

MICHIGAN FARMER

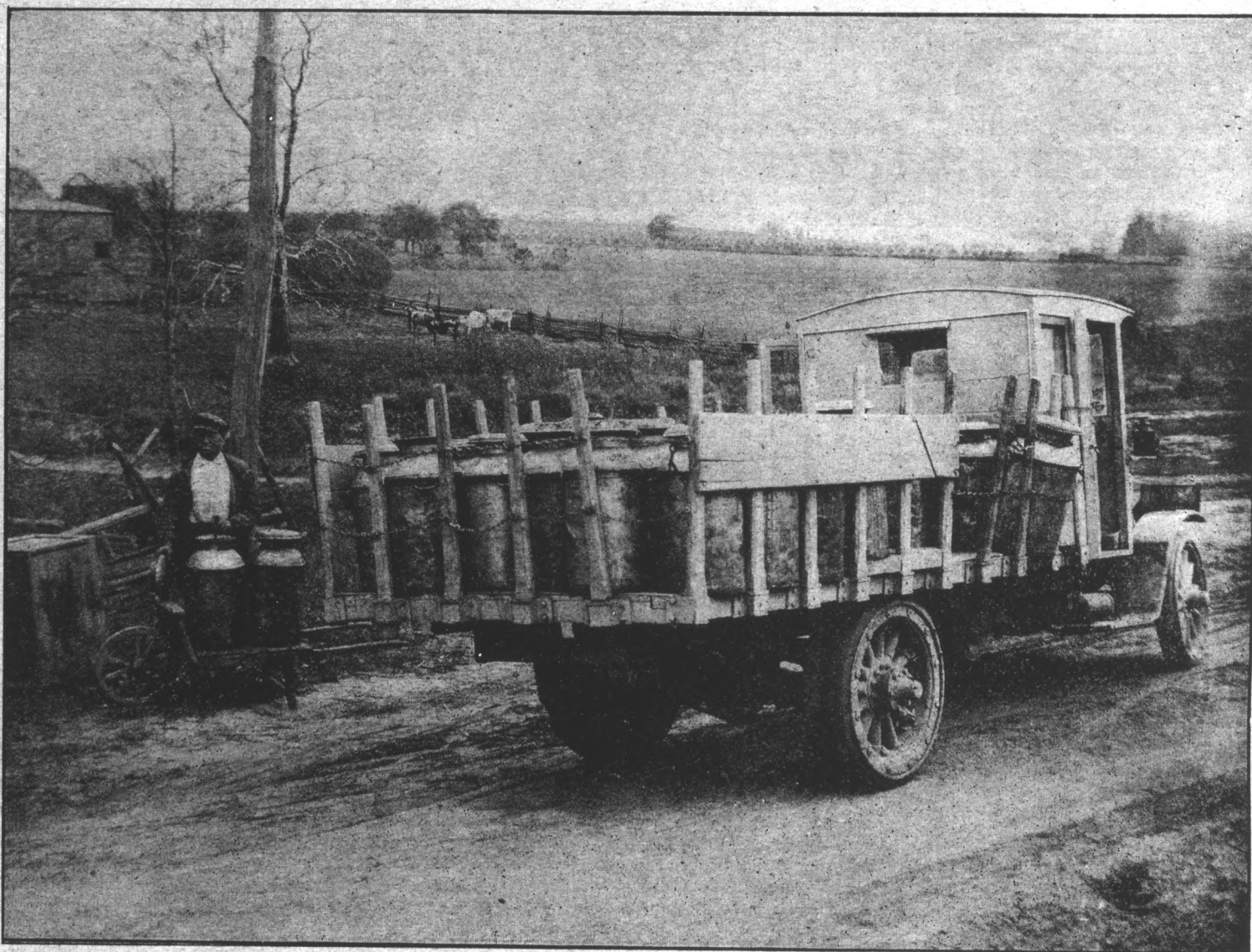
AND
LIVE STOCK
PUBLISHED WEEKLY

JOURNAL
ESTABLISHED 1843.

VOL. CLV. No. 13
Whole Number 4116

DETROIT, MICH., SATURDAY, SEPTEMBER 25, 1920

ONE YEAR \$1.00
FIVE YEARS \$3.00



Expanding the Dairy Industry

MOTOR trucks have solved the problem of connecting up the dairy farm with the city consumers of milk and cream. When the milk is shipped by motor truck there is no delay at country shipping stations, no expense for the loading and unloading at city milk terminals, and the consumers in the city are sure of an adequate supply of milk and cream regardless of delayed milk trains and congested city terminals.

Large creamery companies have found the motor truck indispensable in developing new dairy territory, and for hauling their butter and other products to the best markets within a radius of sixty

or seventy miles from their plants. Carefully conducted tests have convinced these shrewd creamery managers that if they are to hold their best customers in nearby cities and villages they must deliver their products promptly and in good condition. Ice cream manufacturers have also found it possible to expand their business through the use of motor trucks for gathering their milk and cream, and for making deliveries to their trade. The motor truck has solved the problem of expanding the great dairy industry of the country in new territories and bringing the dairy cow nearer to the consumer's table.

The Michigan Farmer

Published Weekly. Established 1843. Copyright 1920

The Lawrence Publishing Co.

Editors and Proprietors

432 Lafayette Boulevard Detroit, Michigan

TELEPHONE CHERRY 8384

NEW YORK OFFICE-381 Fourth Ave.
CHICAGO OFFICE-111 W. Washington St.
CLEVELAND OFFICE-1011-1013 Oregon Ave., N.E.
PHILADELPHIA OFFICE-261-263 South Third St.

M. J. LAWRENCE President
F. H. NANCE Vice-President
PAUL LAWRENCE Treasurer
J. F. CUNNINGHAM Secretary

I. R. WATERBURY Associate Editors
BURT WERMUTH
ALTA LAWSON LITTELL
W. MILTON KELLY

I. R. WATERBURY Business Manager

TERMS OF SUBSCRIPTION

One Year, 52 issues \$1.00
Two Years, 104 issues \$1.50
Three Years, 156 issues \$2.00
Five Years, 260 issues \$3.00

All sent postpaid
Canadian subscription 50c a year extra for postage

RATES OF ADVERTISING

50 cents per line agate type measurement, or \$7.00 per inch (14 agate lines 3 1/2 inch) per insertion. No advertisement inserted for less than \$1.50 each insertion. No objectionable advertisements inserted at any time.

Member Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as Second Class Matter at the Post Office at Detroit, Michigan, Under the Act of March 3, 1879

VOLUME CLV. NUMBER THIRTEEN

DETROIT, SEPTEMBER 25, 1920

CURRENT COMMENT

The Winter Feeding Problem

THE season has arrived when Michigan farmers should be carefully considering the proposition of winter feeding of live stock. While the future outlook for live stock prices is somewhat uncertain at the present time, so is the outlook for forage and grain prices, and where a surplus of forage and grain is available, it will pay to carefully consider the proposition of feeding this up on the farm rather than to sell it off in its original form or carry it over to another season when products of this kind are likely to be cheaper.

