable RED TIP SHOES put on. Then he can laugh at the weather. No sleet storm, no sudden freeze will hold him back. His sharp, strong RED TIP CALKS can be adjusted in 20 minutes, and he is ready for the road. Avoid substitutes. LOOK FOR THE RED TIP.

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Prices Slashed on Fencing, Gates, Steel Posts, Barb Wire and Roofing. An opportunity buyers shouldn't overlook. 23c a rod and up.

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My latest Fence Bargain Book—over 150 styles. Tells why my Double Galvanized Fence is most rust-resisting—lasts longer and many money saving points. Don't buy till you get my book. Write for it and get a handy wire splicer FREE, postpaid.

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High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in color free.

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Belgian Horses

Prairie Farms a Mecca for Visiting

THAT the Belgian horse is one of the most valuable to the farmer, as well as to other users of draft horses, is generally conceded, but it may not be generally known that the Belgian breed is the oldest in existence today. This fact is proven by history, which tells us that during the reign of Henry VIII, King of England, it was learned that on the low lands of Belgium, bordering upon the seashore, there existed the largest and draughtiest horses on the eastern continent. To start the breed in England King Henry encouraged several English breeders to cross the North Sea into Belgium and purchase a number of larger Belgian stallions and mares, which were offered for export. This resulted in the improvement of the equine race in England and the commencement of draft horse breeding on the British Isles.

Belgian Draft Horses Still Lead.

History also proves that the French draft breeds originated from the same section of country—the western borders of Belgium. That these Belgian horses are still in the lead during the present century is claimed by many good judges of the equine race. It was a Belgian stallion that took the champion prize over all breeds of draft horses at the International Exposition at Paris in 1878, and a Belgian that took the champion prize over all draft horses at the International Exposition at London in 1879. It was a Belgian stallion that took the champion prize over all draft breeds at the International Exposition at Brussels in 1880. At the International Exposition at Paris in 1900, it was carried off by the Belgian stallion Deve d'Or 7406. The champion draft mare of the Paris Exposition of 1900 was the Belgian mare Caline II.

The Best Belgian Blood in Michigan.

In reading this brief account of the Royal Bred Belgian Draft horses, we can scarcely imagine this splendid breed as being perfectly represented in our own state. But it is a fact thoroughly proven by numerous awards at which may be seen at any time, many state and international exhibitions, that no state in the Union, or any breeders in America, have better blood in their stallions and brood mares than are bred in Michigan. In this regard the great Prairie Farm in Saginaw county, with its seven thousand acres of land under cultivation stands in the lead and has the largest number of Belgian horses at regular farm work and for sale.

The farm has offspring of the great Reve d'Or and of Indigene du Fosteau, the champion of Belgian draft horses for many years, an animal which every breeder recognized as one of the

greatest sires ever produced, and also mares directly related to Faceur, the stallion that sold at forty-seven thousand five hundred dollars. There are more than two hundred highbred Belgian horses on this big farm, which may be seen at any time by those interested in heavy draft horses. This is a circumstance of considerable importance to horse breeders and farmers generally, as the purchase of the best breeds in America right here in Michigan avoids the risk of shipping from distant points in other states.

These Belgians are perfectly at home in Michigan, a fact which is evident from a casual inspection of the young stock of stallions and mares raised at the Prairie Farm. Colts at weaning time often weigh one thousand pounds, while some yearlings go to eighteen hundred pounds. There are two-year-old mares weighing a ton, a fact which substantiates the assertion that bigger horses are being raised in Michigan at the various ages stated than in Belgium, where the breed originated. Champions of both sexes are being produced, and it was an American bred mare, owned in Michigan, which at the age of four years won the grand championship at the Michigan State Fair in 1918, over imported mares from Michigan, Indiana and Ohio. No better Belgian draft horses can be raised than here in Michigan, the climate and soil conditions being peculiarly suited to their breeding.

Some Champion Belgians.

In order to prove the facts here stated, we will mention a few of the champion Belgians whose records are especially worthy of note:

Sans Peur de Hamel, No. 3446, was grand champion in 1915, 1916 and 1917 at the Michigan State Fair, and grand champion over all breeds in 1916. In show condition he weighed twenty-three hundred and seventy-five pounds. Grade mares off him have sold at \$350, at three years old. The Prairie Farm has over one hundred animals off him, which may be seen at any time, many of them in action. He has improved draft horses in Saginaw county, and his colts are seen everywhere, some farmers having driven their mares as far as thirty miles to get them bred to this great horse.

Rubis, No. 8004, is one of the best Belgian types ever imported. He is heavily boned and strongly muscled—foundations of all the best breeds of heavy draft horses. He was champion at the National Horse Show at Brussels, Belgium, in 1913, where he showed with two hundred and thirty horses in the two-year-old class. He received the silver medal given by the King of



First in Four-year-old Class at Belgian Horse Show at Waterloo, Iowa.

in Michigan

Breeders.---By J. Cooke Mills.

Belgium; and many noted breeders in that country declared it a mistake to let him go out of Belgium, as they recognized his value as a sire. There are many colts of Rubis in Saginaw and adjoining counties, and some at the big farm which are a decided credit to the race. Three-year-olds off him weigh close to a ton; two-year-olds eighteen hundred pounds and over. There is a colt off him at seven months weighing nine hundred and fifty which was Reserve Champion, junior class, 1918, at the Michigan State Fair. He was out of Marquerite de l'Epine, No. 3674, a granddaughter of Indigene du Fosteau.

Anyone who has ever seen the Grand Champion of Belgium, which brought fame to the breed, will easily recognize Marquerite de l'Epine as one of the champion's blood. She shows the same compact qualities of bone and sinew which distinguishes this famous strain, and it is a matter of congratulation that Michigan possesses so valuable a mare.

Flossie, No. 4964, the grand champion mare at the Michigan State Fair, 1918, went up against imported mares that had won grand championships, but even at the age of four years defeated them. She stood third at the International at Chicago in 1917, as a three-year-old. She has all the qualities possessed by a good brood mare, and is greatly admired for her style and action.

Soleil Lavant, No. 9340, will make a twenty-two hundred and fifty-pound horse when matured. He holds the junior championship at the Michigan State Fair, and is plenty good enough to head a pure-bred stable. He is a son of Rubis and out of a twenty-one hundred pound mare whose grand sire was Soleil Lavant, the kind that made the Belgian breeders proud of their stock.

Prospects for Great World Demand.

The Belgian exhibits at the state fairs last fall, where great crowds gathered, again prove the popularity and demand for the Belgian draft horse. During the past years of the war, when we would naturally suppose that the American Association of Importers and Breeders of Belgian draft horses, the only official stud book for Belgian horses in the United States, would have little business to transact on account of conditions in Belgium, and the fact that no horses have been imported from that country during the war, and probably will not be for years to come, if ever, business since 1914 has been the best in the past thirty years, and never in the history of the association have there been more sales and transfers and at as high prices.

The reasons for this are obvious to all conversant with the conditions in this country. The public has seen the heavy Belgian horse developed from a rough and rugged animal, such as were imported twenty-five or thirty years ago, to a finished product, and of the kind that have since been purchased by the American importer in the prize rings of Belgium and from which foundation, coupled with the skill of the American breeder, has been produced and perfected the magnificent Belgian draft horse of today. Because of this he is accorded by the American public a high place among all the draft breeds. Furthermore, he is protected by a registry association whose records have never been questioned and which are so complete that the records show a detailed history and abstract of title of every Belgian that has been registered in the United States since its organization in 1887. No record has ever been made or issued by the association that has not as its foundation the kind of sworn proof that would be accepted by every court in this country.

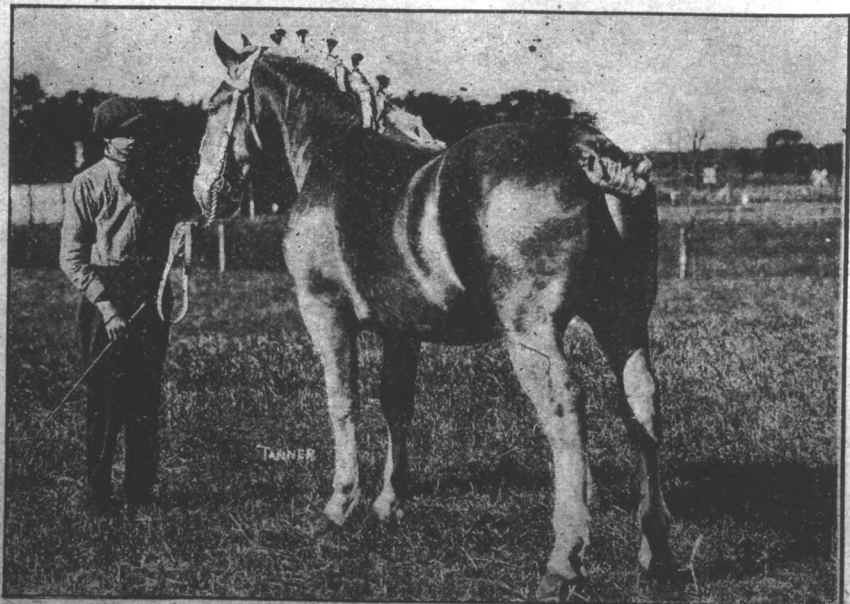
The demand from foreign lands is also noted. The war demands were heavy, the armies in the field using more than six million horses, resulting in a great shortage for commercial needs. The American farmer has not been breeding his mares, with the result of a diminution in the supply, so that now there is almost a famine in horses.

America to Restock Belgium.

As many of you know, the Belgian government has had representatives in this country looking for Belgian horses with a view to their purchase after the war. All draft horses not used in the Belgian army were stolen by the Germans and sold in their country at high prices. This left the home country of the magnificent Belgians stripped of their breeding stock, and it is necessary to call upon the United States to furnish the high-grade stallions and mares with which to restock the country, so that her people may carry on agricultural pursuits. The very foundation and life of the nation will depend on the ability of the farmers and stockmen to produce the foodstuffs and raw materials for the homes and factories, and in which draft horses are absolutely essential.

The United States must be prepared to supply the demand, as it is the world's market for draft horses; and those who are doing their duty in the production of Belgian draft horses will reap the richest reward in the sale of horses that the country has ever known. That the great Prairie Farm

(Continued on page 821).



Second in Yearling Class at Belgian Horse Show at Waterloo, Iowa.

Symbols of Service

FROM your seat in the train as you journey through the Middle West, you see at almost every station you pass the great, white storage tanks of the Standard Oil Company (Indiana). These bulk stations are maintained to insure prompt delivery of petroleum products to the people in that community. To them these tanks are Symbols of Service.

As you motor over the highways and byways of the countryside, you pass the dark green tank wagons of the Standard Oil Company (Indiana) busy delivering petroleum products from the bulk stations to the farmer's tank. To the farmer these are Symbols of Service.

At convenient points in city, town and hamlet you find attractive service stations, beautifying ugly corners. These are maintained for your convenience and to you they are Symbols of Service.

You stop at a railroad crossing to let a train pass. In it are a number of tank cars, hurrying forth from the Standard Oil Company (Indiana) refineries to replenish the stocks at bulk stations. Aside from their usefulness as carriers, these also are Symbols of Service.

The Standard Oil Company (Indiana) is a service organization, and wherever you may see its name or a piece of its equipment, you see a Symbol of the Service it is striving to give in maintaining its position as a public servant doing its full duty.

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EQUIPPED
FOR WINTER WORK

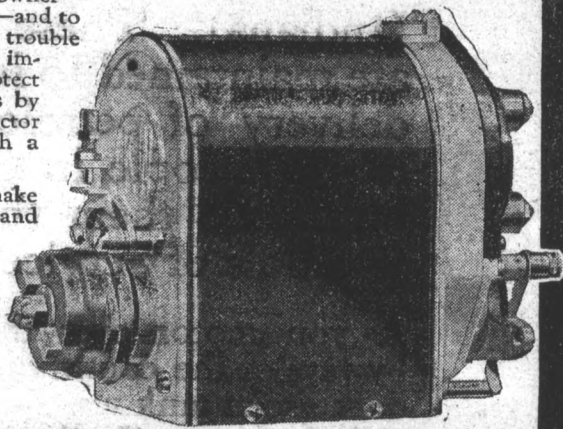
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Every operation—every Farm Tool—every active power minute—the very power life of the tractor itself is centered on the Reliability and Efficiency of the K-W MAGNETO to keep the work of four seasons going.

That Vital Power which either means profit-producing operating machines, or failing, leaves a silent, useless mass of iron and steel, is directly dependent upon thousands of Hot, accurately-timed sparks per minute.

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Write us stating make of tractor you own, and tell us you Ignition Problems.



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

Good Reading Bargaining

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The Michigan Farmer, one year...\$1.00
American Boy, one year 2.00

Total value\$3.00
Both for \$2.50.

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OFFER No. 106.

The Michigan Farmer, one year...\$1.00
Woman's World, one year50
Little Folks' Magazine, one year.. 1.50

Total value\$3.00
All for \$2.10.

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The Michigan Farmer, one year...\$1.00
People's Popular Monthly25
Home Life, one year25
Gentlewoman, one year..... .25
Household Journal, one year..... .35

Total value\$2.20
All for \$1.70.

OFFER No. 110.

The Michigan Farmer, one year...\$1.00
Pictorial Review, one year..... 2.00
Woman's World, one year50

Total value\$3.50
All for \$2.60.

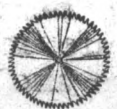
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The Michigan Farmer, one year...\$1.00
Woman's Home Companion, 1 yr. 2.00
McCall's Magazine, one year.... 1.00

Total value\$4.00
All for \$2.75.

The Michigan Farmer, Detroit, Mich.

High Speed Crucible Steel Cord Wood Saws



Every Blade Guaranteed to be free from flaws, cracks and splits, teeth to hold their edge and corners not to crumble.

Size	Price	Size	Price	Size	Price
20 in.	\$4.75	24 in.	\$6.75	28 in.	\$9.25
22 in.	5.75	26 in.	8.00	30 in.	10.50
				32 in.	12.00

ALL STEEL SAW FRAMES with self aligning dust-proof boxes; cannot pinch shaft; thoroughly braced; heavy Balance Wheel. Price \$31.80.

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

ICE Plows \$10.80 up. Tools W.M. H. PRAY, Mfg. La Grangeville, N. Y.

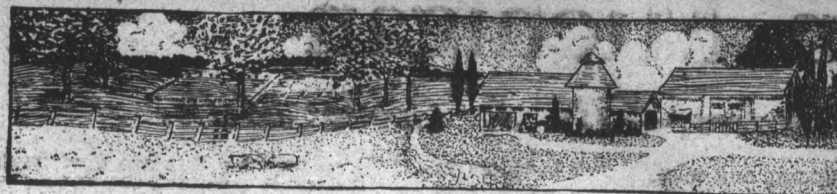
DOGS

Dogs Wanted Write me if you have any puppies for sale, stating price in first letter. I buy either males or females. Dr. W. A. EWALD'S COLLIE FARMS, Mount Clemens, Michigan.

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

Trained American Fox Hounds, Rabbits and Bracks. W. E. LEROY, Holmesville, Ohio.

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



Minnesota "Hort" Society

By C. W. Waid

THE Minnesota State Horticultural Society, which recently held its fifty-third annual meeting at St. Paul, dealt with special features which should be of interest to readers of the Michigan Farmer.

There were from eight to twelve speakers on every half-day program. Secretary Latham said that the reason he asked so many to take part was to get as many short papers as possible to publish in the annual report as only about one-tenth of the membership usually attend the annual meeting. With so many persons on the program very little time was left for questions and discussion. Such an arrangement may give those who do not attend the meeting a large amount of reading material but it does not permit an exhaustive treatise of any one subject.

Strawberries occupied a prominent place on the program, the everbearing sorts being very popular in that state for the home garden. The hill method or the narrow matted row system are most satisfactory. The Progressive variety of everbearers is most commonly grown.

One paper on gooseberries showed that from five hundred bushes the owner secured \$432.70 in 1918 (sixth year) and \$517 in 1919 (seventh year). He grows the Downing and Carey. He uses manure freely around bushes to mulch through winter, putting it on in October.

Professor W. G. Brieley, Pomologist at the University, reported the results of a survey of thirty apple orchards to secure costs and profits. These thirty orchards comprise one hundred and sixty acres. Average age, sixteen years. Crops recorded 1914-1918. The yield was one hundred and thirty-three bushels per acre per year. Return \$138.78, cost \$108.10, net profit, \$30.68 per acre per year. Four of the best orchards of the thirty gave a profit of \$226.31 per acre per year.

Tuesday evening the Men's Garden Club of St. Paul entertained the members of the Horticultural Society. This club is made up of some of the biggest men in St. Paul. In 1912 there were thirty members, in 1919 four hundred members. They stage an annual meeting at which there is an attendance of about five thousand. One of the speakers said that instead of decreasing the demand for vegetables to the disadvantage of the commercial growers, they had actually increased the demand for fresh vegetables.

Wednesday's program was turned over to the Minnesota State Vegetable Growers' Association. The same situation faces the gardeners near St. Paul and Minneapolis as the Detroit gardeners are up against. That is, that the price of real estate has so advanced that gardeners have been forced back from the city and onto land which is not in first-class condition for gardening purposes.

The labor situation is also serious in Minnesota. The gardener who has a large family is the only one who seems able to keep up with his usual production. The future gardener will be forced to use more land and to use a rotation of crops with clover or other legumes as one of the soiling crops.