Live stock feeding on a large scale is an uncertain business, generally offering small margins of profit rather than a large return, where it is conducted on a commercial scale and the feeds as well as the stock are purchased on the open market. Carried on in a small way and as a side line, merely as a means of disposing of home-grown feeds economically and at the same time retaining their fertilizing value on the farm, it is a much more attractive and stable proposition.

Under old methods of marketing the small feeder was largely at the mercy of the local drover when the time came to market his product, and the feeder of less than carload lots was at a great disadvantage in this regard. But with the development of live stock shipping associations all over the state this handicap has been removed to a very great extent, and the farmer with a few head of stock to sell can market them to practically as good advantage as his neighbor who has a carload or more.

The cooperative shipping service should also be utilized in the matter of securing feeding stock where this must be purchased to consume home-grown feeds. In the past altogether too much live stock has gone to market from practically every community in Michigan in a condition far better adapted to further feeding than to conversion into meat. Practically every year at the close of the pasturing season there is a glut of this kind of live stock on the local market. Some of this is purchased by feeders and shipped back to the country, while much of it is sacrificed at a price which is unprofitable to the seller. It would be far better economy if this unfinished live stock could be kept in the country until better fit to market, and if the double freight and handling charge could be saved on that which ultimately finds its way back to the feed yards.

Any farmer who finds that he could economically feed a few head of stock this winter should take the proposition

up with the manager of his local shipping association. Possibly just the kind and amount of stock which he needs could be picked up in the local community from other farmers who are not in a position to feed them. If the local demand is greater than the local supply, the manager of the cooperative shipping association could doubtless purchase in carload lots from other similar organizations in sections where the supply was greater than the demand, or if the point were not too distant, the stock could be delivered on foot and the shipping charge saved.

Managed in this way many a farmer would make a nice little profit from a small feeding operation, thus marketing his coarse feed to the best advantage and in many cases saving him the labor cost of handling his corn crop. Where cattle are fed, shock corn can be used for the purpose at a very considerable saving in labor which would add to the profit of the operation. Where hogs are fed careful consideration should be given to the possibilities of hogging down the corn, thus saving the entire labor cost of harvesting it, which under present conditions is a very considerable item and in itself might make the feeding operation profitable if a fair price can be gotten from the crop in this way, as many farmers have found could be done.

While as above noted, the outlook for live stock prices is necessarily somewhat uncertain, yet from careful surveys made in the corn belt states with regard to the amount of live stock which will be fed this year as compared to 1919, the indications are for considerably reduced feeding operations. This is particularly true with regard to cattle, doubtless owing to the fact that many commercial cattle feeders lost heavily in their last year's operations. But in this regard the small feeder has the advantage of the large commercial feeder, in that his costs are much less, that he can utilize a cheaper grade of stock with no accumulated freight and handling charges to increase his cost, and that he will not ordinarily feed for a high finish which is generally sought by the commercial feeders, and which under the market conditions that prevailed last spring is certain to increase the loss in the same proportion that it would increase the profit when well finished animals bring a high premium.

Under the conditions which seem likely to obtain during the coming year, there is every reason to believe that cheaper cuts of meat will continue to be in demand, and that cattle such as the ordinary farmer will find available in his community or at some nearby point, with such finish as he can give them with moderate feeding on

home-grown feeds may again prove more profitable than the well-finished animals fed at greater cost. While winter feeding on a limited scale is always worthy of the consideration of any farmer who has a surplus of home-grown feeds, there is more than ordinary reason why this should be the case with Michigan farmers during this season.

Marketing Surplus Products

IN a year like the present when there is a profusion of fruit and a surplus of many kinds of vegetables on almost every farm, more attention ought to be given to the marketing of this surplus, which is a comparatively small item for the individual farmer, but which under present conditions results in a large aggregate waste of wholesome food. For example, very many farmers had had a surplus of early apples for which they had no market and many will have a surplus of fall apples. In many cases the same farmers have more grapes and possibly more plums and pears than they need for their own use.

This surplus on any individual farm may not be large enough to pay the farmer to make a special effort to haul it to town and market under present conditions of labor shortage and high transportation costs. But if some provision could be made where there is a cooperative elevator in the community to assemble this surplus of fruit and vegetables on certain days and have it trucked to some nearby market the return would be well worth while and an appreciated service would be rendered to urban consumers, who read or hear of a surplus of fruit rotting on the ground in the country, while they are obliged to pay an exorbitant price for such as they are able to purchase from the local retailer, with rather poor grace.

Where such arrangement cannot be made the individual farmer—or better yet, a group of farmers in any community—could market much of their surplus to very good advantage by assembling it near a main traveled highway and putting up a sign which would attract the attention of tourists from nearby cities or villages. An advertisement in the local paper of some nearby town offering this surplus at a reasonable price on certain days would also bring many purchasers. Various expedients of this kind can be resorted to to dispose of the surplus this year. Ultimately some provision should be made whereby the local cooperative organization can function in this emergency, so as to eliminate a large aggregate waste of these perishable products grown on farms where no effort is

made to produce them commercially and which have no established outlet for surplus products of this kind.

Observe Memory Day

AGAIN we would appeal to our readers for the general observance of September 30 as Memory Day. In another

column will be found a poem which fittingly expresses the Memory Day sentiment and which could well be used in the conduct of public exercises in observance of the day.

As many of our readers know, the designation of September 30 as Memory Day to be devoted particularly to the memory of our departed friends and the care of their last resting places, was the result of untiring effort on the part of ex-President J. T. Daniels of the Michigan State Association of Farmers' Clubs, who through the backing of that organization and of the Michigan State Grange, secured a legislative designation of the day, and by his further effort secured its general observance in many communities throughout the state. He is still working untiringly for its general observance, as are many others whom he has enlisted in this cause. Let us each and everyone pause to give place and expression to this Memory Day sentiment. To us will accrue the benefit from such an observance of the day as will cause us to dwell upon the virtues of those who have passed out of our lives into the great beyond and make us strive to emulate them.

News of the Week

Wednesday, September 15.

BOLSHEVIK forces led by Trotsky are making a vigorous attack against the Poles south of Grodno; the Reds it is reported, are preparing a winter campaign.—Miners are gradually going back to their work in the Wilkesbarre, Pa., region.—Mexico increases tariffs on certain textile goods.—United States shipping constitutes two-thirds of the traffic of the free port of Danzig.—The regular republican nominees win in the New York primaries.—The League of Nations make public the text of the project for a permanent court of international justice, as drafted by Elihu Root.

Thursday, September 16.

THE Italian government asks for a conference between employers and workers to consider the acute industrial situation in that country.—The Jugo-Slavs ratify the treaty of peace with Bulgaria.—Mexican government officials and financiers hope to make a billion dollar loan in the United States.—Italian warships arrive at Genoa where the communists recently took charge of the harbor.—Vessel men offer to carry grain from Lake Superior points to Buffalo at six cents.—It is persistently reported that Marshal Foch is slated as the next president of France.

Friday, September 17.

A TERRIFIC blast that rocked the financial district of New York City and caused a loss of thirty-three lives and of damages estimated at \$2,500,000 is believed to have been the result of activities on the part of radicals.—A Bolshevik congress at Baku announces a campaign against British rule in the Orient.—Results of the recent primaries in Illinois are still in doubt so far as the republican nominees are concerned.—The council of the League of Nations is considering the dispute between Sweden and Finland relative to the Aaland islands.—Anthracite coal miner officials advise all miners to return to work.