Professor F. J. Alway, of Minnesota University, said that peat soils are ideal for vegetables except that they are subject to frosts both early and late. The only vegetable crop, he said, that does not flourish on muck is asparagus. This crop is grown, however, on muck in California, but does not seem to do well in Minnesota. The water table under muck should be under control so that it can be raised or lowered as may be desired. For the first year and in some cases for several years it is a good plan to grow potatoes or corn on new muck soils. Professor Alway believes in the use of a light application of stable manure on new muck soils. If there is a sufficient amount of lime in the soil the nitrogen will become available as fast as it is needed. Sometimes only potash and sometimes only phosphorus is lacking and in other cases both are lacking. A light coating of manure and a light application of phosphoric acid and potash will usually supply all fertility needs, providing there is sufficient lime in the soil. He stated that when the right fertilization is given to the soil potatoes of good quality can be grown on muck.

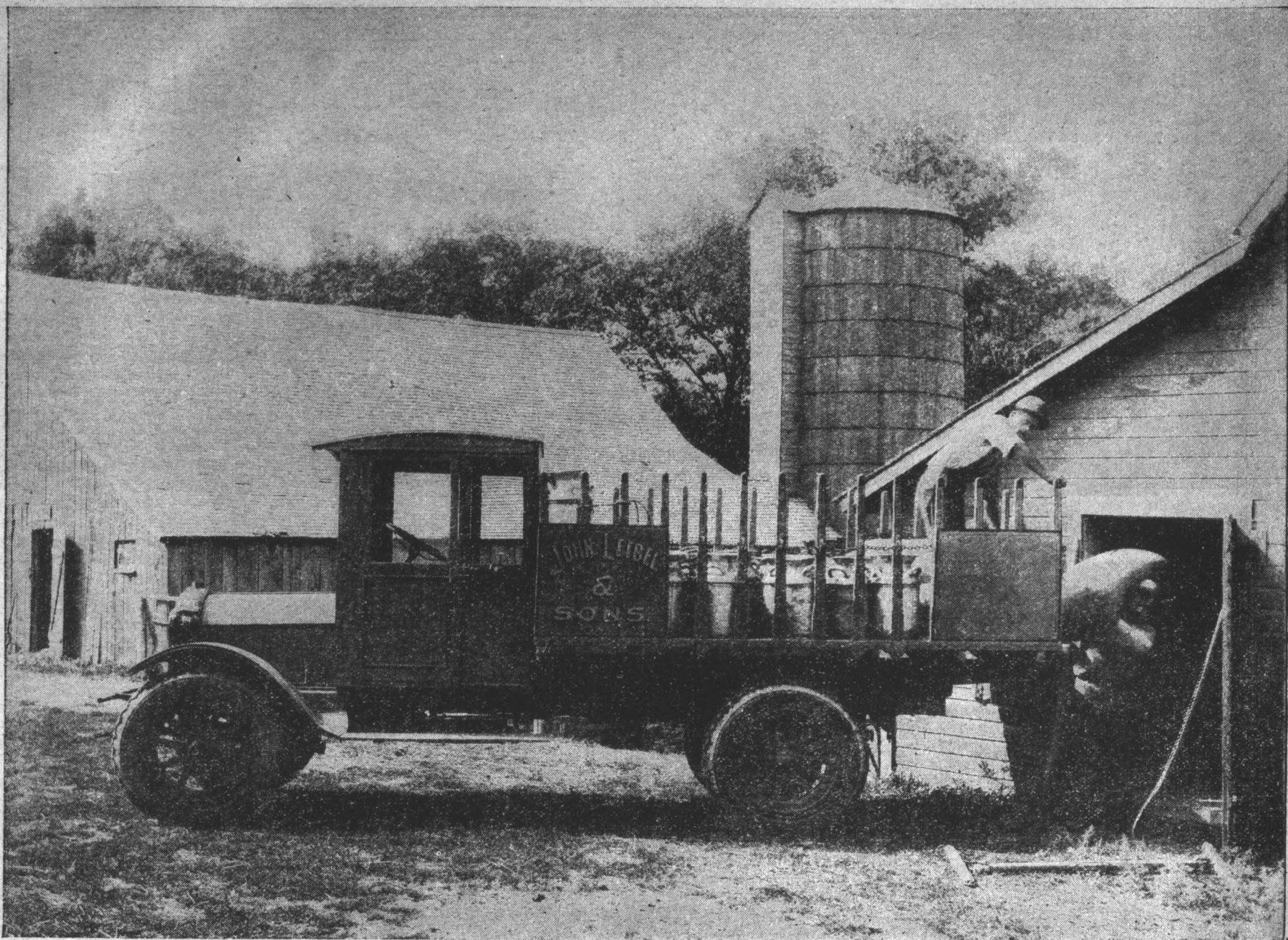
Mr. Sestler, of Des Moines, Iowa, told of his irrigation system. In ten years there had not been a single season when it was not needed at some time during the season. He has his pipes so placed that all can be drained for the winter. He has so arranged his piping that he can move the pipe lines after each watering. He moves lines one hundred and fifty to two hundred feet in length without disconnecting them.

Professor Paul Work, formerly of Cornell, but now doing special research work at Minnesota University, gave a talk which was an appeal to the growers to cooperate with the experiment station in getting research work accomplished. He gave the following suggestions:

1. Help the workers at the experiment station to get acquainted with your problems.
2. Try out the results of experiment station work as reported.
3. Cooperate with the station in carrying on experiments.
4. Let the legislature know you want research work done along fruit and vegetable lines.
5. Send your sons to college as there is a great need of research workers who have been raised on vegetable and fruit farms and who have been properly trained for careful research work.

On Thursday, Mr. Frederic Crane-field, secretary of the Wisconsin State Horticultural Society gave a paper on the subject of the commercial orchard vs. the home orchard. He believes that fruit growing will never be a profitable side line to general farming, and that farm orchards in the middle west are rapidly going out. If you are a farmer dig out and burn all trees not needed to provide sufficient apples for family use. He believes that the farm orchard of the future will be made up of only a very few trees. He stated that Minnesota could plant five thousand acres of orchard and other states in some proportion and not overdo the commercial business. He hopes to live to see the day when there will be enough apples so that every boy and girl, man and woman can have an apple a day.

When poor fruit is produced there is a reason. Aim to find out by a careful study of the trees and conditions what the reason is and try and remove the cause.



"I SAVE two to two and one-half hours daily on a 22-mile milk route with Goodyear Cord Pneumatic Truck Tires and find milk travels in better condition than in my solid-tired truck. Three teams would be required to do the same work done by the pneumatic-tired truck."—Frank Leibel, Farmer, Newbrighton, Minnesota

MANY farmers, like the one quoted above, know that a pneumatic-tired truck saves much time, drudgery and expense.

They know that this is a very valuable saving in these days of high labor costs and when markets must be reached more promptly than ever.

For pneumatic tires free a motor truck from the handicaps imposed by solid tires; they give it utmost traction and cushioning for all-around utility.

Rural users of Goodyear Cord Pneumatic Truck Tires load in the fields, reduce market hauls by hours and get top prices for perishables and live-

stock, sometimes injured by slower, harder transport.

By helping other power-driven farm machinery to work to capacity, Goodyear-Cord-equipped trucks enable farmers to secure the full benefit of motorization.

While pioneering the development of pneumatic truck tires Goodyear has widely investigated the benefits secured by farmers employing them as above.

Consequently, further information concerning the use of pneumatic-tired trucks on farms may be obtained from The Goodyear Tire & Rubber Company, at Akron, Ohio.



GOODYEAR

Bee Keepers Meet

By ARTHUR W. JEWETT, Jr.

THE fiftyfourth annual meeting of the Michigan Beekeepers' Association was held at the Michigan Agricultural College, East Lansing, Michigan, on December 9-10-11.

At the first meeting Miss Addie Sly, of Birmingham, Michigan, (president of the association), gave a brief sketch of the work accomplished during the past year. B. F. Kindig, secretary of the association, read his report and pointed out the work to be done for the coming year. Dean R. S. Shaw was introduced as the first speaker of the day and was followed by many prominent beekeepers of Michigan, and of other states.

During the course of the meetings many interesting and up-to-date subjects in beekeeping were discussed. R. H. Kelty, of East Lansing, spoke on "A comparison of the climatic conditions of the upper and lower peninsulas of Michigan as affecting the keeping of bees." Leonard S. Griggs, of Flint, spoke on "Swarming and its Control." The idea at the present time is to control the swarming of the bees so that they lose no time in gathering and collecting honey. David Running, of Fillon, one of the largest and most successful beekeepers in the state, explained how to ship bees. He also took up the question of honey production.

Michigan by its geographical location and crop adaptation is an ideal place for honey production. In fact, honey produced in Michigan is of better quality than that produced in other states. At the present time Michigan ranks second in this enterprise. Every year this state produces approximately six million pounds of extracted honey and four million pounds of comb honey. These two together are worth two and one-half million dollars.

At the present time there are 25,000 beekeepers in this state and 200,000 colonies of bees. These figures show that on the average there are eight colonies to every beekeeper. These figures include the farmer beekeeper and the professional beekeeper. Leonard Griggs, of Flint, has over seven hundred and fifty colonies in his apiary and devotes all of his time to their care.

Other prominent men who spoke at the convention were C. O. Yost, State Inspector of Indiana; F. W. Summerfield, of Toledo, Ohio; R. F. Holterman, of Brantford, Ontario; O. H. Schmidt, of Bay City; D. O. Davis, of Birmingham; Arthur Sharrow, of Plymouth; E. B. Tyrell, of Detroit, and E. R. Root, editor of Gleanings in Bee Culture.

Many "get rich" articles have been printed telling how an easy fortune can be made by raising bees for honey production. This industry calls for a small beginning and learning the business as it grows. It requires an intimate study of the bees and a detailed knowledge of their needs.

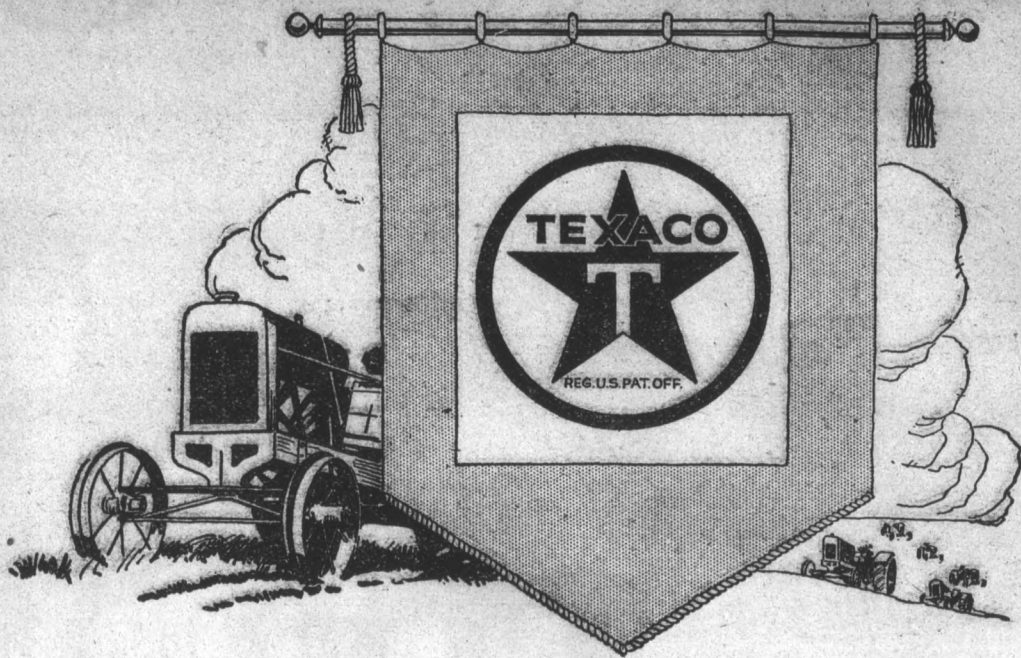
Unlike most states, Michigan has a ready market for its honey. The large cities will take all that can be produced.

Plans Discussed for a Cooperative Organization.

At the last meeting of the association plans were discussed for forming a cooperative organization through which the beekeepers in Michigan could sell their honey. The idea is to put out a standard product and make it known throughout the country. This organization could also handle supplies that the beekeeper needs, and at a much smaller cost. A committee was appointed to look into the matter and decide on something definite.

Officers Elected for Next Year.

Officers elected for next year are: A. P. Button, Ortonville, president; D. A. Davis, Birmingham, vice-president; R. H. Kelty, East Lansing, secretary and treasurer. The meeting next year will be held in Detroit.



TEXACO TRACTOR OIL



Symbol of First Aid to the Tractor

War-tested by our navy—now peace-approved by our farmers

OF COURSE we are proud of the service record that the red Star and green T oils made in lubricating the ships of the navy during the war. But we now have the larger satisfaction that comes from the universal approval and use of Texaco Tractor Oil by the farmer. It is first aid to the tractor everywhere. It makes possible greater efficiency than was ever known before its use. With every quality required of a tractor oil, no wonder the farmer prefers it. He wants correct body, unfluctuating quality, and durability. So he gets this oil marked with the red Star and green T, and does away with that enemy to smooth and continuous operation of the tractor, friction. Become better acquainted with Texaco Tractor Oil. Supplied in wooden barrels and half barrels; 15, 33, and 55 gallon steel drums; and one and five gallon cans.

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General Offices—Houston, Texas. Offices in Principal Cities

DISTRICT OFFICE—CHICAGO, ILLINOIS, McCORMICK BUILDING

Get Money Saving Prices On "Successful" INCUBATORS & BROODERS

Mail a postal—Get our offer. Poultry lessons free to every buyer. Booklet, "How to Raise 48 Out of 150 Chicks," 10c. Catalog FREE. Make green, egg-making feed in "SUCCESSFUL" Grain Sifters. DES MOINES INCUBATOR CO. 368 Second St., Des Moines, Ia. 27 Years of Big Successes

PLANS FOR POULTRY HOUSES.

All styles. 150 illustrations. Send 10 cents. Inland Poultry Journal, Dept. 49, Indianapolis, Ind.

POULTRY

Choice Cockerels

From pure bred quick maturing heavy laying strains. White Wyandottes \$4.00 to \$6.00 each. White Rocks \$4.00 to \$6.00 each. Barred Rocks \$3.50 to \$5.00 each. S. O. R. I. Reds \$3.50 to \$5.00 each. Special prices on larger lots. Above prices for orders received during December only. H. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

LOOK BABY CHICKS \$17 A 100 UP

By Special Delivery Parcel Post, postpaid 20 different thoroughbred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio

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

Barred Rocks egg contest winners, eggs from strain with records to 200 a year. \$2.00 per setting prepaid by P. P. Circular free. FRED ASTLING, Constantine, Mich.

DAY OLD CHICKS

New Spring Catalog

Those who want Day Old Chicks this year will need to order early. There is going to be a big demand again this spring. With eggs at 75 cents a dozen in your home town, poultry people will buy heavily of the laying breeds. For six weeks we have booked orders for spring delivery.

Let us know now the breed you will want. New Catalog ready by January 15. All standard breeds, and fully explained.

You will be especially interested in the extra heavy laying breeds we offer this season. Colonies which for egg production have the endorsement of the Poultry Extension Specialist of the Michigan Agricultural College.

Please let us know now what you will want. Cockerels—We still have a few strictly high quality Cockerels. Let us describe them and give you our price to farmer poultry people: Barred, White and Buff Rocks; R. I. and S. C. Reds; White Wyandottes; S. C. Black Minorcas; W. and B. Leghorns, both combs in each.

Pullets—S. C. Brown Leghorns, choice White Orpingtons.

Let us know what you will want and enter your name now for one of our new Catalogs.

STATE FARMS ASSOCIATION, Desk F Kalamazoo, Michigan

Barred Plymouth Rock Cockerels, large, from prize-winning laying strain, \$3.00 each. J. A. BARNUM, Union City, Mich.

Barred Rock Baby chicks a specialty. We are booking orders now for 1920. Apply H. H. PIERCE, Jerome, Mich.

Buff Leghorns and White Leghorn cockerels at reduced prices, if ordered soon, from great laying strains. Dr. William Smith, Petersburg, Mich.

Barron's 303 egg stock, S. C. W. Leghorn okls., March hatched. Bourbon Red Turkeys, Toms and Hens. Write for prices. Mrs. E. L. Garlock, R. 7, Howell, Mich.

Barred Rock cockerels, Ringlet strain, \$3.00 each; pullets \$2.00. A. A. WOOD & SON, Saline, Mich.

Cockerels and yearling hens, Orpingtons, Rocks, Reds, Wyandottes, Leghorns, Spanish, Minorcas, Campines. Tyrone Poultry Farm, Fenton, Mich.

Cockerels: Single Comb Rhode Island Reds. Excellent Lester Tompkins sire, 200 egg trap-nested blood. Miss Avery, Long Meadow Farm, Oxford, Mich.

Danger If chick and eggs are not shipped right. 100,000 Chix this season. Best Blooded stock ever produced at low prices quoted. Selected Utility, Exhibition trap-nested stock. 16 varieties, Hatching eggs, Hens, Ducks, Turkeys, Geese. Book orders early. Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

Fowler's Buff Rocks: Cockerels, cock birds and pullets. Write for prices. R. B. FOWLER, Hartford, Mich.