Saturday, September 18.

RACE rioting in Birmingham, Ala., has grown beyond local control, and national guard troops have been called in.—Premier Giolitti, of Italy, threatens government intervention in the industrial war of that country unless workers and manufacturers reach an immediate agreement.—Two persons are killed when a train strikes an auto at Manistee.—Michigan bankers of the Grand Rapids district proffer financial assistance to aid in Michigan's agricultural development.—The priority of shipment of coal to New

(Continued on page 394).

Memory Day

(September thirtieth)

By C. R. Cook

We will gather in the graveyard
'Neath the bright autumnal sky,
Bringing flowers, sweet perfumed
For the graves where loved ones lie.
Trimming well each flowering shrub,
Climbing vine, and, shading tree,
'Ere the wintry winds shall still
Singing bird and humming bee.

Treat well the "City of the Dead,"
Grading up each narrow walk,
While we care for graves of loved ones
Let the stranger's lot be sought;
Straightening up each leaning stone
With a tender thoughtful care,
For as we have loved ones sleeping,
Someone's loved one sleepeth there.

'Tis no mark of superstition
That we yearly gather here,
But a duty to remember
And we gather without fear,
Trusting in the Savior's promise
Knowing that beneath the sod
Only their ashes moulder here
For their Spirits are with God.

It is good, then, to remember
Those who passed along before,
For we shall pass, as they have passed
But the grave's an open door;
And beyond it's darksome portals
Lies a land, all free from care,
Where no graveyards mar its beauty
For no death can enter there.

We're but waiting for His coming
Whose loud shout shall rend the
skies,
And the graves, long closed, shall open,
And the dead in Christ shall rise,
Then the general resurrection,
So the Scriptures, we have read,
Death and Hell shall yield their harvest,
And the sea give up its dead.

If the Lord does not forget them,
It becometh you and I
To adorn with grace and beauty
Each low mound where loved ones
lie
Looking toward that great reunion
In the mansions, up above,
Where again we'll meet our dear ones
Who on earth hath claimed our love.

Nut Culture on Michigan Farms

By C. A. Reed

Nut Culturist, United States Department of Agriculture, Washington, D. C.



While the fruit of the pignut hickory is not quite as edible as that of the shagbark, it is acceptable to most people and the tree is very common.

THERE is evidence on all sides that the people of Michigan are deeply interested in nut culture. Some have invested in pecan lands in the Far South; no doubt some own Persian (English) walnut, almond or filbert orchards on the Pacific Coast; and others are at the point of planting nut trees in Michigan. Everybody would go nutting in fall if he could. Michigan leads all other northern states in what its institutions and some of its people have done toward developing the nut industry.

Some thirty years ago the Lake Shore and Michigan Southern Railroad Company showed its interest in nut production, when it planted many miles of chestnut trees along its tracks running north from Adrian. Between 1888 and 1892 there were planted on the grounds of the sub-experiment station at South Haven, a number of pecan trees of Iowa and Mississippi seed, Japanese walnuts, a number of filbert plants and a collection of almond varieties. At about the same time, Prof. L. H. Bailey set out a half dozen pecans and Japanese walnut trees on the campus of the Michigan Agricultural College. Later, Professor L. R. Taft added several seedling Persian (English) walnut trees to the group.

In traveling over the southern part of Michigan, one cannot go far without seeing signs of interest in nut trees. Everywhere the black walnut has been spared or planted. In certain sections it is to be found about practically every farm house or at least near enough by to furnish the winter supply of the family nuts. The chestnut is less common in any part of the state than is the black walnut, not appearing to any considerable extent except in the lower southeastern corner. It has not fared well in the state either as a native or planted tree. The Persian or so-called English walnut has attracted considerable attention from time to time, and under especially favorable surroundings one occasionally finds thrifty specimen trees. The pecan, the Japanese walnut, European hazel or more popularly called the "filbert," have all been given limited trials at various times. Even the almond has had a day in Michigan. Quite possible the pistache has been through the same experience; but if so, the fact is not generally known. That species is from arid Asia and wholly unlikely to succeed in the latitude of Michigan, although a young tree of a Chinese species, ornamental because of its fine feathery foliage, green in summer but which takes on a brilliant hue in fall is, or was, the

last we know, doing well on the private grounds of Dr. Robert T. Morris, near Stamford, Conn.

AMONG the kinds of nut trees from which we can select varieties for planting in Michigan, there are eleven or more distinct species. With such a range as this, one might ask, why not go into nut growing in Michigan on the same scale as in the growing of apples and peaches. There are probably better reasons why this is not being done, but two very good ones are that there are not enough available trees of good varieties to plant more than a single orchard of respectable size in the state; and the other, it would not pay to put good Michigan land to nut trees of such varieties as are now available even though they could be had.

If nut trees can't be had and wouldn't pay if they could, then why publish an article in *The Michigan Farmer* on "Nuts for Michigan Planting," is probably what will run through the minds of most readers of these lines. It is certainly a logical question, but there are at least ten reasons why nut trees should be planted in Michigan.

1. The forests of Michigan have reached the point of depletion such that for the sake of future generations, trees of some kind other than fruit must be planted.

2. While planting trees, we may as well select those capable of performing more than a single service; in other words, trees of maximum possible use. Oaks, poplars, ashes, pines, elms, etc., all have their places, but not one in the group can produce anything of food value to humankind.

3. Nut trees of most kinds, rightly used, are valuable for timber purposes and are very effective in the landscape.

4. Members of the walnut family, including the hickories, are especially appropriate along the highways and city streets. They are sturdy, long-lived and not easily damaged by storms or neighbors' boys.

5. Nuts are among the very best of the meat substitutes. They contain much of the same food elements as do meats, although in different proportions. Some contain starch and to that extent can be used as are the cereals and Irish potatoes. Nuts are the only vegetable product grown in

Michigan, which in raw condition afford a complete and fairly well balanced food for human beings. Every pound of nut food that can be raised from a tree along the street or in the fence corner on the farm is clear gain, and that much added to our national food supply.

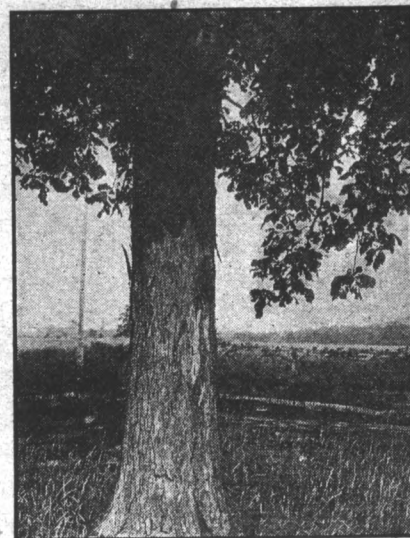
6. Nuts are rapidly assuming importance as factors in the lists of American foods.

7. Many species of nut trees are adapted to some parts of Michigan. By planting the best that are now available, and by constantly being on the lookout for better sorts, superior varieties will be certain to develop in a short while, the same as has been the case with all older orchard fruits and farm crops.