For sale "Buy the Best" eggs for hatching from 200 egg strain Barred Plymouth Rock, \$2.00 per 15, \$5.00 for 45 eggs. H. B. PROCTOR, Grand Haven, Mich.

For Sale 100 Large hen hatched Barred Plymouth Rock Cockerels \$3.00 each. Mrs. E. BELLEN, Whittemore, Mich.

John's Big beautiful Barred Rocks are hen hatched, grow quick, good layers, sold on approval, males \$4 to \$8. Circulars photos. John Northon, Clare, Mich.

Lester's Reds: R. C. cockerels and pullets. Fine color, Heavy egg strain. Dam and sire bred from Chicago blue ribbon winners. F. A. Lester, Mason, Mich.

Silver, Golden and White Wyandottes. Choice quality cockerels and pullets \$3.00 to \$5.00 each until Dec. 15. C. W. Browning, R. 2, Portland, Mich.

Poultry Ads. Continued on Page 823

WORLD EVENTS IN PICTURES



Terrible snow storm drives the Yellowstone Park animals from their haunts and hunger tames them.



John F. Turner, of Philadelphia, a diver of international reputation, in a new diving suit in which he went down three hundred and sixty feet to the ocean's bed.



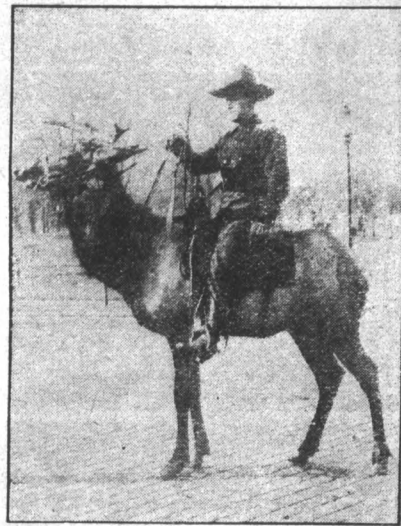
Harry Lauder, famous comedian, defeats Chief of Police White, of San Francisco, at golf.



Col. E. H. R. Green, son of Hetty Green, with Jennie Turpaud, the ninth war orphan he adopted.



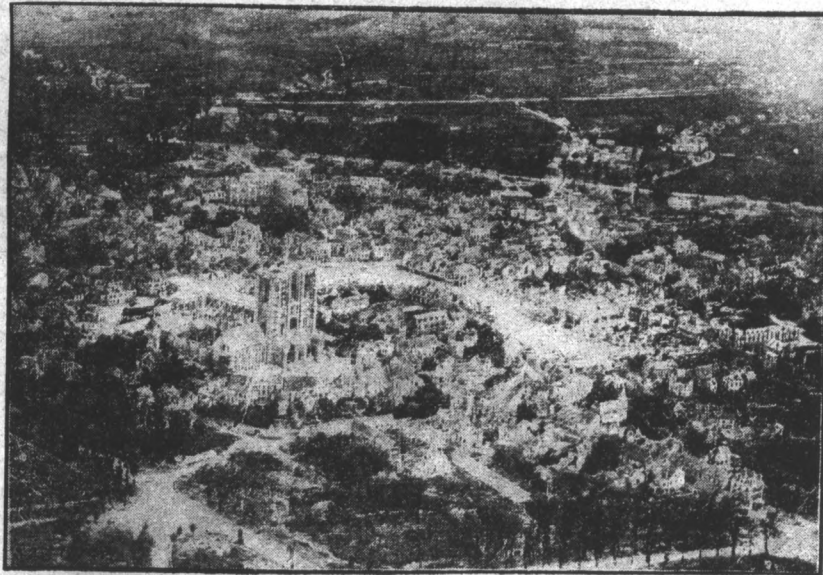
This cafe at Ypres was built by the Belgian at the left of the picture, with circular strips of corrugated iron salvaged from war dugouts. He lives in the rear with his wife.



Buck McKee makes people in Washington, D. C., stare by riding this elk in Potomac Park.



"El Gobernador" in Zion Canyon, which has just been made a new National Park.



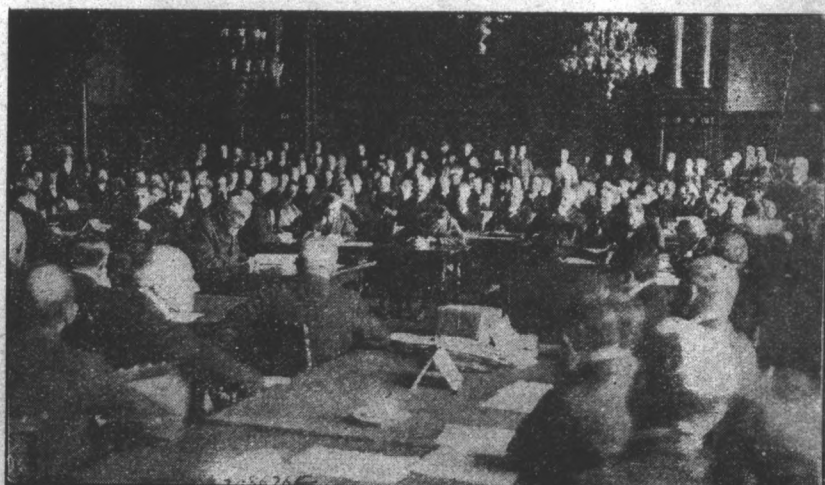
Aerial view of Noyon the French city twice captured by the Germans. Although practically destroyed it is being rapidly reconstructed, as this photograph shows. Note the Famous Cathedral in the left center.



Walter Ruesch, government custodian on the "Wet Trail" of the Zion Canyon. These walls rise 2,500 feet.



The House Committee on Immigration and Naturalization faces huge task of guarding against the entrance of dangerous aliens.



Former German Chancellor Von Bethmann Hollweg reading his testimony concerning war responsibility to State Committee of Berlin.

Kalamazoo

"The World's Standard"

TILE AND WOOD SILOS



CONSIDER the name. It means perfection. It means the best—in every sense of the word "best". It means Silo satisfaction for your lifetime and for generations yet to come.

The Kalamazoo Silo is a permanent, profitable investment—not an expense, and whether you choose wood or the more permanent tile, you are sure of getting extra value for your money.

Glazed Tile Silos

Made of hollow tile blocks—as "permanent as the Pyramids" and absolutely fire-proof, frost-proof, moisture-proof, acid-proof, storm-proof and vermin-proof. Galvanized reinforcing and equipment. Saves all paint and repair expense. Easy to build—plans and instructions for erecting furnished free.

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Shipped complete and ready to set up. Easily erected even by inexperienced home labor. Your choice of four time-defying woods. Many exclusive features including Kalamazoo continuous doors and galvanized steel door frame. Made right—priced right.

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Don't buy any Silo until you investigate the Kalamazoo. If not convenient to pay cash we will make you the easiest kind of easy terms. Write today for our illustrated catalog and price list.

KALAMAZOO TANK & SILO COMPANY
Dept. 223 KALAMAZOO, MICHIGAN

Crooked Trails and Straight

By Wm. MacLeod Raine

(Continued from last week).

"I'll take that from you, my dear, because you look so blamed pretty when you're mad; but I wouldn't take it from him—from your father, who is hiding out in the hills somewhere."

Anger uncurbed welled from her in an inarticulate cry. He had come close to her, and was standing beside the stirrup, one bold hand upon the rein. Her quirt went swiftly up and down, cut like a thin bar of red-hot iron across his uplifted face. He stumbled back, half blind with the pain. Before he could realize what had happened the spur on her little boot touched the side of the pony, and it was off with a bound. She was galloping wildly down the trail toward home.

He looked after her, fingers caressing the welt that burned his cheek.

"You'll pay for that, Kate Cullison," he said aloud to himself.

Anger stung him, but deeper than his rage was a growing admiration. How she had lashed out at him because he had taunted her of her father. By Jove, a girl like that would be worth taming! His cold eyes glittered as he put the bloodstained kerchief in his pocket. She was not through with him yet—not by a good deal.

CHAPTER V.

"Ain't She the Gamest Little Thor-oughbred?"

KATE galloped into the ranch plaza around which the buildings were set, slipped from her pony, and ran at once to the telephone. Bob was on a side porch mending a bridle.

"Have you heard anything from dad?" she cried through the open door. "Nope," he answered, hammering down a rivet.

Kate called up the hotel where Maloney was staying at Saguache, but could not get him. She tried the Del Mar, where her father and his friends always put up when in town. She asked in turn for Mackenzie, for Yesler, for Alec Flandrau.

While she waited for an answer, the girl moved nervously about the room. She could not sit down or settle herself at anything. For some instinct told her that Fendrick's taunt was not a lie cut out of whole cloth.

The bell rang. Instantly she was at the telephone. Mackenzie was at the other end of the line.

"Oh, Uncle Mac." She had called him uncle ever since she could remember. "What is it they are saying about dad? Tell me it isn't true."

"A pack of lies, lassie." His Scotch idiom and accent had succumbed to thirty years on the plains, but when he became excited it rose triumphant through the acquired speech of the southwest.

"Then is he there—in Saguache, I mean?"

"No-o. He's not in town."

"Where is he?"

"Hoots! He'll just have gone somewhere on business."

He did not bluff well. Through the hearty assurance she pierced to the note of trouble in his voice.

"You're hiding something from me, Uncle Mac. I won't have it. You tell me the truth—the whole truth."

In three sentences he sketched it for her, and when he had finished he knew by the sound of her voice that she was greatly frightened.

"Something has happened to him. I am coming to town."

"If you feel you'd rather. Take the stage in tomorrow."

"No. I'm coming tonight. I'll bring Bob. Save us two rooms at the hotel."

"Better wait till tomorrow. Forty miles is a long ride, lass."

"No, I can't wait. Have Curly Flandrau come to the Del Mar if he's in

town—and Dick Maloney, too. That's all. Good-by."

She turned to her cousin, who was standing big-eyed at her elbow.

"What is it, Kate? Has anything happened to Uncle Luck?"

She swallowed a lump in her throat. "Dad's gone, Bob. And nobody knows where. They say—the liars—that he robbed the W. & S. Express Co."

Suddenly her face went down into her forearm on the table and sobs began to rack her body. The boy, staggered at this preposterous charge, could only lay his hand on her shoulder and beg her not to cry.

"It'll be all right, Kate. Wait till Uncle Luck comes back. He'll make 'em sick for talking about him."

"But suppose he—suppose he—" She dared not complete what was in her mind, that perhaps he had been ambushed by some of his enemies and killed.

"You bet they'll drop into a hole and pull it in after them when Uncle Luck shows up," the boy bragged with supreme confidence.

His cousin nodded, choking down her sobs. "Of course. It—it'll come out all right—as soon as he finds out what they're saying. Saddle two horses right away, Bob."

"Sure. We'll soon find where he is, I bet you."

The setting sun found their journey less than half done. The brilliant rainbow afterglow of sunset faded to colder tints, and then disappeared. The purple saw-toothed range softened to a violet hue. With the coming of the moon the hard, dry desert lost detail, took on a loveliness of tone and outline that made it an idealized painting of itself. Myriads of stars were out, so that the heavens seemed sown with them as an Arizona hillside is in spring with yellow poppies.

Kate was tortured with anxiety, but the surpassing beauty that encompassed them was somehow a comfort to her. Deep within her something denied that her father could be gone out of a world so good. And if he were alive, Curly Flandrau would find him—Curly and Dick between them. Luck Cullison had plenty of good friends who would not stand by and see him wronged.

Any theory of his disappearance that accepted his guilt did not occur to her mind for an instant. The two had been very close to each other. Luck had been in the habit of saying smilingly that she was his majordomo, his right bower. Some share of his lawless temperament she inherited, enough to feel sure that this particular kind of wrongdoing was impossible for him. He was reckless, sometimes passionate, but she did not need to reassure herself that he was scrupulously honest.

This brought her back to the only other tenable hypothesis—foul play. And from this she shrank with a quaking heart. For surely if his enemies wished to harm him they would destroy him, and this was a conclusion against which she fought desperately.

The plaza clock boomed ten strokes as they rode into Saguache. Mackenzie was waiting for them on the steps of the hotel.

"Have they—has anything been—?"

The owner of the Fiddleback shook his grizzled head. "Not yet. Didn't you meet Curly?"

"He rode out to come in with you, but if he didn't meet you by ten he was to come back. You took the north road, I reckon?"

"Yes."

His warm heart was wrung for the young woman whose fine eyes stared with dumb agony from a face that looked white in the shining moonlight.

Clipped Cows Mean Clean Milk

Wide awake dairy farmers assert that it's next to impossible to obtain milk with low bacteria counts without clipping. They clip their cows on udders and flanks at frequent intervals during the winter and early spring, which makes cleaning quick and easy and keeps dirt and other filth out of the milk. Here's what two of them say:

JELKE DAIRY FARM

Dundee, Ill., Nov. 7, 1919.

A clipping machine is about the most important thing used in a dairy barn to get clean milk, as well as to keep the cows clean with much less work. When a cow is not clipped, all the manure sticks to her hips, legs, udder and sides, and it is impossible to get sanitary milk. No matter how careful a man may be, it is bound to get into the milk. Clipping a cow does not take much longer than to clean her well—after clipping the cleaning is a very small job.

J. P. TUCK, Manager.

BROOK HILL FARM

Genesee Depot, Wis., Nov. 6, 1919.

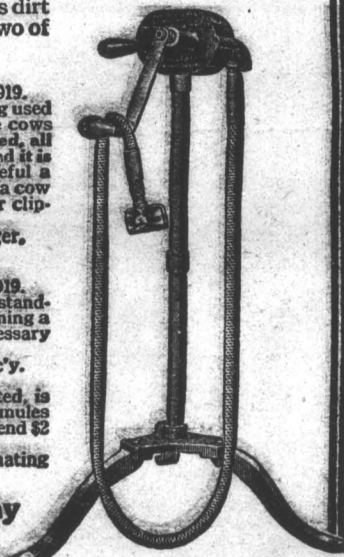
We find clipping our cows a necessity both from the standpoint of saving labor and of cleanliness. In maintaining a high standard of milk production clean cows are necessary and only clipped cows can be kept clean.

HOWARD T. GREENE, Sec'y.

The Stewart No. 1 Clipping Machine, here illustrated, is best. Runs easily—lasts a lifetime. Clips horses and mules also. Your dealer has it, or order from us at \$12.75. Send \$2 if you wish and pay balance on arrival.

Electric Clipping Machine, direct current, \$60; alternating current, \$80.

Chicago Flexible Shaft Company
Dept. B127 Roosevelt Road and Central Ave., Chicago



The Most Dependable ALBION Pumping Power

And the cheapest in first cost, up-keep and long life, is a reliable ALBION mill. THE ALBION IS SIMPLE. One-third the working parts of the ordinary mill. Direct connection of mill to pump, gives but one wearing point where others have from three to six.

ECONOMICAL. Upkeep of an ALBION, for 20 years, averages but 2% of its first cost. REPUTABLE. The ALBION has been popular for fifty years.

SMOOTH RUNNING. Long bearings, adjustable boxes, three-length Pitman stroke and grooved oil containing turntable, insure silent, smooth action. PERFECTLY BALANCED. The ALBION governs by weight, without springs, giving a perfectly balanced mill, either in gear or out.

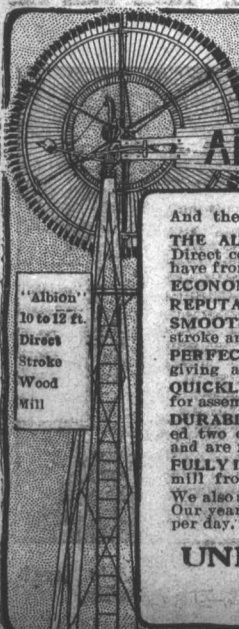
QUICKLY ERECTED. No expert necessary, all parts shipped knocked down, ready for assembly. We furnish blue prints and full instructions.

DURABLE. Wheel arms securely bolted and braced. Wheel and rudder hand-painted two coats in the wood. Steel wheels thoroughly hot galvanized after making, and are rust-proof. All ALBION mills fit either steel or wood towers.

FULLY INTERCHANGEABLE. You may replace any bearing without removing the mill from the tower. We ship duplicate parts the day your order is received.

We also supply direct—and back-gear steel mills, pumps, stock tanks, and fittings. Our years of experience are at your service. Write us of volume water you pump per day, depth of well, etc., and will we recommend the proper ALBION mill.

UNION STEEL PRODUCTS CO., Ltd.,
ALBION, MICHIGAN



He put an arm around her shoulders, and drew her into the hotel with cheerful talk.

"Come along, Bob. We're going to tuck away a good supper first off. And while you're eating, I'll tell you all there is to be told."

Kate opened her lips to say that she was not hungry and could not possibly eat a bite, but she thought better of it. Bob had tasted nothing since noon, and of course he must be fed.

The lad fell to with an appetite grief had not dulled. His cousin could at first only pick at what was set down before her. It seemed heartless to be sitting down in comfort to so good a supper while her father was in she knew not how great distress. Grief swelled in her throat, and forced back the food she was trying to eat.

Mackenzie broke off his story to remonstrate. "This won't do at all, Kate. If you're going to help find Luck, you have got to keep yourself fit. Now, you try this chicken, honey."

"I—just can't, Uncle Mac."

"But you need it."

"I know," the girl confessed, and as she said it broke down again into soft weeping.

Mac let her have her cry out, petting her awkwardly. Presently she dried her eyes, set at her supper in a business-like way, heard the story to an end quietly, and volunteered one heart-broken comment.

"As if father could do such a thing."

The cattleman agreed eagerly. There were times when he was full of doubt on that point, but he was not going to let her know it.

Curly came into the room, and the girl rose to meet him. He took her hand in his tanned, muscular one, and somehow from his grip she gathered strength. He would do all that could be done to find her father, just as he had done so much to save her brother.

"I'm so glad you've come," she said simply.

"I'm glad you're glad," he smiled cheerfully.

He knew she had been crying, that she was suffering cruelly, but he offered her courage rather than maudlin sympathy. And hope seemed to flow through her veins at the meeting of the eyes. Whatever a man could do for her would be done by Curly.

They talked the situation over together.

"As it looks to me, we've got to find out two things—first, what has become of your father, and, second, who did steal that money."

"Now you're talking," Mackenzie agreed. "I always did say you had a good head, Curly."

"I don't see it yet, but there's some link between the two things. I mean the robbery and his disappearance."

"How do you mean?" Kate asked.

"We'll say the robbers were his enemies—some of the Soapy Stone outfit maybe. They have got him out of the way to satisfy their grudge and to make people think he did it. Unfortunately there is evidence that makes it look as if he might have done it—what they call corroborating testimony."

Billie Mackenzie scratched his gray poll. "Hold on, Curly. This notion of a link between the hold-up and Luck's leaving is what the other side is trying to. Don't we want to think different from them?"

"We do. They think he is guilty. We know he isn't."

"What does Sheriff Bolt think?"

Curly waved the sheriff aside. "It don't matter what he thinks Miss Kate. He says he thinks Luck was mixed up in the hold-up. Maybe that's what he thinks, but we don't want to forget that Cass Fendrick made him sheriff and your father fought him to a fare-you-well."

"Then we can't expect any help from him."

"Not much. He ain't a bad fellow,

Bolt ain't. He'll be square, but his notions are liable to be warped."

"I'd like to talk with him," the young woman announced.

"All right," Mackenzie assented. "Tomorrow morn'ing—"

"No, tonight, Uncle Mac."

The cattleman looked at her in surprise. Her voice rang with decision. Her slight figure seemed compact of energy and resolution. Was this the girl who had been in helpless tears not ten minutes before?

"I'll see if he's at his office. Maybe he'll come up," Curly said.

"No. I'll go down to the courthouse if he's there."

Flandrau got Bolt on the telephone at his room. After a little grumbling he consented to meet Miss Cullison at his office.

"Bob, you must go to bed. You're tired out," his cousin told him.

"I ain't either," he denied indignantly. "Tired nothing. I'm going with you."

Curly caught Kate's glance, and she left the boy to him.

"Look here, Bob. We're at the beginning of a big job. Some of us have to keep fresh all the time. We'll work in relays. Tonight you sleep so as to be ready tomorrow."

This way of putting it satisfied the boy. He reluctantly consented to go to bed, and was sound asleep almost as soon as his head struck the pillow.

At the office of the sheriff, Kate cut to essentials as soon as introductions were over.

"Do you think my father robbed the W. & S. Express Company, Mr. Bolt?" she asked.

Her plainness greatly embarrassed the officer.

"Let's look at the facts, Miss Cullison," he began amiably. "Then you tell me what you would think in my place. Your father needed money almighty bad. There's no doubt at all about that. Here's an envelope on which he had written a list of his debts. You'll notice they run to just a little more than twenty thousand. I found this in his bedroom the day he disappeared."

She took the paper, glanced at it mechanically, and looked at the sheriff again. "Well? Everybody wants money. Do they all steal it?"

"Turn that envelope over, Miss Cullison. Notice how he has written there half a dozen times in a row, '\$20,000,' and just below it twice, 'W. & S. Ex. Co.' Finally, the one word, 'Tonight.'"

She read it all, read it with a heart heavy as lead, and knew that there he had left his own strong, bold handwriting convincing evidence against himself. Still, she did not doubt him in the least, but there could be no question now that he knew of the intended shipment, that absent-mindedly he had jotted down this data while he was thinking about it in connection with his own debts.

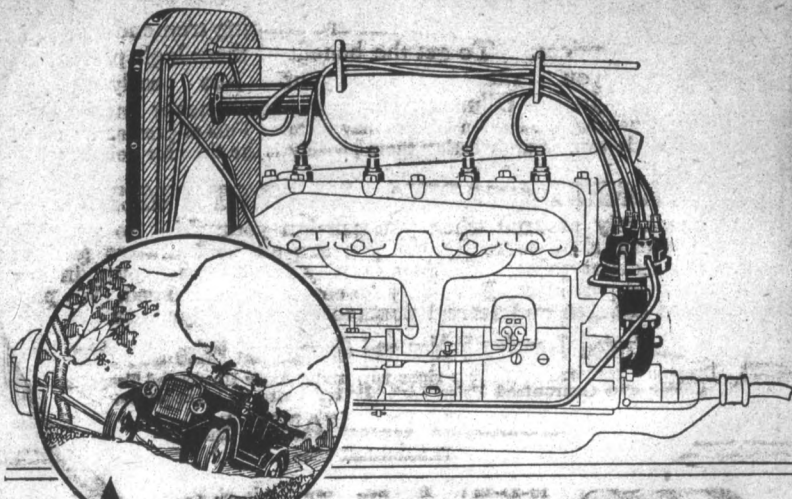
The sheriff went on tightening the chain of evidence in a voice that for all its kindness seemed to her remorseless as fate. "It turns out that Mr. Jordan of the Cattleman's National Bank mentioned this shipment to your father that morning. Mr. Jordan was trying to raise money from him, but he couldn't let him have it. Every bank in the city refused him a loan. Yet next morning he paid off two thousand dollars he owed from a poker game."

"He must have borrowed the money from someone," she said weakly.

"That money he paid in twenty-dollar bills. The stolen express package was in twenties. You know yourself that this is a gold country. Bills ain't so plentiful."

(Continued next week).

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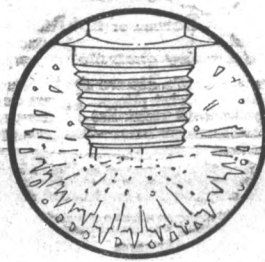
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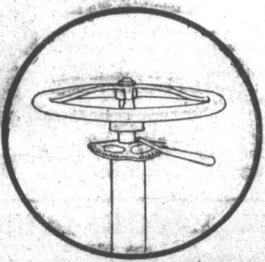
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Our Boys' and Girls' Page

Club Work Notes

Michigan is to be represented this year for the first time, by a club live stock judging team at the International Live Stock Exposition at Chicago. The team which won the state championship at the Michigan State Fair from the Dixboro Club in Washtenaw county, will represent Michigan at Chicago. A team similarly chosen, from each of the middle states, will enter this live stock judging contest.

Mr. R. A. Turner, State Club Leader, attended a conference of the leaders of the middle west states at Des Moines recently.

Work for the season just closing is being brought to a formal end by the holding of county club achievement

These achievement days are being held in each of the counties in which county club leaders are in charge. At these achievement days the winners of local and county club championships are announced; awards and honors given out, and the work for the season brought to a formal end.

All county club leaders are reviewing their reports for the season, tabulating the basis of the annual report for the coming year and compiling their yearly reports. These yearly reports form state which is forwarded to the Department of Agriculture at Washington, the last of each year. The statistical results for the past season's work will soon be available.



Bumper the White Rabbit Plays King

By George Echelbers Walsh

STORY VI.

A Test of Courage.

SPOTTED TAIL was so chagrined by losing the race that he immediately began to scheme to humiliate Bumper in some other way. He was confident that the race hadn't gone to the swiftest and strongest but he could not convince the others of this. The story of how the tortoise beat the hare in a race, because the latter had lain down to sleep on the way, was an old joke among the rabbits, and Spotted Tail's excuses only aroused mirth and derision.

No, clearly, Spotted Tail could not redeem his lost glory by challenging Bumper to another race. But there were other ways to discredit him in the eyes of his people.

"Oh, Bumper, King of the rabbits!" he exclaimed one day in mock court-esy. "The Lion is called the King of the beasts, and he won that title by his bravery and courage. Do you think that should make one king?"

"Courage is a quality that every king and leader should have," replied Bumper cautiously.

"Greater than that of any of his subjects?"

Bumper hesitated, for he feared a trap; but when all the others looked at him, waiting upon his words, he felt that he had to assent.

"Yes, I suppose he should be the bravest of his people."

"Then," smiled Spotted Tail, "you must be the bravest of all the rabbits in the woods—braver than Old Blind Rabbit ever was, or any of the young ones here."

"I shouldn't like to claim that," faltered Bumper, modestly.

"Then you shouldn't be king. Isn't that the law of the woods?"

"A leader should be as brave as any of his people," Bumper answered, "not a braver. Perhaps that would be impossible."

"Well said," muttered the Old Blind Rabbit. "There are many of my people who are brave as any king, and more could not well be asked of their leader."

Spotted Tail licked his lips and smiled. "We should make a test," he added, "to see who are the brave ones among us. All who choose can enter it. Has anyone a test to suggest?"

There was absolute silence. Spotted Tail knew no one would think of a suitable test on the spur of the moment. So he proposed one himself, one short one, either through chance or

that he had had in mind for some days. "Suppose, then," he added, still smiling, "we cross, one by one, Swinging Bridge, and those who get over safely will be entitled to be called brave."

There was a gasp of surprise and consternation. Swinging Bridge was a small tree that had fallen across Rocky Ford where the river cut deep through a narrow gorge. The tree seemed almost suspended in mid-air by the vines and bushes, and was very dangerous. Every wind swung it back and forth like a hammock strung between two trees.

No rabbit had ever dared to cross it. It was supposed to be an impossible feat. The tree was so small and slippery that it afforded small chance for an animal without claws to walk across it. It hung fifty feet from the river's bed so that a fall from it meant almost sure death.

It was foolhardy to try it. Bobby Gray Squirrel could run across it easily, but that was because he had claws with which to cling to it. Sleepy the Opossum and Washer the Raccoon could likewise walk across the bridge without fear of falling. But for a rabbit, whose feet were not made to climb, it was a dangerous undertaking.

"Oh, no, not that!" exclaimed Fuzzy Wuzz shuddering.

"Why not?" asked Spotted Tail. "It will be a wonderful record for any rabbit who can do it. What do you say, Bumper?"

"I'm willing if you are," Bumper replied, feeling that he could not withdraw from the challenge.

"Then we will draw lots to see who goes first," promptly added Spotted Tail, who had arranged the whole thing.

"That isn't fair," interrupted one of Bumper's followers. "The challenger should go first."

"Since when was drawing lots unfair?" queried Spotted Tail. "I appeal to your judgment, Old Blind Rabbit."

The old leader of the rabbits hesitated for a moment, but he had to admit that this form of selection had been common with his people as long as he could recollect.

So when he decided in favor of Spotted Tail, the work of choosing their order of going across the bridge began. There were ten who stepped forward to accept the challenge. The Old Blind Rabbit held the sticks as each one stepped up to choose. Bumper got the

ment. So he proposed one himself, one short one, either through chance or

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through some trick Spotted Tail had arranged. No one could say which it was, but a murmur of dissent went up at once.

"It wasn't a fair drawing!" they cried. "Try it over again. Spotted Tail played a trick on Bumper."

"No," interrupted Bumper, "we'll not draw lots again. I'll cross Swinging Bridge first."

The decision was accepted with applause, and the rabbits trooped through the woods to Swinging Bridge. Bumper's first sight of it made him shiver. It was worse than he had imagined. The chasm was at least thirty feet across, and the butt end of the tree was not more than eight inches in diameter, while the smaller end seemed to dwindle away into a mere whip. In fact, the tree could never have remained in its position if it hadn't been for the vines suspending it.

"I'll begin on this end," Bumper said, choosing the butt end of the tree. His quick eye had seen the only possible chance for crossing. Half way across, where the tree grew smaller rapidly, there was a crotch which offered a firm footing. Bumper decided to walk out to this, and then reach the other side in one tremendous hop. That would be crossing the bridge, for nothing in the terms had been said about the manner of going.

While the others held their breath, and Fuzzy Wuzz shook and trembled with fear, Bumper hopped on the tree, and began making his way slowly along. He dared not look below where the river rolled and tossed over the rocks. He kept his eyes on the crotch ahead.

He reached this without accident. Then paused. The rest of the way was too perilous for any rabbit to proceed. Spotted Tail smiled to himself. He knew that it would be the last of the white rabbit if he attempted it.

Bumper crouched low, fastened his hind feet firmly in the crotch, and then to the surprise of all, leaped into the air in one tremendous spring that carried him clear across to the other side. His heart was beating at a lively rate, but when he realized that he had performed the difficult feat a little glow of triumph spread over his face.

"Wonderful! Good for Bumper!" were the cries from the other side that reached his ears.

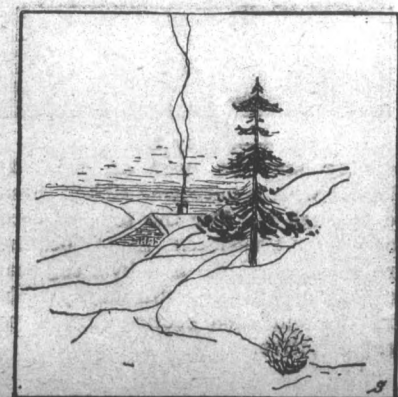
"Now Spotted Tail, it's your turn!" someone said.

But Spotted Tail was white and trembling. He had never expected to be called upon to attempt it. With the death of Bumper in the river below, they would call the test off. It would be suicidal for another to try it. But now all was changed. Bumper was safe on the other side, and they were calling on him to cross. He crouched in abject fear, and seemed ready to ask for mercy when Bumper spoke.

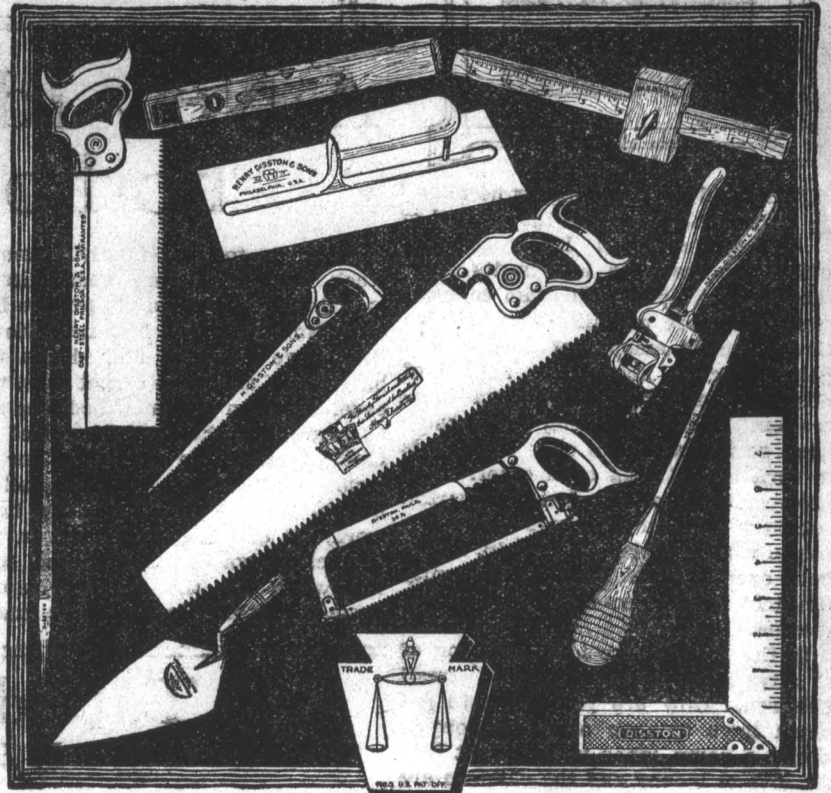
"No," he said, "it isn't safe. It's a foolhardy thing to do. I forbid anyone else trying it. You understand, Spotted Tail, I forbid it!"

Spotted Tail raised his head hopefully, and a cunning, cringing expression came into his eyes.

"The king must be obeyed!" he said. Then boastfully, walking away: "But I could have crossed without jumping half the way. That was not included in the terms of the test."



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Woman's Interests

A New Idea in Neighborhood Clubs



IT'S an ill wind that blows no-whar," says Sambo. And so the ill-wind of high prices and labor shortage which the war has left in its train should blow along with it its compensating measure of gain. I've an idea that no small amount of that gain is going to come about in a revival of neighborliness, helpfulness and cooperation. Everybody being in the same boat, so to speak, the only way out is to turn in and help each other. And the result cannot help but be a partial return at least, to the ways of our forbears, when, lacking hired help, neighbors exchanged work and community life took the place of joy rides and movies.

In the towns there is a suspicion of it already among mothers of small children. How are you going to get down town to shop or to a show or out to a party, when you can't get help for love or money and the children are too young to leave? Prior to this dearth of workers, if you didn't keep a girl, you could always hire someone to come in for an afternoon or evening. But now it is almost impossible to do that. As a result, mothers, who not so very long ago would never have asked a neighbor for a favor, are beginning to help one another out by exchanging services. Mrs. Jones takes Mrs. Smith's Sally for Monday, and Mrs. Smith returns the favor Tuesday. As a result each woman discovers that the other is really human. Other little courtesies follow, and instead of looking the other way when they meet in the street the two women get acquainted and discover they have many interests in common.