8. Whoever intelligently plants nut trees performs a distinct public service. He will receive the gratitude of more than the present generation.

9. Among all kinds of trees, none are more appropriate for memorial purposes to the men who did not come back from France, than is the black walnut. That species itself took a valiant part in warfare. It furnished material for gunstocks the same as in previous wars, but in the World War it rendered what was considered by eminent authority, a greater service in supplying propellers for aeroplanes. The shells of the nuts contributed their part toward the making of carbon for gas masks, and no one knows the extent to which walnut kernels made up the delicacies sent from home to the boys in the trenches. With such a service record as this, the black walnut is entitled to a memorial of its own. Its value as a timber tree, as an ornamental, and as a food producer, together with its great range of adaptability from North to South and East to West, should justly entitle it to recognition as a national tree.

10. Michigan has a law providing for the planting of nut trees along its highways. Thus, the state has officially put its approval on the idea and has become a leader in the encouragement of this great kind of economy and thrift. It has taken a step toward conservation in a direction which is highly developed in certain parts of Europe. There, nut and fruit trees along the highway are cared for and protected by the public. The product



Perhaps the most popular nut grown in Michigan is the shagbark hickory. It is long lived and tremendously hardy.

is sold to the highest bidder and the income used in the upkeep of the road system. In that manner the roadways of those sections take care of themselves. In this country millions of dollars of state and federal moneys are being used this year (ending June 30, 1921) in the construction and upkeep of public roads.

Desirable as it would be to accomplish these ends, it could not all be done at once. Even though there were an abundance of available trees of tried kinds, it would take a long time to plant them and to care for them until they might become of profitable bearing age, also public opinion would need to be remolded in order to insure their care and protection. Still, it can and will be done. The movement is already on; the Michigan law began to operate soon after being passed, and the Division of Forestry at the Agricultural College is raising the trees for planting. Public opinion regarding the care of the trees and their product will take care of itself when the value of the trees and their products becomes apparent. Both in California and in Oregon not only nut but fruit orchards and vineyards, grow beside the roadways with no protection other than that of public opinion; and what has been done in one part of the country can be done in others as well.

THE eleven species referred to as being available for Michigan use are as follows: The almond, butter-nut, beechnut, chestnut, filbert (hazel), pecan, shagbark hickory, shellbark hickory, black walnut, Japanese walnut, and the Persian or so-called English walnut.

Taking these up in order we will consider first the

Almond.

Except as an ornamental, the almond does not offer a great deal for use in Michigan. It is sometimes said to be as hardy as the peach, but only as this refers to the tree and not to the fruit, is it true. Certain edible hardshell almonds, although so inferior to the improved varieties as to have practically no market value, do sometimes succeed in lower Michigan, but their value is limited to their beauty when in bloom and to the production of a low grade product. In form and general appearance, these almonds are much like peach pits. Very often they contain much of the same bitter taste as Prussic acid common to the kernel of the ordinary peach. They are interesting to observe while growing, especially

(Continued on page 374.)



No really valuable tree is more common in southern Michigan than the American black walnut. It is also a handsome tree and grows more rapidly than any other hardwood variety. It should be planted more generously.



Entrance to Grand Haven Harbor, Which Remains Open Throughout Year.

WHILE Michigan is noted for diversity of interests, it is doubtful if many realize that nearly all of those interests can be found in a single county, and if you were asked to name such a county which one would you select? There are many counties that contain a wide variety of soils, that produce all of the grains, that raise the various truck crops, that have wonderful scenery, that are blessed with choice resort locations, that have fine fishing privileges, that excel in the dairy or live stock industry, that specialize in poultry, that have a well-developed seed growing business established, that have delved into the problems of reforestation, drainage, highway building and co-operative marketing. Yet, how many counties can show all of these within their respective boundary lines?

Just as the Raw Recruit was returning from the expedition into the northern wilds(?), happy with the recollections of luscious cherries, fish dinners, beautiful bays, harbors, lakes and streams, not to mention the handsome groups of cherry pickers that had not yet migrated southward to their winter homes, and looking forward to his honorable discharge, he received an S. O. S. call to prepare for skirmish duty in Ottawa County. He immediately repaired to the scene of action, where he was met and welcomed by County Agricultural Agent C. P. Milham.

History tells us that Ottawa County was organized in 1837, at which time it also embraced the present County of Muskegon. The lands were placed on the market by the Federal Government in 1839, and the County had a population of only 1,200 in 1846. The assessed valuation of all property in 1840 was \$352,372.57. By 1880, it had risen to \$6,417,320; the valuation in 1919 was \$47,560,000. Aside from its very rapid growth, its development will be seen to have been comparatively recent and mostly within the lifetime of the middle-aged grown-ups. Only 39 years ago, the County cut 191,000,000 feet of lumber in a single year.

Much of the County is comparatively level, and geologists tell us that, some centuries ago before Michigan and the surrounding lakes had settled down and decided to behave themselves, the level portions of the County were a part of Lake Michigan, and only a little of the southeastern and northeastern corners were "dry territory." Since that time great sand dunes have been thrown up along the present shore of Lake Michigan, concealing the Lake from view except along the immediate shore, around the mouth of the Grand River, and from Black and Pigeon Lakes. This was undoubtedly a wise provision of nature, as there are fine bathing beaches on the shore, and some of the latest styles of bathing costumes might disturb the peace and tranquility that pervades the rural

communities within the County, if not concealed from view by these huge piles of sand.

WHILE the population is made up of representatives of many different countries, Holland contributed by far the largest number. It is estimated that at least 80 per cent of the people in the county were either born in Holland or of Holland parentage. These people are thrifty, industrious, hard-working, home-loving, religious, conservative and honest citizens. Probably no nationality in the United States possesses all of these attributes to as great an extent as do these people. Coming to this country, as many of them do, with small means and possibly with large families, they are able by their inherent frugal and careful habits to acquire not only a livelihood but in most cases large farms, good buildings, fine herds of cattle and other live stock, and all of the other evidences of prosperity. Aside from being able to manage their private affairs successfully and profitably, many have demonstrated their fitness in handling the large problems of county and state. Much of the success of the various splendid co-operative associations in the county is readily traceable to the unusual business ability of the county's leading citizens.

Less conservative counties may well be astonished at the progress that co-operation has made in Ottawa County. The spirit of co-operation was first developed in a dozen or more very active farmers' clubs and nine granges. The latter are still active and flourishing, but some of the farmers' clubs have been supplanted by the co-operative associations. However, eight of these clubs are still active. They are located as follows: Midway, Spring Lake Township; Dennison, and Boosters, Polkton Township; Robinson, Robinson Township; Allendale, Allendale Township; Harlem, Olive Township; North Shore, Park Township; River Bend, Tallmadge Township. Meetings are generally held monthly at public halls or private homes, and are both business and social in purpose. In the winter months, the meetings are all-day affairs with a picnic dinner.