In a certain country district in Michigan the idea is being worked out on a still more comprehensive scale. It all happened at a quilting bee. Now quilting bees are neither new nor original. They have been held from time immemorial, but the idea which grew out of this one has a decided element of newness. The women had a wonderfully good time, and when it came time to leave, someone wished they might have another quilting party the next week.

"I haven't a quilt to tie, but I've got a bushel of stockings you might darn," the mother of six said jokingly.

"Why not?" two or three women said at once, "we'll just do that."

"O, no," protested the first woman. "I wouldn't think of having you do my mending."

"What difference does it make whether we pull darned cotton through a stocking or through a quilt?" argued a friend. "It is work either way, and if mending will help you more than quilting, we'll all come."

"Then I'll give you your dinner," said the first woman.

"Indeed you won't," chorused the crowd. "What help would it be to mend for you if you had to spend the whole day cooking for us. We'll all bring something and have a pot-luck dinner. You make tea or coffee, and we'll bring our own dishes and take them home to wash. In that way, no one will have much to do."

So it was settled, and the neighborhood club has become a regular institution. Every week they go to some home and do just what will be most helpful. One week it was making

nightgowns for the family. Another week they made two house dresses and three kitchen aprons for the hostess. Nobody knows how many towels they have hemmed, and sheets they have made, and as to carpet rags, well, several women have new bedroom rugs as a result of the busy fingers of this club. One woman even had her fall housecleaning done. She is in delicate health, the doctor ordered no heavy work, no one could be hired in that district to wash windows and scrub woodwork, so the neighbor women came with their work dresses, and in a day's time cleaned the house from attic to cellar.

The men of the neighborhood have caught the spirit. Husking bees are again heard of, there has been a day of sawing and splitting wood, and when there came a dearth of workers in the sugar beet fields, the men's club operative club banded together and helped one another out.

The result has been very satisfactory. Work is lighter for everyone, there is a spirit of sociability in that neighborhood not found in many since the advent of autos made long excursions from home possible. They have made the school house a community center and have parties, lectures and old-fashioned "spell-downs." The spirit of cooperation is being worked out into a buying and selling club, which promises help of a still more material sort. And it all arose out of the shortage of labor.

DEBORAH.

THE TROUBLESOME COLD.

BY EMMA GARY WALLACE.

WHEN winter comes upon us, many people succumb to annoying colds. As a rule, there are very good reasons for this affliction.

It is a strange but human characteristic that most people do not like to lay off their easy-to-put-on summer underwear, and to get into the heavier-weight garments. In fact, many pride themselves on wearing the same undergarments summer and winter, arguing that it saves trouble, and they do not feel the need of making a change. In certain parts of the world this may be all right, but we are not living in the tropics. If we are to continue living in health in the temperate zone, we should imitate nature and dress accordingly.

The birds seek a warmer climate, and the animals who stay here put on a heavier coat for the winter season. Even the fields welcome a thick, warm coverlet of white. And why should the human family try to toughen itself through exposure, and the dangers of pneumonia. Men are more sensible in this regard than women, for their underwear and outer garments, too, are of a type to protect the body instead of expose it.

Surely the sensible thing to do is to dress according to the weather, and there is no gainsaying the fact that anyone who faces wintry blasts partly clad, soon gets to have a weatherbeaten look, which does not add to one's loveliness.

It is better to have artificial heat even if the windows have to be left open, than to sit in damp, chilly rooms. Children are particularly susceptible to colds. They are nearer the floor and more in drafts, and young children are more sensitive to respiratory troubles than older people who have developed a certain amount of resistance.

Another cause of colds is dressing over-warmly. Sometimes careful parents are to blame here, in that they load their children down with wraps so heavy that when the children become active in play, they perspire freely. Then if they sit down on the ground or the steps, or come in and take off their wraps and the house is cool, they catch cold. A child's head should never be damp with perspiration when its wraps are removed.

Carelessly-used handkerchiefs, coughing and sneezing are also among the distributors of colds. If one member of the family is so affected, he should be very careful to cover his mouth with a fresh handkerchief when he coughs; to keep far enough away from the rest so that they will not get his breath. In many families, the laundry basket is the receptacle for all soiled clothing, and handkerchiefs are dropped in there, trusting that the process of laundering will sterilize them. This cannot

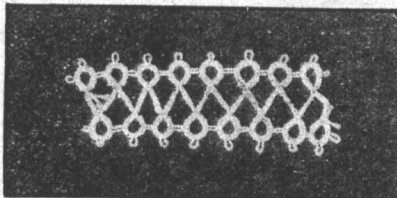
Tatted Beadings

By Helen Combes

TATTING is fascinating work and if fine thread is used has the appearance of lace, while being durable and easy to launder. There are many varieties and widths of tatted edges, many of which can be made into insertions, but few of them lend themselves readily to take the place of beading. The patterns here given are designed specially for beading, but can, by crocheting a simple chain stitch

mation of the loop, which instead of being quite plain has a picot finish at the top. The loop is made as follows: 5 st, p, 4 st, p, 1 st, p, 1 st, p, 4 st, p, 5 st. These are made the same at the top and the bottom of the work and joined by the first picot.

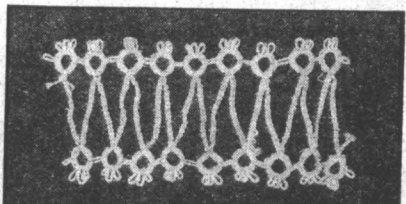
No. 3 is done in two sections exactly alike, excepting that the second section is joined to the first in working, by the middle picot of the plain loop. The sections are made as follows: Plain loop, 5 ch on extra thread, fancy loop same as that used in the wide



No. 1—Plain Beading.

along one edge, be used as edging, while by chaining along both edges they may be used as insertions. The designs while new are so simple that the amateur worker will have no difficulty in copying them.

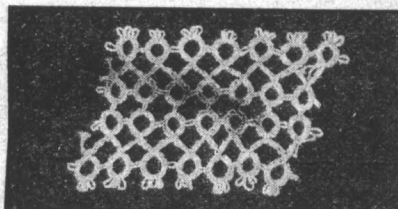
No. 1 is the simplest. It is done with two shuttles or with one shuttle and an extra thread. No. 40 thread is used. The method is as follows: Tie the ends of the two threads together. Let the extra thread hang while making a



No. 2—Wide Beading.

plain loop with the shuttle thread. The plain loop has 5 st, p (picot) three times, ending with 5 st. Take up the extra thread and on it make a plain chain of 7 st. Drop the plain thread, and make a plain loop at the bottom of the chain. This is all the pattern, the 7 ch being repeated between each loop, and the loops made alternately top and bottom of the work, each being joined to its neighbor by its first picot. The plain beading can be made wider or narrower, by making more or less chain stitches.

No. 2 varies from the plain beading only in the number of chains, 15 being used between each loop, and in the for-

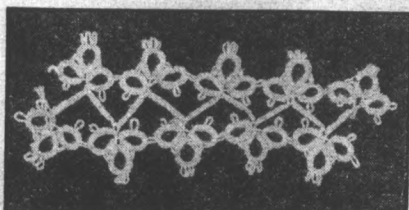


No. 3—Double Beading.

beading. Repeat till the section is the length required. Then begin the second section, joining it to the first as directed.

No. 4 is the trefoil stitch, known to most tating workers. It is worked with two threads, the second being used only for the chain stitches. The trefoil is formed of two plain loops with a fancy loop between them, and 7 ch st connecting top and bottom rows. The loops are joined together by their first picots, and the trefoils are joined together by the second picot in the first and last loops of each.

The wide beading can be used very effectively in decorating a white dress, putting it round the waist and threading it with ribbon. The narrower



No. 4—Fancy Beading.

beading may be used on yoke and sleeves with a narrower ribbon threaded through it. For the tops of corset covers or brassieres these beadings are very effective. A baby's cap made entirely of beading, with dainty ribbon and handkerchiefs are dropped in there, trusting that the process of laundering will sterilize them. This cannot

be depended upon, for germs are tenacious of life and many people do not boil their clothes, but merely pour boiling water upon them. In this way, not only handkerchiefs but other garments may become the source of danger.

Run no risk, but disinfect handkerchiefs with a solution of carbolic acid or something else which your druggist may recommend to you as safe and certain. The best plan is to wash the handkerchiefs by themselves, and to boil them thoroughly for at least twenty minutes.

A person with a cold should not sleep with anyone else, and it is not too much to ask that cup, fork, spoon, and anything else which touches the lips of the patient shall be washed by themselves and boiling water poured over them to sterilize them.

If anyone in the family has a severe cold, he should use all reasonable means to get rid of it, and not wait "to wear it out," for not only is he likely to suffer more than need be himself but to expose others as well. The other members of the family should use a simple gargle night and morning, and a nose spray, for throat and nose are so apt to be portals through which the germs enter. Extra care should be taken at this time in cleaning the teeth, and the system should be kept free with laxative foods.

A suitable gargle is made by taking one part hydrogen of peroxide, two parts of listerine, and three parts of water, or a few drops of liquid synol soap shaken into one-fourth cup of water will do nicely for both gargle and tooth wash. Oil of eucalyptus used as a nose spray has proved a decided benefit.

If the system becomes weakened from a severe cold, the likelihood of catching more is greater, and not only is the general health and nutrition impaired, but the likelihood of contracting epidemic or seasonal diseases is greatly increased.

An old rule warned, "Keep the feet dry, and the head cool," in order to avoid colds. This is equivalent to saying, be careful of damp feet, do not overheat your rooms, and see to it that they are sufficiently well ventilated so that the air is pure night and day. Exhausted, breathed over air and a high temperature are among the conditions to be avoided.

Where there is a marked susceptibility to cold, it may not be sufficient to observe the cautions given thus far, for some people, and especially some children, have very little resistance. Or they have what is known as sensitive, mucous membranes. Bodily vigor may be built up by good food, a suitable amount of rest for the age of the individual, and a carefully prescribed tonic. Just what may suit you may not be what I will need at all. You may discover that the membranes inside the eyelids and lips are pale; your skin has a somewhat waxy appearance; and there are blue shadows beneath the eyes. Your doctor may decide that you need more iron in your blood, and in that case he recommends the drinking of more milk and the eating of whole wheat breads and cereals, and the taking of some medicine with iron in it, in order to build up the red blood corpuscles.

That same physician may examine me and may discover that I am suffering from indigestion, and so am unable to make use of the body-building material which my meals furnish. In that case, he will probably recommend some partly pre-digested food, and a digestive aid to assist in taking care of my food. Or, again, he may discover that the mucous membranes are in a condition to become very easily inflamed, and may think it wise to give something in an emulsion of soothing oils combined with a special tissue builder. So you see, it is not entirely safe to take the medicine which the

doctor prescribed for another. Look out for colds, and you will save yourself unnecessary suffering, loss of time and lowered efficiency.

HOME QUERIES.

Household Editor:—Can you tell me of any way of cleaning the edge of a comforter which has become soiled by face and hands, without washing the whole cover? What will clean oxidized lamp fixtures? As we have no book store in our town I would like to know where the book, "Play in the First Eight Years," is published. What is the best practical farm wife's cook book?—A Reader.

1. Clean it with gasoline or emery.

2. The word "Oxidized" simply means a dull finish. I could not tell what to use unless I knew whether the fixtures were brass, iron or silver. Washing with warm soapy water will remove surface dirt, and a good silver or brass polish should do the rest. The common scouring powders, such as bon ami or sapollo will do for gun metal fixtures.

3. Ginn & Co., 2301 Prairie Avenue, Chicago, publish "Play in the First Eight Years."

4. "Feeding the Family," The Macmillan Co., New York City, which was reviewed in the Michigan Farmer some time ago, is an ideal book for farm women. It is splendid for its chapters on food values and balanced rations, gives suggestions for every age, and has recipes as well which are simple and not at all expensive. I believe it is \$1.75, but am not just sure.

Household Editor:—I am asking for a recipe for making chowder with green tomatoes, cabbage, onions, sugar, spices and vinegar, and also one for making mince meat with meat.—Mrs. G. M.

The name of the relish is "French Pickle." Chop one peck of green tomatoes fine, sprinkle one cup of salt over them and let stand over night. In the morning drain, add two medium heads of cabbage, six large onions chopped fine, and boil one-half hour in two quarts cider vinegar, two pounds of brown sugar, and a half tablespoon each of cloves, allspice, cinnamon, mustard, ginger and black pepper.

Mince Meat.—The following recipe for mince meat is the best I have ever tasted. You can make as large a quantity as you like. Three pounds of lean beef, two pounds of suet, three quarts of apples and three pounds of raisins, all finely chopped. Two pounds of currants, three pounds citron, cut in small pieces, one-half cup each of lemon and orange peel chopped, one-half cup of lemon juice, one-fourth cup of orange juice, two tablespoons of salt, four cups of sugar—white or brown—one cup of coffee, two cups of cider, one teaspoon each of cloves and allspice, two teaspoons of cinnamon, one glass of currant jelly. Boil two hours, then add one quart of fruit juice of any desired flavor or a quart of cider. Let stand one week before using. If this seems too expensive you can omit the candied citron and peel and add an equal amount of raisins and apples. Any tart jelly can replace the currant jelly, if you haven't that, but if made like the recipe it is delicious.

To renew my old blankets, I turn them end for end and stitch together. I then bind the raw ends with braid. This puts the worn portions at the ends where there is not much wear and they will last a long time.—M. P.

If your white gaiters or cloth top shoes are soiled, try cleaning them with equal parts water and peroxide hydrogen. Rub the gaiters or shoe tops with this solution and put in the sun to dry.—M. A. P.

When there is a long drive ahead, have the feet warm and dry, then slip a paper sack over each shoe. Fasten securely, and the heat will be retained for hours.—Mrs. J. J. O'C.



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means merely the lessening of service; but with the telephone, mechanical and electrical conditions must be practically perfect to insure operation.

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1919 Winnings to Date				
Mich. State Fair	12 1sts	2 cham.	1 gd. ch.	
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Cloverly Angus, 5 cows with calves, rebred; 2 bred cows; 1 two year old, 2 yearling heifers. Price \$2800. 6 yearling bulls, \$225 each. Geo. Hathaway & Son, Ovid, Mich.

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Sheep Men Confer

WITH the unanimous expression from all delegates attending the Sheep Extension Conference, Washington. Commission salesmen and packer buyers were heard on the subject and an interchange of ideas resulted from this important branch of sheep handling. Later definite plans of organization, discussion of associations in their relation to the sheep extension conference and discussion by individuals of their particular connection with the varied associations bearing on sheep, cattle and hogs, and the entire subject's relation to sheep extension work, was threshed out in detail by M. J. Smith, of New York state, Max Coll, of College Station, Texas, and D. A. Spencer of Columbia, Missouri. Under this subject county organizations were discussed and the place of the sheep specialists was designated in this important work. George Evans, of North Carolina, E. L. Shaw, of West Virginia, and G. P. Williams, of Baton Rouge, La., brought up the subject of introducing of breeding stock; L. L. Heller assistant secretary of the National Wool Growers' Association, and C. G. Potts, of the Washington bureau, told how increased lamb consumption can be encouraged; R. P. Hite, E. L. Shaw and H. E. Haslett told the conference what can be done to help pure breeding.

Twenty-one representatives were accredited from as many states. They had come at the invitation of the Department of Agriculture. From Washington three men, prominently identified in the specialization of sheep and cattle raising, came laden with valuable data, formulated plans for the advancement of the industry rated to be one of the most important in agricultural circles and to meet these experts the delegates from the state agricultural colleges from many states arrived at Chicago for the purpose of giving first-hand information concerning sheep raising to the governmental representatives. The conference was called at a time considered the most advantageous of any time of the year, inasmuch that beginning November 29 and extending to December 5 many associations, record, breeders, registry, live stock, horse, publicity, etc., were scheduled to be held at Chicago. All of these meetings in some degree hinged on the famous International Live Stock Exposition at the International Amphitheater, Union Stock Yards. Among the eight hundred individual entries at the exposition some were notable sheep entries. Naturally the sheep raisers found added zest in combining their own important event with that of cattle and horsemen from all parts of the United States.

The session of the sheep extension men lasted three days. Thursday, the opening day, was ushered in by roll call and an opening, rallying meeting at which was outlined the program covering the three days' deliberations. F. R. Marshall, of the Department of Agriculture, Washington, discussed the development of the sheep business, outlining the work from its inception and leading up to the present-day methods. G. H. Bedell, also of the agricultural department, outlined the Bureau of Animal Industry's part in sheep extension, going into the details of the government's activities in this direction. D. A. Spencer, of Missouri, T. C. Stone, of Iowa, and H. E. Haslett, of Amherst, Mass., gave a valuable oral demonstration on yearly sheep management in their respective states. C. Harper of Lafayette, Indiana, G. L. Bigford, of Mississippi, and R. P. Hite, of Tennessee, described lamb feeding and its essentials.

Friday's session was given over to discussion and actual demonstration work of sorting and handling sheep in stock yards under the leadership of E. W. Baker, of the Bureau of Markets, Washington. Commission salesmen and packer buyers were heard on the subject and an interchange of ideas resulted from this important branch of sheep handling. Later definite plans of organization, discussion of associations in their relation to the sheep extension conference and discussion by individuals of their particular connection with the varied associations bearing on sheep, cattle and hogs, and the entire subject's relation to sheep extension work, was threshed out in detail by M. J. Smith, of New York state, Max Coll, of College Station, Texas, and D. A. Spencer of Columbia, Missouri. Under this subject county organizations were discussed and the place of the sheep specialists was designated in this important work. George Evans, of North Carolina, E. L. Shaw, of West Virginia, and G. P. Williams, of Baton Rouge, La., brought up the subject of introducing of breeding stock; L. L. Heller assistant secretary of the National Wool Growers' Association, and C. G. Potts, of the Washington bureau, told how increased lamb consumption can be encouraged; R. P. Hite, E. L. Shaw and H. E. Haslett told the conference what can be done to help pure breeding.

An uneasy, weary, watching calf will seldom be a thriving one. The sense of bodily ease and comfort is essential in the care of stock. It would be well if we would ask ourselves how certain lines of care and treatment would suit us if we were in the place of our animals. All animals, man included, have much in common; and this fact should be kept in mind when we are caring for and feeding our live stock.



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A 32-lb. grandson of Michigan's great 35-lb. champion. His dam, Oak Valley Korndyke Beets Segis Fan, 32.06, is also a Michigan prize winner. Write for calf list. **Wah-be-me-me Farms, White Pigeon, Mich.**

\$125 Liberty Bonds or terms gets bull calf born May 29, 1/2 white, 9 nearest dam: avg. 23.85 lb. bu., 538 lb. milk in 7 days. Dam gd. dam, of Pontiac Cornucopia M. L. McLAULIN, Redford, Mich.

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

MONEY IN WINTER DAIRYING.

(Continued from page 803).

silage and by all means should be more generally fed than at present. Lacking either, it is important to secure similar effects through the grain ration with the aid of alfalfa or clover. In this connection oil meal is of great value because of its laxative qualities, coupled with its high protein content.

In the absence of silage or roots a grain ration something like this should be used: Bran, forty parts; ground oats or barley, twenty parts; corn meal twenty parts; oil meal twenty parts.

And in mixing the rations a pair of farm scales will aid in adding profits, weighing the grain for each cow and the milk that she produces. It is usually admitted that occasional weighing is worth while as showing whether a cow is a "boarder" or not, but those who have kept a complete milk record realize the value of such a method to the feeder.

It is a safe rule to feed ten to fifteen pounds of hay, twenty-five to forty-five pounds of silage, or thirty to fifty pounds of roots, varying the quantities according to the size and capacity of the cow. In addition, one pound of the grain mixture should be fed for every three or four pounds of milk produced. If a cow tends to fall off in production without gaining in body weight it would seem that she is not eating enough, but if she gains in weight at the expense of production it is apparent that she needs more protein, relatively, in her ration, or maybe she is the wrong kind of a cow. A good feeder will not allow a cow to run down and become too thin. If she tends to "go too much to milk" she can stand a wider ration, that is, more fattening feeds in proportion to those richer in protein.

The profitable feeding of dairy cows consists of supplying them with plenty of well-balanced, palatable feed, in surroundings which afford them health and comfort. Nature gives the dairyman a model in feeds in the month of June and this is recognized to such an extent that the very words, "June pasture," suggests the ideal condition for producing milk and butterfat of the highest quality and in greatest abundance. The dairyman should, therefore, endeavor to extend these more ideal conditions throughout as much of the year as possible, and will succeed just as far as he recognizes and applies the factors which go to make up the ideal conditions.

In the first place, the common grasses supply all the required nutrients in the proper proportions. Besides, this forage is relished by animals to such an extent that they will consume it almost to the limit of their capacities. Then again, pasture grasses are succulent and so keep the digestive system of the animal in a laxative condition favorable for the very best action of the organs of digestion and assimilation. We must not forget that animals on "June pasture" are supplied with an abundance of fresh air and sunlight, not to mention pure water at will.

And the man who follows the winter dairying program finds that it aids in solving the labor problem. It makes the working hours of summer shorter and more regular, and provides steady work during the winter, thus keeping some of the good men from drifting to the cities after the rush spell is over, which occurs on those farms without a well planned season's program for both winter and summer.

Own a
"Selected" Farm
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Make Bigger Profits!

THE most wonderful opportunity in the world for Business Farmers is in the "SELECTED" FARMS which can be bought for \$15 to \$40 an acre along the lines of the Canadian National Railways in Western Canada.

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These "SELECTED" Farms are carefully chosen from the cream of the richest wheat and cattle country in America, to meet your special needs, on the advice of experts representing 14,000 miles of railway, whose assistance, though free to home seekers, is of great practical value.

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Taxes Are Low

Western Canada taxes fall lightly on the farmer. A small tax on land, but buildings, improvements, animals, machinery and personal property are all tax exempt.

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Special railway rates will be made for home seekers and their effects to encourage personal inspection of the Farms along the lines of the Canadian National Railways. Rates and full information will be sent free on request. **Write or mail coupon TODAY!**

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GET A BETTER BULL
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BREEDERS OF

Registered Holstein-Friesian Cattle

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

JOHN H. WINN, (Inc.)

Lock Box 246, Rosecommon, Mich.

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

CLUNYSTOCKFARM

A Semi-Official Bred Bull to Head Your Herd
Maplecrest Application Pontiac No. 132652, heads Your Herd
His dam's record is 1344.3 lbs. butter, 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515.6 lbs. milk in 7 days.
One of his sons from our good record dams will carry these great blood lines into Your Herd.
For Pedigrees and Prices write to
R. BRUCE McPHERSON, Howell, Mich.

HOLSTEINS OF QUALITY

Cows all sold. Have 15 choice heifers some bred to a 33 lb. and 35 lb. bulls. Some open, will breed anytime to suit purchaser to a grandson of May Echo Sylvia. Record of two nearest dams of herd sire is 35 lb. butter and 512 lb. milk in 7 days.
O. HARDY, Rochester, Mich.

Reg. Holsteins Herd bull, a double grandson of De-
dividual, kind, sure server. Dams record at 3 yrs. butter 7 days 28.53 lbs. milk 619. 365 days at 2 1/2 yrs. butter 302 lbs. milk 18622 lb. **W. B. Reader, Howell, Mich.**

Give Yourself or Buy a real CHRISTMAS present—
Buy a finely marked Holstein Bull Calf, Sept. 18, 1919. Great blood lines. Dam 15 lbs. at 2 years A.R.O. \$75.00 delivered with registered papers. Your chance. Good enough for any farmer.
JAMES BOYCE, R. 8, Holland, Mich.

LONG DISTANCE

Holstein calves of either sex. Can spare a nicely marked heifer backed by seven dams that average above 1200 lbs. butter and 2400 lbs. milk in one year. Choice Duroc Sows. **A. FLEMING, Lake, Mich.**

Beautiful Holstein bull calf nearly white born Oct. 23, 19, Price \$75.00 reg. and del. Better wire for him.
J. ROBERT HICKS, St. Johns, Mich.

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

UP NORTH

JERSEY COWS are adaptable to any climate. Hale in the North—hardy in the South.

Always efficient yielders of the richest quality milk—always dependable and gentle—always a pride to their owner.

JERSEYS

Jerseys consume less feed than any other breed. Every dollar you put into Jersey feed doubles its value in the milk pail. Her milk averages 5.37% butter fat. Butter and cheese made from Jersey Milk is the best obtainable. Let us mail you free some interesting data and information about the Jersey Breed.

The American Jersey Cattle Club
322-M, West 23rd Street, New York



FOR SALE \$700.

Entire herd of six registered Jerseys consisting of one bull two years old bred at Hood Farm, Lowell, Mass. a grandson of Sophie 19th, the greatest Jersey cow in the world. His sire sold at auction for \$5000.00. Also two cows four years old, one heifer two years old of Flying Fox breeding; also two heifer calves five and seven months old sired by above bull. All delivered F. O. B. Washington, Mich.

Herd tuberculin tested by Federal Government.
J. M. BARNES, 219 W. Adams St., Chicago, Ill.

The Wildwood Jersey Farm
Bulls for sale by Majesty's Oxford Fox 12424 and Kin-
incent Lady's Majesty 150894, and out of R. O. M. Ma-
jesty dams. **ALVIN BALDEN, Capac, Mich.**

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

Maple Lane R. of M. Jersey Herd. For sale Blue Belle's Premier son of Sophie's Premier that sold for \$1750 this fall. Bulls and bull calves, R. O. Red cockerels. **IRWIN FOX, R. 8, Allegan, Mich.**

MICHIGAN JERSEYS

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

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

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

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

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

MICHIGAN JERSEY CATTLE CLUB.

For Sale. Five Registered Jersey Cows. Fresh or soon to freshen. Also young bulls ready for service. H. C. & A. H. Donaldson, Fenton, Mich.

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

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

FOR SALE Registered Jersey Cows with Calves and Herd Sire. Latter carries 32% of Sophie 19th blood. CHAS. B. COOK, R. 1, Box 103, Owasco, Michigan.

HARWOOD HEREFORDS

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

JAY HARWOOD, Ionia, Mich.
Farm six miles south of Ionia.

HEREFORDS

of Quality. Renner Bullion, sired by the \$5000.00 Bullion the 4th, now heads our herd. Inspection invited. COLE & GARDNER, Hudson, Mich.

HEREFORDS

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

ALLEN BROS.
PAW PAW, MICHIGAN

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

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

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

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

BIDWELL SHORTHORNS

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

BIDWELL STOCK FARM
Box B, Tecumseh, Mich.

Richland Stock Farms
Home of the Michigan Champions.
Shorthorn Sires in Service:

IMP. Lorne, IMP. Newton Champion, Sterling Supreme. Why not buy a young bull to head your herd that carries the blood that is making Shorthorn History. Only a few real headers left. Write your wants.

C. H. PRESCOTT & SONS, Tawas City, Mich.

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

Scotch Shorthorns Imp. Royal Bruce heads a select herd of females consisting of the Rosewood, "Lovely Orangeblossom" and Roan Lady and several other good females. Two bulls ready for service for sale also a few females. CARB BROS. & CO., Bad Axe, Mich., Address Norman Car, Secretary.

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

Michigan Holstein Breeders

FIRST ANNUAL SALE
TUESDAY, JAN. 13 1920

A T
Michigan Agricultural College

EAST LANSING, MICH.

SEVENTY-SIX HEAD

Seventy females in all stages of lactation

	Butter	Milk
All full age records average 7 days	27.93 lbs.	586.1 lbs.
" four year old. " " "	25.85 lbs.	540.9 lbs.
" three yr. old. " " "	24.28 lbs.	497.9 lbs.
" two yr. old. " " "	18.94 lbs.	396.4 lbs.

Many have 30 day records. A few have semi-official yearly records up to 1100 lbs. butter 25000 lbs. milk.

Six bulls with dams, records up to 33.5 lbs. butter, 675 lbs. milk 7 days and all sired by better than 30 lb. bulls. Two ready for heavy service.

All cattle from herds under state or federal supervision for tuberculosis eradication and sold with 60 day guarantee. All selected by one man from Michigan's best herds. Individually fully equal to their records. Send for catalog and come. Buy some of these profit makers and raise some more.

CHAS. A. DANIELS, Secy.
OKEMOS, MICH.

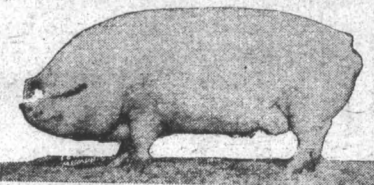
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We have the undefeated Herd of the World. Winning premier breeder and exhibitor at every fair shown in 1919-1918-1917, including the following state fairs—Ohio, Michigan, Indiana, Illinois, Missouri, Kentucky, Tennessee, Oklahoma, New York, Alabama,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

CRANDELL'S PRIZE HOGS, Cass City, Mich.

O. I. C. BOARS FOR SALE

One of the Best Herds in Michigan

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

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

Branch County Farm breeders of American Polled Shorthorns. Herd headed by Grand Champion bull, Sultan's Standard, son of Sultan Creed. For sale choice young bulls & heifers priced to sell. Address G. E. Burdick, Mgr., Coldwater, 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.

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

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

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

Milking Shorthorns of best Bates breeding one bull 10 mo. old for sale. Price \$150.00. E. H. KURTZ, Mason, Mich.

Bulls all ages. 6 yr. cow due in Jan. \$300; 2-2 yr. old heifers \$250.00 each. Central Michigan Shorthorn Assn., Oscar Skinner, Sec., Gowen, Mich.

Small Herd of Registered Shorthorns for sale. SHEAR BROS., R. 5, Flint, Mich.

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

HOGS

Registered Berkshire Boars; ready for service. A few gilt and sows bred for May and June farrow. Also spring pigs. CHASE STOCK FARM, Marietta, Mich.

Berkshires Bred and open gilts serviceable boars; can furnish pairs or trios. RUSSELL BROS., R. 3, Merrill, Mich.

Registered Berkshire boars, one yearling, two spring boars priced reasonable and guaranteed. B. B. REAVEY, Akron, Mich.

Duroc Opportunity

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

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

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

DUROC JERSEYS
CAREY U. EDMUNDS, Hastings, Mich.

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

For Sale Spring Boars, Breed and open Gilts. Dams Isabella 12, granddaughter of Joe Orion 11. Schuellers Isabella 10 sired by Ideal Col. FLOWER CITY DUROC FARM

R. E. Stitt, Route 4, Box 53, Niles, Michigan

December Special

\$30 each takes our July Durocs of either sex.

\$20 each for September Pigs.

\$50 each for March and April Boars and Gilts.

Reg. and shipped C. O. D. subject to inspection.

Eager Bros., Howell, Mich.

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

Registered Duroc Boars

We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 118478. Ira Jackson selected this boar to head our herd. Our prices are within every farmer's reach. The Jennings Farms, Bailey, Mich., R.F.D. No. 1

Duroc Jerseys Our herd won 15 firsts, 9 seconds, 3 thirds, 3 fourths, 3 fifths at leading Michigan fairs including State Fairs. We have some choice boars ready for service, reasonable prices. Some bred sows later on. RUSH BROS., OAKWOOD FARM, Romeo, Mich.

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

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

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

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

Duroc bred sows and gilts sired by Orion Cherry King Col. 2nd, bred to All Col. of Sangamo 2nd. First class lot, reasonable. W. O. Taylor, Milan, 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 in 4 months old. Write for my plan. More money from hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

Chester Whites, spring and fall stock for sale either sex. At Saginaw fair we won highest honors against strong competition. F. W. ALEXANDER, Vassar, Mich.

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

O. I. C. Pigs. 35 to 40 lbs. Pairs and trio, no skin from matured stock. I will ship to you on approval. C. O. D. \$30 each Reg. HARLEY L. FRY, Scott, Ohio

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

O. I. C's. Last spring boars all sold. Have an extra good lot of last spring gilts, good fall pigs not skin. Good stock, registered free 1/2 mile west of Depot. OTTO B. SCHULZE, Nashville, Mich.

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

O. I. C's. One June boar and fall pigs not skin. Also Shorthorn bull calf 7 mos. old, Stock registered free. JOHN O. WILK, Alma, Mich.

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

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

O. I. C's Service boars, fall pigs no skin also. CLOVER LEAF STOCK FARM, Monroe, Mich.

L. T. P. C. 1 spring boar, (by Long Jones) the best pig you ever saw; price \$100.00; send check with first letter or the other fellow will beat you. If you don't like description will return check. A few good spring boars left at farmer's prices. Gilts will be bred to a grandson of Giant Buster and a Grand Son of Dishes Giant, no better pair of young boars in the state, and Wiley's King Bob. H. O. SWARTZ, Schoolcraft, Mich.

Boars also sows and pigs. Real Big Type Poland Chinas. Bred big for 25 years. Sired by Mich. Buster by Giant Buster, litter 14 out of Mow's Miss Queen 2nd, some breeding, also by Butler's Big Joe by Rust's Big Joe, out of a Wonder Queen, not sold. Write us your wants, we will treat you right, our prices are low. J. C. BUTLER, Portland, Mich.

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

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

B. T. P. C. spring Boars all sold. One Oct. 21st perfect as any pig in Michigan. Price \$125. Gilts ready Jan. 1. Bred to a good son of \$10.00 Harrison's Big Rob. Every pig recorded free. JOHN D. WILEY, Schoolcraft, Mich.

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

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

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

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

THE HOG TRADE.

ACCORDING to all accounts, there are plenty of hogs in farming districts, and most owners are making them good in quality before marketing, although comparatively few stockmen are making their swine heavy, hogs weighing up to 300 pounds being few. The greater part of the offerings reaching the Chicago market have been fattened on the new corn crop, and many droves averaging from 180 to 200 pounds are showing up daily. Enough heavy hogs are offered to meet the demand, however, and the highest prices are paid for the lighter weights, with the bulk of the hog sales within a range of forty cents, and light and heavy butchers selling very close together. Fluctuations in prices are frequent and wide, sharp advances being followed by as severe declines, with provisions following hogs in their ups and downs. The domestic consumption of fresh and cured hog products continues very large, despite the high prices asked, for prices are still far above normal, notwithstanding the large reductions from the figures quoted a year ago. Within a short time pork for January delivery has sold about \$13 a barrel lower than a year ago, with similarly large reductions in prices for lard and short ribs. The export trade in provisions has fallen off materially of late, because of the great fall in foreign exchange, rendering many foreigners unable to make the large purchases so much needed. Stocks of provisions are ample, stocks in Chicago warehouses being larger than a year ago of hog meats, while much smaller of lard. Pigs are selling at a large discount from the prices paid for hogs, and no large numbers are marketed, most owners preferring to mature them. A year ago hogs were selling at \$16.50@17.80 and two years ago at \$16.15@17.35, prices which make present prices appear low; but three years ago sales were made at \$8.50@10, while four years ago sales were at \$5.75@7.