THE organization of the various co-operative institutions has been rapid and unusually successful. The Holland Co-operative Association at Holland was organized last September with less than 100 members; it now has 500 members in Ottawa and Allegan Counties. It started business in a small warehouse in a very poor location. Today it owns a fine, large warehouse in a central location, and has purchased the flour mill formerly owned by Van Eyck & Weurding. This mill is equipped for grinding not only wheat, but rye and buckwheat as well, and has a capacity of 50 barrels per

Our Farm Bureaus

*Agricultural Agent Milham of Ottawa
Man Through Prosperous Farming*

day. The Association has recently purchased an elevator at Harlem and a warehouse at West Olive, and maintains a branch office at each of these places. The officers are: Simon Harkema, president; William Van Apple-dorn, secretary; and George Heneveld, manager.

The Zeeland Farm Bureau Exchange was organized in June of this year, and already has over 100 members. It has bought the business of the Zeeland Fuel & Supply Company from Glarum Brothers, taking possession on September 1st. It intends to purchase coal, fertilizer and other supplies for its members, and to ship their grain and other products. It will also do feed grinding and operate a complete concrete block plant which it already owns. Its officers are: G. H. DeWitt, president; James Kossen, secretary-treasurer; and John Ten Have, manager.

The Coopersville Farmers Elevator



County Agent C. P. Milham.

Company ships all kinds of farm products and purchases supplies for its members. Its co-operative activities began in the form of a live stock shipping association, and has gradually enlarged in scope to include nearly all lines of farm business. While it has been in operation only about 18 months, it now has a membership of 362. It has taken over the Durham elevator and Laug Brothers plants. It is efficiently managed by the following list of officers: George Wallis, president; William Riemersma, vice-president; E. L. Collar, secretary; Ellis Peck, treasurer; Paul Hahn, manager.

The success of the Coopersville Association, in handling live stock shipments, prompted the organization of

the Conklin Farmers Association about one year ago for the same purpose. It started with about 100 members and has since grown rapidly. It not only handles live stock but nearly everything that the farmer has to sell or buy, including stock feeds and remedies, flour, farm produce, tires, oils, binder twine, seeds and fertilizers. Feed grinding is also a part of the business. The Association is erecting three concrete silos with a capacity of 11,000 bushels for storing grain. The officers are B. O. Brevitz, president; C. O. Batson, secretary; and E. J. Dinkel, manager.

The Farmers Co-operative Elevator at Jamestown does a very large business and is in a flourishing condition. It has a branch at Hudsonville and one at Vriesland. It does a general elevator business in each of the three places, and handles all kinds of farm products except live stock. It also owns and operates the flour mill at Jamestown. The officers who are responsible for this excellent showing are: J. J. Nienhuis, president; Alexander Klooster, secretary; and Peter Takken, manager of the three plants. Similar institutions are about to be organized at Grand Haven and Grandville.

Another very successful co-operative institution is the Grand River Valley Fruit Growers Association at Grand Haven. It has 140 members, and was reorganized under its present name last spring. It ships the crops of small fruits of its members, chiefly berries and grapes, which are very successfully grown around Grand Haven and Spring Lake. It has already done \$100,000 worth of business this year in berries, and it expects to handle at least 100 cars of grapes worth between \$150,000 and \$200,000. It has contracted the crop from 300 acres of grapes. The officers are: Ira Cross, president; Klaas Bolens, vice-president; and C. C. Whistler, secretary.

A smaller organization, unique in purpose, is the Grand River Game and Fur Protective Association. Its 45 members are land owners along Grand River and nearby marshes. They feed and protect the fur-bearing animals on their property during the summer months, and reap their benefits during the trapping season. It is said that the Association sold \$30,000 worth of furs last year.

The dairy interests have a small but very enthusiastic organization known as the Ottawa County Holstein Breeders Association. The president is J. J. Nienhuis of Jamestown, and the secretary, Ben Van Lente of Holland. At a recent meeting, the members decided to put on an educational advertis-



Original Planting on Holland Sand Blow to Prevent Movement of Soil.

and Their Work

Drives the Michigan Farmer Writer-Townships of His Adopted County

ing campaign at the local fairs, to work for the Farm Bureau in various show the food advantages of butter, cheese, cream and milk, over manufactured substitutes. The membership is made up of leading dairymen from the vicinity of Holland, Zeeland, Jamestown and Coopersville.

The Poland China Breeders Association at Coopersville is another active association, and is devoting its energies to the building up of the swine industry and the improvement of the herds in that part of the state. It will put on a consignment sale at the Marne fair grounds this fall. It is expected that about 30 registered pigs will be in this sale. Mr. John G. Ter Avest is one of the largest swine breeders in this section, and is one of the live wires in the association.

FROM the foregoing it will be seen that the spirit of co-operation has not only been aroused in Ottawa County, but that it has reached a high state of development. The advent of the Farm Bureau is proving to be a connecting link in bringing the various co-operative institutions together and establishing unity of purpose and action. A number of the associations are arranging to co-operate with the Farm Bureau, and it is probable that the others will do likewise when they come to realize the advantages of the larger and wider co-operation thus made possible. The Ottawa County Farm Bureau was particularly fortunate in the selection of its officers and committeemen. County Agent Milham gave unstinted praise to this governing body. He said there were many other men equally as capable in the county but none who were better. The official staff is as follows: William Berger, Jenison, president; H. W. Harrington, Holland, vice-president; Melvin Smith, Marne, secretary-treasurer. The executive committee is composed of the following: William Riemersma, Tallmadge Township; W. V. Easton, Allendale Township; Alexander Klooster, Jamestown Township; J. G. J. Van Zoren, Zeeland Township; Adrian Knight, Robinson Township; Fred Gordon, Crocker Township; Mrs. Colon C. Lillie, Polkton Township.

William Berger, the president, owns a fine 200-acre farm in Georgetown Township. Everything about the premises is neat and tidy, and the buildings are modern and well-painted. Mr. Berger is a young man of great energy, enthusiastic, appreciative, and an all-round good fellow. He is Master of the local Grange and has been active in Grange work. He appreciates the value of co-operative organizing and has given much time to it. At the present time he is doing advance agent

H. W. Harrington, with three sons, operates a splendid 280-acre farm six miles north of Holland in Olive Township. While he follows general farming, he specializes in dairying and has a tuberculin-tested herd of grade Holsteins and a registered sire. He allowed us to peep into his pocket account book containing his record of milk sales. We did a little adding and computing and found that his monthly average sales for the last seven months has been 13,706 pounds of milk, and the average monthly income from which was \$415.57. He uses a tractor in his farming operations, and his thoroughly modern house has a bath, lavatory, septic tank, running water, and acetylene lighting plant. He is a fine gentleman in every respect and takes great interest in all progressive agricultural movements.

Secretary Smith of Marne is an-



Miss Hitchcock, Home Demonstration for Ottawa.

other live wire. He is the supervisor of his township, and has always been active in all local community affairs. He has occupied practically every office at some time in his local grange. With the assistance of his brother, he operates a farm of 130 acres in Tallmadge Township, about eight miles west of Grand Rapids. Their farming operations include general farming, fruit growing, and live stock raising. He owns a fine flock of pure bred sheep. He is a man of unquestioned ability and is rendering splendid service to the Farm Bureau.

William Riemersma, of Tallmadge Township, takes an important part in the management of the Coopersville Farmers Elevator Company, and is a director of one of the banks. He owns



Splendid Field of Rosen Rye and Vetch on Bethke Farm.

a good farm of 240 acres, and is rated as an exceptionally prosperous and progressive farmer. He is evidently a disciple of Roosevelt, in that he has a family of eleven children. If he can persuade them to remain on the farm he has solved the labor problem.