KEEP THE TURKEYS AWAY FROM BUCKWHEAT.

In your issue of November 15, under the head of "Some Turkey Troubles," A. M. B., of Emmet county, asks what to do for his turkeys. By the description he gives of their actions I think they have been eating buckwheat, and if he will keep them out of the buckwheat he will have no more trouble.

We have had them showing the same symptoms after eating buckwheat or running in a buckwheat field.—H. W.

BELGIAN HORSES IN MICHIGAN.

(Continued from page 807).

is doing its share in this regard is shown by its preparations to ship a carload of its choicest stock to Belgium as soon as overseas transportation can be arranged.

Great Value of Belgians to the Farmer.

One of the most profitable assets that the farmer can have on his farm today is a Belgian draft mare that will raise him a colt every year. It costs no more to feed them than ordinary stock, and they do more work and produce a colt each year that is worth almost as much as the dam. In a few years he has his farm stocked with high-class horses that cost him nothing and are making him a profit every year. At the big Saginaw county farm they work the mares in foal and after the colts are weaned, and when work is pressing with the colts at their side. The Belgians are willing and ready workers, always peaceable and highly intelligent, and real pleasure is derived in working them. And there is also a keen satisfaction in raising high-class stock, which is always a source of pride and congratulation as well as profit.



Take Bigger Milk Checks to the Bank

That is just what Larro means to you—more milk from your cows and *bigger milk checks* to take to your bank. For seven years Larro has been sold on a guarantee which says you absolutely must get more milk or your money back.

To the man who is not yet a Larro user the above guarantee is an absolute promise of better results from his cows—to the veteran Larro user it is double assurance that Larro today is the same as it was in the beginning—that its quality will never be changed.

Why You Get More Milk With Larro

You get more milk with Larro because it isn't a one-sided ration, but a nutritious, balanced food. The protein is there—in just the proportion to maintain the highest possible

milk flow over a long period, but the carbohydrates are there too, and the other necessary elements—all the ingredients scientifically mixed by automatic machinery with just one purpose in view, to produce milk-pail results—at the same time maintaining the health of the cow.

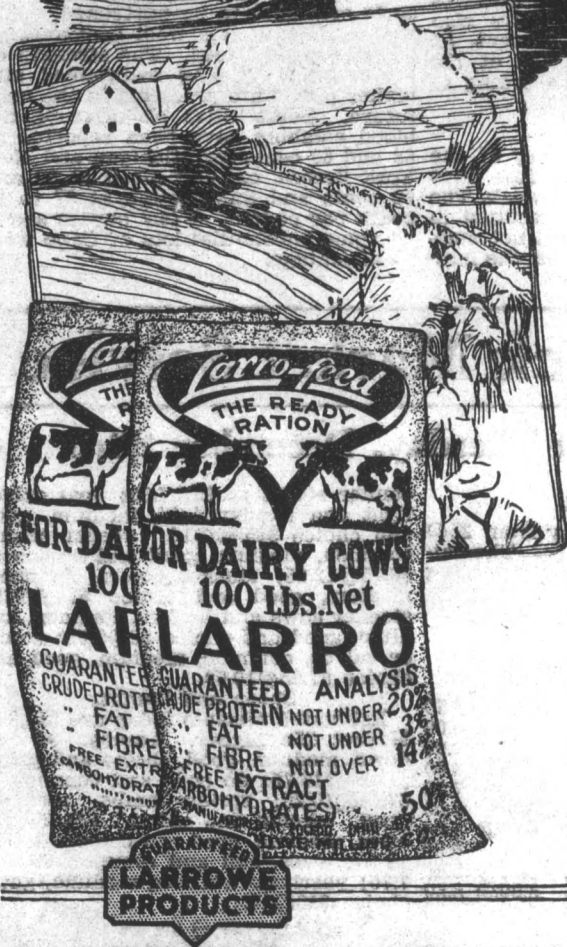
Buy Larro from Your Dealer

Remember that no matter how much milk your cows are producing on their present ration, Larro is guaranteed to make them produce more. If your local dealer does not have Larro in stock write us for complete information.

DEALERS: Write for Sales Plan

The Larro-Milling Company, 504 Larrows Bldg., Detroit, U.S.A.

Larro-feed
THE READY RATION FOR DAIRY COWS



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

BUFFALO CORN GLUTEN FEED

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

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

HOGS

Big type P.C. Choice spring boars from Iowa's great best herds out of 1100 lbs. sire and mammoth sows big boned fellows. E. J. Mathewson, Burr Oak, Mich.

TWO HERD BOARS

for sale. Ask for description of a real boar, five wires. Also have a few fall pigs, pair not akin C. A. BOONE, Blanchard, Mich.

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

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

Big Type Poland Chinas. Sired by Smooth Masto don litter mate to the Ill. Grand Champion. The big boned, deep, long bodied kind at farmer's prices. Washburne Farms, White Pigeon, Michigan.

Large type P. C. Spring boars and gilts now ready to ship. Also one fall yearling boar and fall pigs. CLYDE FISHER, R. 2, St. Louis, Mich.

Big Type Poland Chinas. Up-to-date in blood lines, in size and in quality. We have sows sired by Big Bob, the Yankee, Gertrude Jones and Gertrude King. Our herd boar is one of the largest and smoothest and of choice breeding. He is proving to be a great sire. We like the good ones and believe you do also. We now have a litter of 10 "Clansmans" and the dam booked again for spring litter to the Clansman. Visitors welcome. Wesley Hill, R. 2, Ionia, Mich.

Big Type P. C. sows bred to Big Bob & THIRTY lbs. Giant, fall pigs, none better, call or write. E. R. LEONARD, St. Louis, Mich.

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

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

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

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

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

HAMPSHIRE

Steuben's Hampshire Farm

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

STEUBEN'S HAMPSHIRE FARM
ANGOLA, IND.

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

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

Hampshires. Bred gilts now ready to ship, a few 160 lbs. boars left and fall pigs from new blood lines JOHN W. SNYDER, R. 4, St. Johns, Mich.

HORSES

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

SHEEP.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS. "The Sheepsman of the East" I sell and ship everywhere and pay express charges. I will start one man in each town. Write for club offer and descriptive price list. Oxford, Shropshires, Ramboulllets and Polled Delaines. PARSONS, Grand Ledge, Michigan R

KIDS of Mich. You are the future farmers of the state. I am one of the best sheep breeders in the state. Let's get together that you may start your own flock of registered Shropshires now. A lot of kids have already done so, but I want more. I will buy your ram lambs and cooperate with you in every way. Write me for my proposition and prices. KOPE-KON FARMS, S. L. Wing, Prop. Box A, Coldwater, Mich.

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

BUY A SHEEP

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

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

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

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

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

Shropshire Ewes bred to an imported Minton Ram. For sale by VAN BOOHER, R. 4, Ewart, Mich.

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

Please Mention The Michigan Farmer When Writing to Advertisers.

LATEST MARKET REPORTS

FIRST EDITION.

The markets in this edition were revised and corrected on Tuesday afternoon, December 23.

WHEAT.

Receipts of wheat are heavy, which is the result of sales by the government to the mills. The wheat is coming from the southwest. The wheat market here is holding its firmness, but millers report buyers pretty well filled up with flour. Detroit quotations are as follows:

No. 1 red.....	\$2.48
No. 1 mixed.....	2.46
No. 1 white.....	2.46
No. 2 red.....	2.45
No. 3 red.....	2.42

CORN.

The corn market is decidedly dull. There is little buying and every indication of an increase in supplies. The decreased receipts at Chicago have proved a disappointment and the market is showing some signs of strength, although reports of corn on track have had a tendency to keep prices down. The market at Chicago for future corn held pretty well, but cash deals were reported easy. The local corn market lost one and two cents and the tone is easy. The Detroit prices are as follows:

Cash No. 3.....	\$1.50
No. 3 yellow.....	1.52
No. 4 yellow.....	1.48
No. 5 yellow.....	1.44
No. 6 yellow.....	1.40

In Chicago No. 3 mixed corn is quoted at \$1.44; No. 2 yellow, old \$1.53; January \$1.37½; May \$1.34½.

OATS.

Oats are firm and in light supply. The market has been strengthened by reports of heavy shipments for export. Present quotations in Detroit are:

Cash No. 2.....	.89
No. 3 white.....	.88
No. 4 white.....	.87

RYE.

A good cash demand and the activity of buyers is causing dealers to look forward to a large export business. A feature of the rye trade is the selling in Chicago of May rye around \$1.78. Local prices for cash No. 2 are \$1.76.

BEANS.

The bean market is slightly improved with the demand well sustained. At Detroit beans for prompt shipment are quoted at \$7.25 per cwt for hand-picked pea beans. At Chicago a moderate demand exists with prices more firmly held. Hand-picked, choice to fancy pea beans being quoted at \$7.50@8 per cwt, with red kidneys at \$13.50@13.75 per cwt. There is a general feeling that prices will be maintained for the next few weeks.

HAY.

The hay market is firm and demand is well sustained. Present values are as follows: No. 1 timothy \$29.50@30; standard and light mixed \$28.50@29; No. 2 timothy \$27.50@28; No. 1 mixed \$27.50@28; No. 1 clover \$27.50@28; rye straw \$12.50@13; wheat and oat straw \$13.50@15 per ton in carlots.

FEEDS.

Quotations show slight changes. The market is somewhat lower than it was two weeks ago. Present values are as follows: Bran \$48@49; standard middlings \$50@51; fine middlings \$61@63; coarse corn meal \$60@63; cracked corn \$65; chop \$53@56 per ton in 100-pound sacks.

SEEDS

The seed market remains active and firm with prices showing slight changes. Present quotations are as follows: Prime red clover, cash and March at \$30.50; alsike \$30.50; timothy \$5.60.

POTATOES.

The supplies are rather light. Demand and movement slow, market is steady, with slight changes in prices. Detroit market, sales to jobbers, of Michigan U. S. Grade No. 1 in 150-lb. sacks reported at \$4.90@5 for round whites. The bulk of the sales were at the latter figure. The Chicago market is strong with prices higher. Track

sales mostly \$3.25@3.35 cwt for round whites in carlot lots. In Cleveland the supplies are moderate and a few early sales are reported with no change in prices from last week. Sales to jobbers of round whites in 150-lb. sacks are being made at \$5.25@5.50 per sack.

EGGS.

The irregular quality is causing a wide range in prices. New laid eggs are in a class by themselves; the so-called fresh eggs are failing to give satisfaction, and buyers are in many cases turning to the cold storage eggs in preference to the uncertain qualities of the other sorts. Buyers are also buying small quantities at present. At Detroit fresh eggs are quoted at 73c per dozen; storage eggs, according to quality, at 46@51c per dozen.

BUTTER.

There is a steadier feeling in the butter market, but the conditions have changed but little since last week. The late decline in prices has resulted in slightly greater demand, but not sufficient to take the slack out of the mar-

ket. Consumption is lacking and dealers are not buying in large supplies. Extras in fresh creameries are meeting with a little more inquiry and are easier to move promptly at present quotations which are as follows: Fresh creamery 63c; fresh creamery one one-pound bricks 64@65c; storage bricks at 63c.

WOOL

The wool trade has experienced a quiet week since the auction sale of government holdings. The speculative movement in scoured and pulled sorts has subsided. Activity in the medium sorts continues to be postponed, while the scarcity of fine wool continues to be more pronounced. The strength of the market is being maintained and higher prices are predicted in the near future. Some sales of three-eighths blood combing have been reported at 68 and 69 cents for Michigan and New York fleeces, one-half blood at 80 and 82 cents and fine delaine at 87 to 90 cents per pound. A few buyers secured some substantial lots of Cape wool to advantage.

Cheese.—Trading in cheese has been very limited during the past week. There has been very little export trading during the week. Quotations are: Current make, common to good 29@30c; average run 31@31½c; specials 32@32½c. Held cheese, undergrades 26@30½c; average run 31¼@32¼c; specials 32½@33c.

Eggs.—The decline in prices which took place at the close of last week was halted on Monday and there was a slight recovery. Receipts during the week included some Australian eggs of fair quality and one car of very poor eggs from China. Quotations are as follows: Firsts 80@81c; extra firsts 82@83c; extras 84@85c.

Poultry.—There has been but little change in the poultry market since last week. Receipts have been moderate and demand has been fair. The quotations have changed very little. Established quotations are: Spring chickens 25@28c; heavy fowls 33@35c; medium to light fowls 25@30c; old roosters 20c; turkeys 45@50c; ducks 36c; geese 28@35c.

MICHIGAN STATE GRANGE.

(Continued from page 805).

food distribution. The opponents as a last ditch frightened enough votes to defeat the bill.

"A proposal to amend the state constitution to permit the classification of property for the purpose of taxation was earnestly opposed. Heeding the admonition of leading tax authorities concerning the narrowing base of taxation, the rapidly increasing tax budgets and the necessity of discovering new fields of taxation, the federated committee supported the proposal to amend the state constitution so that a state income tax similar to federal income tax might be levied in Michigan. It did not pass and probably will not until the heavy burdens of war are somewhat lightened.

"The Grange through the federated committee secured the passage of the counter-proposal of J. W. Hutchins providing that in fifty-fifty counties in each one hundred dollars spent on trunk line roads the federal appropriation should be fifty dollars, the state twenty-five and the county twenty-five. What this means in a specific case is shown by Washtenaw this year. Six hundred thousand dollars is going spent on a trunk line road. Under the law which we opposed the federal government and Washtenaw county would each have paid \$300,000. Under the law which we did favor, and which passed, the federal government put in \$300,000 and the state and county each \$150,000, a saving to Washtenaw of \$150,000.

"It is enough to say that public opinion supported the Grange contention last spring, both in convention and at the polls, to place our worthy state lecturer on the state board of agriculture January 1, and will bring to that important body not only the viewpoint of the farm women but also some voting strength representative of the thought of the actual farmers of the state concerning the policies and program of the Michigan Agricultural College. We believe a continuation of this program should be followed until the control of this great institution passes completely into the hands of those who see the needs of the farmers first, last and all the time. As a matter of history it may be well to record here that the first nominating speech made in Michigan political convention in behalf of a woman was made by our worthy chaplain, Sister Olivia J. C. Woodman, and made in support of our worthy lecturer, Sister Dora Stockman."

(Continued next week).

Live Stock Market Service

Reports for Tuesday, December 23rd

BUFFALO.

Hogs were off here today from 25@35c, and lambs from 50@75c. The cattle market ruled dull while the trading in calves continued steady.

DETROIT

Cattle.

Market strong.	
Best heavy steers.....	\$12.00@12.50
Best handy wt bu steers..	9.00@10.00
Mixed steers and heifers	8.50@9.00
Handy light butchers....	7.50@8.00
Light butchers.....	6.00@7.50
Best cows.....	8.00
Butcher cows.....	6.00@7.00
Cutters.....	5.00@5.50
Canners.....	5.00@5.25
Best heavy bulls.....	8.00@8.50
Bologna bulls.....	6.00@7.00
Stock bulls.....	6.00@6.50
Feeders.....	8.00@9.00
Stockers.....	6.00@8.00
Milkers and springers....	\$65 @ 150

Veal Calves.

Market steady.	
Best.....	\$18.00@19.00
Others.....	10.00@15.00

Sheep and Lambs.

Market steady.	
Best lambs.....	\$17.50@18.00
Fair lambs.....	16.50@17.00
Light to common.....	12.00@14.50
Fair to good sheep.....	8.00@10.00
Culls.....	4.00@6.00

Hogs.

Market 25@35c lower.	
All grades.....	\$13.60

CHICAGO.

Hogs.

Estimated receipts today are 81,000; holdover 8,915. Market 40@50c lower. Bulk of sales \$13.25@13.50; tops at \$13.65; heavy 250 lbs up, medium, good and choice \$13.25@13.50; medium 200 to 250 lbs, medium, good and choice at \$13.30@13.50; light 150 to 200 lbs, common, medium, good and choice \$13@13.45; light lights 130 to 150 lbs, common, medium, good and choice \$12.85@13.25; heavy packing sows 250 lbs up, smooth at \$12.75@13.15; packing sows 200 lbs up, rough at \$12@12.75; pigs 130 lbs down, medium, good and choice \$12.25@13.25.

Cattle.

Estimated receipts today are 12,000. Steers 25@50c higher; butcher stock 15@25c higher; calves steady; feeders strong. Beef steers, medium and heavy weight 1100 lbs up, choice and prime \$18.75@20; do medium and good \$17.25@18.75; do common \$8.75@11.25; light weight 1100 lbs down, good and choice \$14@19.25; do common and medium at \$7.75@14; butcher cattle, heifers, common, medium, good and choice at \$6.50@14.50; cows, common, medium, good and choice \$6.25@13.50; bulls, bologna and beef \$7.40@11.50; canners and cutters, cows and heifers \$5.25@6.25; do

canner steers at \$6@7.50; veal calves light and handyweight, medium, good and choice \$15.50@16; feeder steers, common, medium, good and choice at \$6.75@12.25; stocker steers, common, medium, good and choice \$6@10.25; stocker cows and heifers, common, medium, good and choice \$6@7.50; stocker calves, common, medium, good and choice \$7.25@10.50.

Sheep and Lambs.

Estimated receipts today are \$17,000. Market 25c higher. Lambs 84 lbs down, medium, good, choice and prime \$15.50@17.75; do culls and common at \$7.50@15.25; spring lambs, medium, good, choice and prime \$11.75@15; ewes, medium, good and choice at \$8@10.25; ewes, cull and common \$4.50@7.75; yearlings wethers, medium, good, choice \$13@15.

BUFFALO.

December 22, 1919.

Cattle.

Receipts 140 cars; market a shade lower; prime heavy steers \$16@17; best shipping steers \$13.50@14.50; medium shipping steers \$11.50@12.50; best native yearlings 950 to 1000 lbs \$15@16; light native yearlings, good quality \$12@13; best heavy steers \$11@11.50; fair to good kind \$10@11; handy steers and heifers mixed \$9.50@10.50; western heifers \$10.50@11.50; state heifers \$8@9; best fat cows \$10@11; butchering cows \$6.50@7.50; cutters \$6@6.50; canners \$4@5; fancy bulls \$9@10; butchering bulls \$7@8; common bulls \$6@7; best feeders 900 to 1000 lbs \$10@11; medium feeders \$8@9; stockers \$6.50@7.50; light common \$5@6; best milkers and springers \$10@15; mediums \$75@90.

Hogs.

Receipts 120 cars; market 75c lower; all grades \$14.25.

Sheep and Lambs.

Receipts 40 cars; steady; top lambs \$19@19.25; yearlings \$13@15; wethers \$12@12.50; ewes 10@10.50. Calves at \$7@21.

NEW YORK PRODUCE MARKET.

Butter.—The butter market, aside from slight changes in tone, has changed but little from last week. The quotations remain exactly as they were one week ago. There continues to be a shortage of fancy butter while there is more than an abundance of medium to low quality butter. There seems to be no export demand, although there is a rumor going the rounds that one large firm of receivers had received an order for one million pounds of firsts to be delivered immediately. Receipts were low during the week. Storage stocks are cleaning up well. Centralized butter is selling at a marked disadvantage. Quotations are: Extras 73c; higher scoring than extras 73½@74c; firsts 61½@72c; seconds 56@60c.

DECEMBER CROP REPORT.

MICHIGAN has again sown an unusually large acreage of wheat and rye, according to the joint crop report issued by Coleman C. Vaughan, Secretary of State, and Verne H. Church, Field Agent, United States Bureau of Crop Estimates. However, the area devoted to winter wheat is estimated to be four per cent less than that of last year, and rye, which nearly equaled winter wheat in area last year, has lost ten per cent. The results obtained from the annual inquiry relative to the wages of male farm labor show the remarkable advance that has taken place in recent years, and that the cost of this factor in farm operations has fully kept pace with the advance in the value of farm products.

The acreage of winter wheat sown this fall is estimated at 922,000, or 38,000 less than sown one year ago. Notwithstanding this decreased planting, the acreage is considerably above normal. In some of the northern and eastern sections of the state more ground was sown last year, but in the southern districts seeding conditions were less favorable. The ground was generally dry and hard and much plowing was delayed until after the fall rains came, labor was scarce, and the result was that some acreage intended for wheat was not sown. The crop went into the winter in generally good condition. A normal top growth was made except in a few southeastern counties where much seeding was done late. The Hessian fly is prevalent in the southwestern and southern districts in early-sown fields, being reported from twenty counties and probably existing at points in a few others. The amount of resulting damage will depend upon the weather conditions in the spring and the virility of the spring brood.

The amount of wheat marketed during November at mills and elevators in the state is estimated at 889,000 bushels; the total from August 1 to November 30, 6,620,000 bushels; twenty-six mills and elevators report no wheat purchased during November.

The acreage of rye has increased rapidly in recent years; 910,000 acres was the amount grown last year, which nearly equalled the wheat acreage, and is the largest on record for the state. The popularity of the crop has been due to the high-yielding qualities of the Rosen variety, the relatively high price of rye during the war, and its natural resistance to insect pests and winter-killing. With the decline in price and the excellent wheat yield as compared with that of rye this year, it has lost some of its popularity and a decrease of ten per cent in the acreage planted this fall is the result. The condition is good, nearly all sections reporting a good stand, good color, and a normal top growth except on late-sown fields.

The wages of male farm labor are found to have increased from twenty to twenty-five per cent during the last year, and from seventy-eight to 108 per cent, according to the kind of labor, since 1915. The average price paid to men in 1919 hired by the year is \$44.75 per month with board, and \$62.25 without board; for harvest labor \$3.55 per day with board, and \$4.50 without board, for other than harvest work, \$2.00 per day with board, and \$3.70 without board.

The average amount of wood consumed on the farms of Michigan during the past year is found to have been fifteen cubic cords per farm, the value of which was \$7.00 per cord, an increase in the past two years of about fifteen per cent in consumption and thirty-five per cent in value.

The amount of grain and seed threshed as reported by threshermen up to and including November 29, 1919, is as follows:

Crop.	Bushels.	Av. Yield.
Winter wheat	17,111,266	20.30
Spring wheat	856,868	11.22
Rye	11,254,147	13.38
Oats	28,136,956	23.87
Spelt	158,832	17.72
Barley	3,634,215	16.93
Buckwheat	207,937	13.10
Peas N.	267,785	11.69
Timothy seed	2,846	2.53
Clover seed	56,100	1.17
Beans	2,915,498	13.73

Canadian and Montana ranges are marketing cattle much later this year than usual, and it is probable that they will continue to make shipments until well along in December. These grass cattle are averaging poorly in quality and sell accordingly. After they are all in there will be a better show for native cattle fed in farming districts. Range herds are forced on Chicago and other markets by scarcity of feed.



They All Say So

"Where you getting all the milk these days, Walt? We'll be having to put another car on pretty soon to make room for the stuff."

"Why, you ought to know. Since I've been feeding this Stevens '44,' I've been getting a pile of milk. My cows are healthy and contented—you

know that makes 'em give more milk."

"It must be great stuff, Walt. I notice that we're carrying more every day along the line. Dairymen in these parts know a good thing when they see it."

Feed Stevens "44" to your cows and get results.

The Park & Pollard Co.
OF ILLINOIS

Webster Building, Chicago

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is a **SAFE ANTISEPTIC AND GERMICIDE**.

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.50 a bottle, delivered. Describe your case for special instructions and Book 5 R free.

ABSORBINE, JR., antiseptic liniment for mankind, reduces Strains, Painful, Knotted, Swollen Veins. Concentrated—only a few drops required at an application. Price \$1.25 per bottle at dealers or delivered.

W. F. YOUNG, INC. 268 Temple St., Springfield, Mass.

SHIP YOUR
POULTRY, VEAL and HOGS
TO
J. W. Keys Commission Co.
470 Riopelle St., Detroit, Mich.
Eastern Market
You Will Get a Square Deal
and Returns Daily.

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

HAY!
We have it—Clover, Light Mixed, Heavy Mixed, or straight Timothy. Co-operate with your neighbor and buy in car lots. Write or wire us for prices. Market is advancing and dealers all predict much higher prices as the season advances.

Michigan Potato Growers Exchange, Cadillac, Michigan

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

GEO. R. ELDRIDGE CO.
494-18th Street, Detroit, Mich.
Remember! We guarantee you satisfaction with every shipment.

For Best Net Results
Ship to
CULOTTA & JULL
Detroit, Mich.
"Enough Said!"

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

COUNTY DISTRIBUTORS
wanted for new line of auto necessities. Exclusive contract. \$24.00 per week can be made with our line. Write today for particulars.
The National Automotive Products Co.,
331 The Arcade, Cleveland, Ohio.

POULTRY
UNTIL Jan. 15 only. Pure bred selected White Rock Cockerels \$2.75 each; \$5.25 for 2. Splendid value. Best offer yet. Mrs. Florence Howard, Petersburg, Mich.

Vigorous Banded Plymouth Rock Cockerels. Trap-nested. A.C. 250 egg strain. Improve your flock. \$3 to \$5 each. Rosemary Farms, Williamston, Mich.

White Pekin Ducks and White Chin-ese Geese.
Mrs. CLAUDIA BETTS, Hillsdale, Mich.

WHITAKER'S R. I. REDS BOTH COMBS. Bred for color and eggs. Choice, farm raised cockerels at reasonable prices. Day old chicks. Order now for early spring delivery. Write for prices.
INTERLAKES FARM, Box 29, Lawrence Mich.

White Plymouth Rocks Stock for sale, breeding and quality of the best. Write wants. Richard M. Gretton, Mason, Mich.

White Wyandotte; out of choice stock for sale; cocks, cockerels \$1.50 each, send for my circular. DAVID RAY, Ypsilanti, Mich.

White Plymouth Rock cockerels choice birds. Fishel Strain \$3.00 to \$5.00 each. MERLE H. GREEN, Ashley, Mich.

Buy Turkeys Now Michigan's best Giant Bronze breeding stock, young toms 23 lbs., pullets 15. Excellent color. Health and vigor guaranteed. N. E. Ryan Ramsdell, Ionia, Mich.

MAMMOTH Bronze Turkeys. Toms 16 lbs. \$8.00; Hens 14 lbs. \$5.50; Toms 9 lbs. \$4.50. Excellent plumage. Ralph Wise Nurseries, Box 15, Plainwell, Mich.

Salesmen
Wanted

We pay salary to good subscription getters, who can devote their entire time to our work. The offer our salaried men handle is especially attractive to farmers.

The Michigan Farmer

You Can Cut Barn Work in Half

In the barns that are James equipped, the increasing cost and scarcity of labor is much less a problem; for James Equipment makes barn work easy.

James Equipment not only cuts labor in two, but makes it possible for children to do work that without James labor-saving devices would require a man's strength; chore time becomes almost play time for boys who work in the barn.

Cleaning The Barn

The easy running James Carriers turn the disagreeable, dirty task of cleaning out the barn into a near-pleasure. They make a boy's job of what used to be shirked by all—and are an investment that pay profits of 25% or more a year in labor saved.

James Scrapers make quick work of cleaning cement floors; the James Stanchions, with the James Alignment Device, keep the stalls and cows clean, by aligning the cows at the rear, so that manure falls in the gutter and not on the platform.

Feeding The Cows

The easy way of feeding the cows is the Jamesway—the James Feed Truck or Feed Carrier, and James Feed Mangers. Rolling easily along the track or on the cement floor, the James Carrier or Truck make unnecessary the lifting of heavy baskets filled with feed. With their big, roomy tubs they save much walking to and from the feed rooms, and in a short time pay for themselves in labor saved.

Watering The Cows

What a job this used to be in winter time—keeping a fire going in the old time tank heater, or breaking the ice in the tank so that the cows could drink.

And how they hated to drink—with the north wind howling, the snow or sleet driving, and the drinking water icy cold.

No wonder the milk yield dropped in winter time—for feed that should have gone to make the milk was used to warm the cow, and the water needed to make milk was never drunk.

James Drinking Cups have changed all that. A sanitary cup for each cow provides fresh water day and night. It flows in automatically as fast as the cows drink.

Water—the simplest means of increasing milk yields—is often disregarded by dairymen. Those who realize how greatly milk flow is increased by James Cups are reaping huge profits on their investment.

Reports based on milk records of 28 herds (739 cows) for instance, show an average increase per cow per day of 2.45 lbs. This is 490 lbs. in 200 days, which at \$3.50 per cwt. totals \$17.15; with a saving of \$2.50 per cow in labor and 55c in fuel. That's a profit of 400% the first year.

Other reports and other investigations confirm these figures. Ask us for the proof. Then get James Cups busy right away making these big profits for YOU.

"Airing" The Cows

Pure air is just as necessary to life and production of milk as feed and water.

And a cow needs TWICE the weight of AIR per day that she does of feed and water combined.

Do your cows get enough pure, fresh air?

Food, water and air. The feed costs money—lots of it. But water and air are

free—the only expense is getting them to the cow, and that amounts to very little.

The James Ventilators help get the foul air out of the barn, help bring the fresh air in to the cows. Ask for full information regarding these wonderful ventilators and about the James Ventilating System.

Other Work-Saving James Devices

There are many other James devices that save labor, increase milk yields, help sanitation and improve cow health, such as Cow, Calf and Bull Pens, Feed Mangers, Calf Pail Holders, Sure-Stop Swinging Post, Swinging Cranes, "Safety

First" Bull Staff, Handy Milk Stools, etc. Also equipment for the hog barn, horse barn and beef barn.

The James Way Sunny Hog Barn provides sunshine and sun warmth on the floor of every pen two-thirds of the sunlit hours. The James Hog Barn Book, sent on request, tells all about it.

Free Dairy Barn Book

The 336 page book—"The Jamesway"—tells all about the James inventions that save so much of labor, prevent spread of disease, promote better cow health, protect against dangerous bulls, make simpler the care of calves and sick cows, and increase milk yields.

Easy Installation

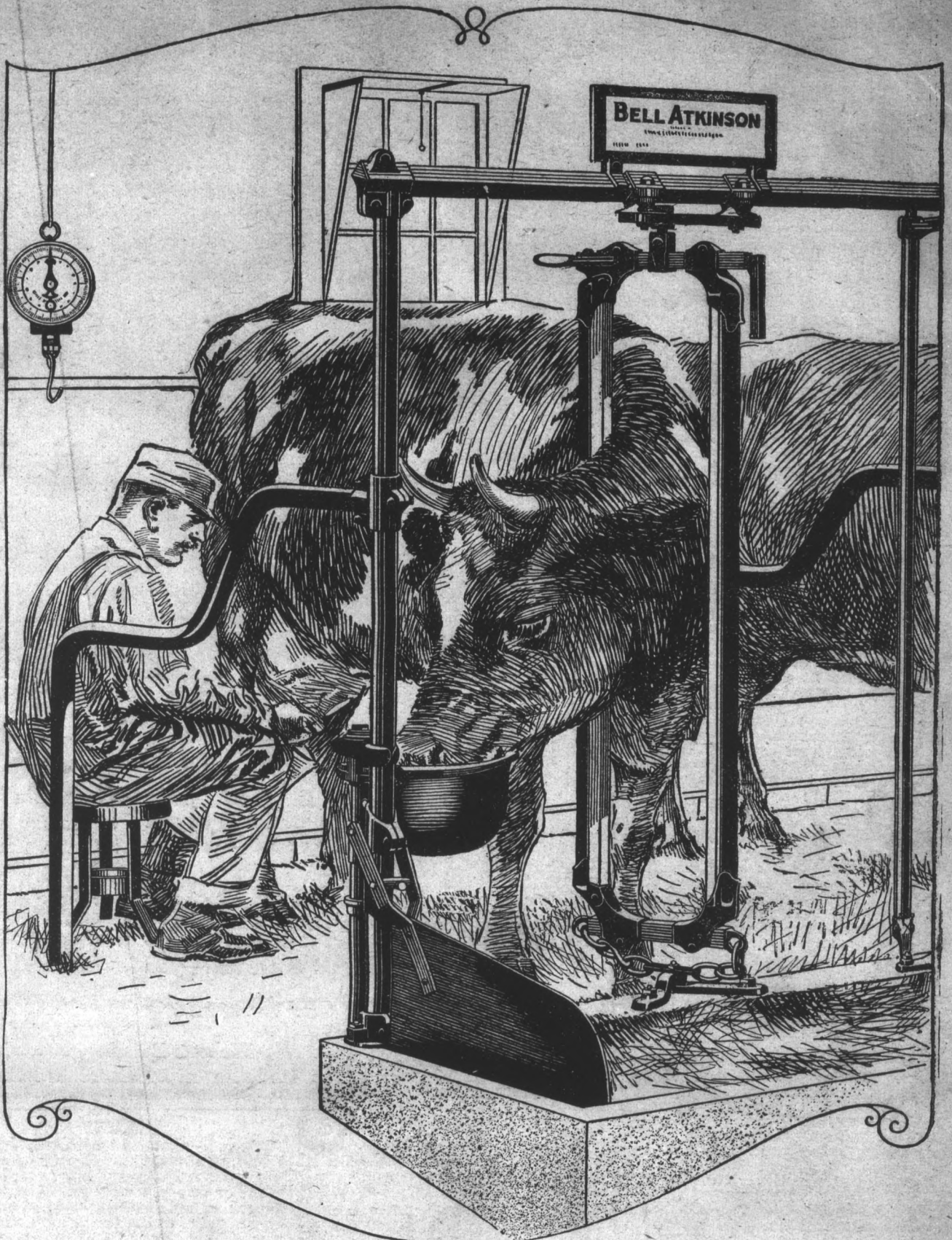
It explains the easy way of putting up carriers, setting up stalls and pens and attaching drinking cups.

Skilled help is not required, because of the ingenious James Anchors and because the equipment is assembled at the factory.

Barn Plan Service

It tells about James Barn Plan Service; the many James barn experts who are at your service—men who know what has been successful and what has not, what not to do as well as what to do in planning convenient, money-saving barns.

Their advice on barn planning, ventilation and other barn problems is free, with no charge for floor plans. Send for the book—a postal card request will bring it—get the full details of how to build a barn, how to ventilate a barn, how to cut the barn work in half, how to make more milk—and more money.



James Mfg Co., Ft. Atkinson, Wis., Elmhurst, N.Y., Minneapolis, Minn.

The James way

Labor Saving Equipment for the Dairy Barn