W. V. Easton is a young and exceptionally progressive farmer. He is a member of the firm of Harter & Easton, proprietors of Maplewood Farm. The farm derives its name from a very fine maple sugar orchard that is operated by the owners and which produces a large quantity of fine maple products each year. On this farm is a herd of pure bred Duroc Jersey hogs and a herd of milking Shorthorn cattle that is said to be the best of its kind in the county. Mr. Easton has a fine home with modern conveniences which is beautifully located on the banks of Grand River in Allendale Township. He has always been active in community affairs and took a leading part in the organization of one of the largest farmers' clubs in the state.

Alexander Klooster is the youngest member of the committee, and is proprietor of one of the largest and best-managed day old chick businesses in the state. He specializes in White Leghorns and operates on a large scale. Because of this fact he operates only forty acres of land, which is located in Jamestown Township. He is the secretary of the Jamestown Co-operative Elevator Company, and is credited with possessing good judgment and always acting with deliberation and calmness in the management of large affairs.

J. G. J. Van Zoren is the owner of a 105-acre farm in Zeeland Township, on which he has developed a wonderful herd of grade Holstein cattle through the use of pure bred sires. He has practically retired from active farm life, but his son operates the farm. The farm home and other buildings are strictly modern and up-to-date. Mr. Van Zoren is actively interested in the local co-operative creamery. It takes quite a number of capital letters to get his full name onto paper, but it also takes a good many adjectives to describe his good points.

Adrian Knight is a prosperous sand land farmer in Robinson Township. He operates a farm of 125 acres on which he specializes in the growing of vetch seed, rye being used as the supporting crop. He is president of the local farmers' club, and has held the office of supervisor of his township for several terms. He is the bachelor member of the committee, but, being fortunate in having a sister living with him, we suspect he does not have to sew the unruly buttons on his trousers.

Fred Gordon has 126 acres of good land and twelve unusually handsome children, has been county treasurer for four years, has served as supervisor for several terms, and has held practically every office in both the

local and Pomona Grange. He follows general farming and is noted as a successful grower of high grade corn and potatoes. He has a fine home, and one is impressed with the beautiful natural view as he approaches it.

Mrs. Colon C. Lillie needs no introduction to Michigan people. Her home is in Coopersville, where she has been interested in every progressive movement, both local and state-wide. She has been particularly active as an officer of the Women's Christian Temperance Union and of the Eastern Star. She has also been a moving factor in the Coopersville Grange, which is one of the largest granges in the state. Last year she was vice-president of the Farm Bureau. She is a firm believer in co-operation and progressiveness.

WE attended a potato and corn demonstration at Maple Drive Farm, owned by Mr. Bert Van Lente, secretary-treasurer of the Holland Co-operative Association. He and his son operate 240 acres of land, and he is an exceptionally good farmer. He gives special attention to procuring good seed corn and seed potatoes. We saw a field of fodder corn on his farm that averaged ten and one-half feet in height, and single stalks were found that measured nearly twelve feet in length. He has a fine herd of Holstein cattle, and is a member of the Holstein Breeders Association, of which his son is secretary. Mrs. Van Lente is a splendid cook. This point we proved to our entire satisfaction.

We might go on indefinitely in describing farms and farmers in Ottawa County. We might write columns of names of farmers who are interested in co-operation and community movements in that county, but the few here mentioned will serve to illustrate the character and calibre of the men who are behind the co-operative associations and the Farm Bureau, and who are giving their time unselfishly to the improvement of agricultural conditions.

WE MUST also mention that, while the spirit of co-operation was really first developed in the local farmers' organizations, much of the real active organization work to bring these associations up to their present high standards was directed by County Agents Hagerman and Milham. Mr. D. L. Hagerman went to Ottawa County about five years ago as its County Agent. He is a young man of boundless energy, a graduate of Michigan Agricultural College, and one with a clear vision into the future of Mich-



Mr. Waldron Gives Dairy Demonstration on Hanchett Farms.

igan agriculture. He assisted in the organization of the County Farm Bureau, and the co-operative associations at Hudsonville, Jamestown, Zeeland and other places. He was active in promoting the dairy industry, and started the Sand Blow project which we will describe farther along. Because



Former Agricultural Agent Hagerman in Field of Red Rock Wheat.

of his exceptional qualifications, he was tendered the position of Agricultural Agent for the Grand Rapids and Indiana Railroad Company last spring. He accepted this position and is now actively engaged in its duties, his operations extending throughout the greater part of western Michigan.

His worthy successor, Mr. C. P.

Milham, entered upon the duties of County Agent in Ottawa County on April 1 of this year. He was born on a farm in Kalamazoo County, which his grandfather acquired from the United States in 1837. He graduated from high school in 1911, and after one year at the Western Michigan Normal College, he completed a two-year agricultural course at Michigan Agricultural College. He then took up County Agent work in Iosco County, where he served two years, and up to the time of his coming to Ottawa County. Finding the county to be so thoroughly organized in a co-operative way, he has devoted his energies largely to efficiency in production. He believes this can be accomplished by the elimination of disease in live stock, fruits, truck crops and the grains; by feeding and properly handling live stock and soils; by stimulating interest in better breeding and better seeds. He is giving aid to the further extension of co-operative activities and the Farm Bureau, and hopes that there will soon be a central organization or clearing house at Grand Rapids for the numerous co-operative units in Muskegon, Ottawa, Allegan and Kent Counties. He is also looking forward to the complete amalgamation of the co-operative associations and the Farm Bureau. During the month of August he held no less than 31 meetings, consisting of field demonstrations with corn, potatoes and poultry, and evening meetings. He has readily acquired a grasp of the needs of the county, and is endeavoring to fully meet the responsibility placed upon him. He is endowed with a pleasing personality and good looks, and, as he is still single at the present writing, we predict that he has no difficulty in obtaining a good attendance, particularly of young ladies, at the various meetings called by him.

However, his popularity is not confined to any one class of Ottawa County citizens, judging by the general interest manifested in him and his work.

OTTAWA COUNTY was the first in the state to take up home demonstration work. The leader is Miss Grace H. Hitchcock, formerly of Mason County, and a graduate of Michigan Agricultural College in 1915. During the three years that she has been in the county she has organized numerous hot lunch clubs in the rural schools, classes in garment making, and canning clubs. She has been unusually successful in her work, and some of her classes have captured prizes in various state contests. The Zeeland club won second prize in a hot lunch demonstration at the State Fair, and the Spring Lake club secured the first prize last year in the state contest in garment making, the particular garment being the work of Miss Marie Bronsema of Spring Lake, a young lady between 12 and 14 years of age. Miss Hitchcock has also conducted several courses in dietetics, and, during the war did much Red Cross work. She is a lady of pleasing personality and is rendering splendid service.

We cannot refrain from mentioning the name of Miss Ethel Smith in connection with the agricultural progress being made in Ottawa County, notwithstanding her strenuous objections to our so doing. She has been the efficient clerk in the office of the County Agent for the past four years, and, having handled the correspondence during that time, she is thoroughly acquainted with the history and personnel of all of the county and local organizations, and with every detail of procedure in connection with the effi-

ciency in the work has contributed no small amount toward its success.

ONE of the very unique and interesting projects being conducted is known as the Sand Blow project. The object of the experiment is to determine the best method of preventing the blowing or drifting of sand, and at the same time to develop reforestation. The site is a 20-acre tract in the southwestern part of the county, where sand was threatening to fill an open



Elevated Feeding Walk Facilitates Care of Poultry in the Many Pens of the Macatawa White Leghorn Company.

drain. Trees of many kinds were planted on the tract and various temporary methods of checking the sand blows have been tried. The most successful temporary results are obtained with brush barriers four rods apart, and more permanent results with yellow willows behind which are planted poplar cuttings. This project is being carried on with the assistance and co-operation of the United States Forestry Department and the Department (Continued on page 388.)

Results from Road Tests *And Other News from Washington*

THE extensive use of heavy motor trucks has created new and very serious problems in the construction and maintenance of highways. This has led the Bureau of Public Roads of the United States Department of Agriculture to undertake some highly important testing and research work for the purpose of finding the best road materials and methods of construction to meet present day requirements. These road material tests are being carried on at the Arlington, Va., Experimental Farm, under the supervision of E. B. Smith, senior assistant testing engineer, and have been under way a year and a half. The results at this time are not conclusive; nevertheless, the work has progressed sufficiently to enable the Bureau of Public Roads to reach some definite conclusions which will be given to the public in a bulletin to be found at an early date.

Tests are being made to determine the durability of various materials in concrete, vitrified brick and stone block pavements. The tests are planned to give sections of pavement of all the different materials the same practical traffic use. A wear testing machine gives approximately the wear produced by heavily loaded steel-tired vehicles. It is described by the engineer in charge as consisting of "five castiron wheels 48 inches in diameter and two inches wide, each weighing 1,000 pounds. The wheels are mounted inside of a channel iron frame in such a way that they roll over the center twelve inches of the 24-inch test strip. Each wheel is mounted independently of the other so as to be free to move up and down and thus adjust itself to inequalities and depressions in the pavement along the line over which it travels. The wheels

travel six miles per hour." At present these wheels have made upwards of 6,000 trips over the test pavement.

Each section of pavement is laid on a concrete base eight inches in depth, under which is a twelve-inch subbase of cinders, with a four-inch tile beneath, providing ample drainage.

In the tests some of the materials used have gone down badly. It has been found that the durability of brick depends largely upon its hardness. Hard brick with both cement and asphalt fillers has stood up very good, while less hardened brick is badly cut up. Granite block is apparently more lasting than other materials, but lacks the finished surface. The cement filler gives a smoother surface than the asphalt, after hard wear.

A new series of tests is under way, with solid concrete slabs the width of the roadway. These blocks will rest on a sub-surface which in some of the tests will be water proofed and in others the subsurface will be protected from water seepage by concrete side walls. In other tests with the solid slab pavement the subsurface is kept water soaked and in others well drained.

A machine for testing these road slabs has been constructed which is designed to produce the impact that might be delivered by a 7½ ton truck. These impacts are made until the slabs are broken. In some instances a few impacts are sufficient to break down a slab on a poorly constructed subsurface, while with a more adequate subsurface many times the number of impacts are necessary to break the slabs.

In actual tests on a concrete road, the indications are that "when a wheel load of 8,500 pounds is at rest on an

eight-inch concrete slab, laid on a rather wet clay subgrade the fiber stress in tension is only about 34 pounds per square inch directly under the load, and since the modulus of rupture of the ordinary concrete road mixture is well over 400 pounds per square inch, and possibly as high as 600 pounds per square inch, the danger of serious cracking of the concrete under static loads is practically nil except at the corners of the slabs."

The results obtained with a War Department truck loaded with five tons of sand, and having a total weight of 7,750 pounds on one rear wheel, showed that the maximum impact pressure when the truck was running fifteen miles per hour and fell through a height of three inches, has 42,000 pounds, and this was 5.4 times the static load pressure executed by the rear wheel. When the rear wheel dropped through a height of only one-fourth inch at fifteen miles per hour, the impact pressure produced was 28,000 pounds, or 3.6 times the static load pressure.

That roads properly constructed of certain road materials found most highly durable, stand up under these severe practical tests, indicate that it is possible to construct highways that will stand the heavy wear of motor truck traffic.

EACH state farm bureau is appointing delegations to confer with senators and congressmen and ascertain their positions with respect to the item of legislation desired. Every agricultural plank presented by the American Farm Bureau Federation is included in both platforms and since confirmed by both presidential candidates. The federation now proposes to make certain that all candidates

understand the nature of the promises made and insists that the farmers shall know that the men they vote for are familiar with their demands. Some of the bills on which candidates will be asked to definitely commit themselves are the Capper-Volstead bill, legalizing collective marketing by agricultural producers' organizations; the Nolan bill, imposing an additional tax on land; the Truth in Fabrics bill, requiring manufacturers to honestly label their fabrics so as to show the percentages of wool and shoddy used; the Kenyon-Anderson bill, to control the meat packers; a German credit bill, providing a credit for Germany against the net proceeds of the alien property custodian's sales, the money to be used in purchasing raw materials, such as wool and cotton in this country; the Kahn-Wadsworth bill, authorizing the government to operate the air fixation nitrate plant at Muscle Shoals, Ala., for the production of nitrate for fertilizers; farm financing measures, including the strengthening of the Federal Farm Loan act, and the enactment of a rural credits bill.

THE Washington office of the American Farm Bureau Federation is arranging with the War Department to take over the sale of large quantities of surplus goods now in the warehouses of the War Department. Each state takes orders for the goods in carload lots.

Included in this stock of War Department goods are 100,000 sets of harness, 100,000 saddles, 500,000 pairs of heavy work shoes, 3,000 auto trailers and vast quantities of other goods. Some of the harness is not suitable for farm use and will be made over by a company under contract with the (Continued on page 372).

Almond Growers Real Business Men

They Fix Prices and Control Their Product, and Have Run the Speculator to Cover—By Herman Steen

Copyright 1920, by Standard Farm Papers

DURING the ten years from 1901 to 1910 the average retail price in the United States for almonds was thirty-five cents per pound. This varied little from year to year. The California farmers who grew the almonds received an average of eight cents per pound for them. The producers' share of the consumers' dollar was twenty-two cents.

That was before the almond growers organized. The low prices prevailing for almonds year after year so discouraged the growers that many groves were pulled out, and the farmers turned their energies to endeavor that promises a profit. There had been no profit in the almond business—except for the fellows who bought for eight cents per pound and sold for thirty-five.

Everything to Gain.

It did no good to protest over the low prices for almonds, so some of the leading almond growers in 1910 took one desperate last chance and formed an association to market their product. "We had everything to gain and nothing to lose," says Geo. W. Pierce, now president of the California Almond Growers' Exchange, and a leader back in 1910. "We would have all gone busted anyway, under the system then prevailing, so we decided to take the one chance left to us."

During the eight years from 1911 to 1918, consumers still paid thirty-five cents per pound for almonds. The retail price remained practically the same from year to year. The almond growers received an average of seven-tenths of a cent per pound for their product. The producers' share of the consumers' almond dollar was 47 cents. The 1919 crop was moved at a higher figure, due to a tremendous demand, the almond growers receiving about twenty-seven cents and the consumers paying forty-five.

Growers Fix the Price.

Since 1910 the price received by the growers for almonds has been determined by the growers themselves. The California Almond Growers' Exchange, which is nothing more or less than an organization of 3,700 almond growers whose purpose is to market the almond crop, each year fixes the price which the farmers receive for their crop.

Note that statement in the preceding paragraph—fixes the price. That does not refer to the steel trust, nor is it a mistake in print. The almond growers themselves, through their representatives, on the executive committee of their organization, decide what their product is worth and then go ahead and sell it for the figure they fix. No, my dear Corn Belt reader, you are not dreaming nor am I telling a fairy story—the almond growers have been doing this for ten years.

The Almond Growers' Dollar.

A comparison of the figures for the ten years before organization and ten years after organization are illuminating. Consumers paid practically the same price for almonds during the whole twenty years (except in 1919, when everything, including almonds, was higher than ever before.) The growers' slice of the consumers' almond dollar expanded from twenty-two cents before organization to forty-seven cents after organization. In other words, without charging the consumer a penny more for their product, the almond-growers have doubled their

returns. If that is not a proper line of activity for a farmers' marketing organization, I'd like to have somebody specify a better one.

What have been the general effects upon the almond industry from organization? I will let Geo. W. Pierce, president and leading almond grower himself, answer. "The acreage devoted to almonds in California has increased between six and seven times since 1910," he says. "I have figures in my office to show that. In 1910, when we organized, the industry was

directors elects an executive committee of five, who have the direction of the affairs of the California Almond Growers' Exchange.

How the Crop Is Handled.

When the almonds are harvested, the growers deliver them to the warehouses belonging to their local associations. The nuts are then graded, processed, packed and prepared for shipment. When they leave these local plants they are ready for the world's market.

Note that I said in the preceding



on the decline. Many groves were abandoned, and many others were neglected, simply because none of us were skillful enough to make a profit in growing almonds, for eight cents per pound. We were absolutely under the domination of a group of almond-packing concerns which bought the crop as cheap as they thought they could get by with. Growers all over California were thoroughly discouraged, and in spite of the fact that it takes years to develop a good almond orchard, they were quitting the business.

Profitable Price Insures Supply.

"By organizing, the almond growers have been enabled to fix a price for their product which yields a fair return on their land and labor and pays a reasonable profit besides. That is the reason why there has been such a tremendous increase in the acreage devoted to almonds. Let me impress upon you that that principle applies to every product under the sun: Fix a price upon a product which will give the producer a fair profit and you will never need have any fears about the supply.

There are 3,700 almond growers in the organization, or ninety per cent of all the almond growers in California. They are scattered all over the state, but usually in clusters in the areas suited to almond production. They are organized into twenty-four local associations, which are organized on a non-profit plan without capital stock. Each local association elects one director, and this body of twenty-four

paragraph, "the growers deliver them"—they don't sell the almonds to the association. The job of the local association is to prepare the almonds for market. Neither the grower nor the local association has one word more to say about selling the almonds than you and I have—except as he has a vote for director in his local association.

When the local association has the almonds ready for market, it ships them to any place indicated by the general manager of the California Almond Growers Exchange, which is the central organization of the twenty-four local associations, and which is the only body with a word to say about the sale of the almonds. It is primarily and solely a selling organization, whose business it is to secure a good price for the growers' almonds.

Setting the Price.

Each year there is a meeting attended by the directors from the twenty-four local associations, the general manager of the exchange and a few experts hired by him. This meeting is held about the time the almonds are ready to move onto the market. These men, after taking into account the probable demand for almonds, the size of the crop, the size of the foreign crop, general business conditions, and a few other things of lesser importance, set the price on the almond crop. The general manager has authority to raise or lower this price at any time. Should demand prove greater than expected, he can increase the price, or

should it prove less, he can lower it.

"We pay no attention to the cost of production," said T. C. Tucker, general manager of the exchange, in discussing the fixing of a price. "We set a price that we think will move the crop. For years we have maintained a salaried expert in Spain to report on the almond crop there. California produces only twenty per cent of the almonds used in this country, the rest coming from Spain. We depend on the information he sends, and upon our own information as to the size of the crop, probable demand, general business conditions, and then decide upon a price which we think will sell the crop for us."

The Same Price to All.

Here is another all-important point. Every grower gets the same price for the same grade of almonds, regardless of whether the nuts sold for twenty cents or thirty cents or for nothing. This is accomplished through what is called a pool. Each variety is a pool by itself, and all the first grade almonds of each variety are pooled together. Second grade almonds are not pooled, but are kept separate and sold for the account of the man who grew them.

Suppose an almond grower has 3,000 pounds of Imperial almonds. When he delivers them to the local association, he is credited with them. The central exchange sends him a sum of money equal to about half the sale value of these almonds; this money has been borrowed from the banks. Later, when enough Imperials have been sold to pay the advance and money begins piling up in the treasury, a further payment is made. Later as more Imperials are sold, another payment is made, until all the Imperials are sold, then a final payment is made.

The past few years the harvest advance has been ten cents per pound—more than the growers formerly received altogether before the exchange was organized. At first the directors had to borrow this money on their personal notes, but now the banks recognize the strength of the exchange and loan to it as they would to Armours or any other large borrower on its own note. Last year one bank loaned \$1,040,000 to the almond exchange.

Ninety Per Cent of Growers in Association.

Ninety per cent of the almond growers of California are members of the organization and turn their almonds over to it. The exchange does not guarantee these almonds any price; all it does is to take these almonds and sell them for the best available price and return that, less the cost of operation, to the growers. These growers must sign the by-laws, which require each member to turn his almonds over to the exchange.

The almond industry is a small industry, but the lessons taught by the California growers who organized and put it upon a more solid foundation than it has ever known before are worthy of study by all whose thoughts run toward co-operative marketing.

This is the second of a series of ten articles on co-operative marketing systems developed in California. The third will appear next week.

Fall plowing is the most universal method of fighting insect pests practiced by the general farmer.



One of the Early Fruits of Co-operation is the Development of Sociability and a Community Spirit.

OUR SERVICE DEPARTMENT

POTATO TOPS TURN BLACK.

The tops of my potatoes are blackened as if tipped by frost and the blackened portions are soft and rotted. The damage does not look like frost damage but seems more like Blight. Is there anything to be done?

Oakland Co.

J. McM.

I believe your potatoes have been struck by the late blight. This disease has been found recently in Wayne and Oakland County, and I believe it will be found here and there in southeastern Michigan. This disease has come on so very late this year that it will not shorten the crop to any great extent. It is likely to make the potatoes rot badly in storage, however. It is too late to spray with Bordeaux Mixture. That should have been done in July and August. All that you can do is to delay digging until the tops are entirely dead. If possible, wait a week or ten days after the drying of the tops takes place. The rotting of the tubers comes from spores which either wash through the ground to the tubers or else from spores shaken from the tops at digging time. Potatoes dug while the tops are green, if late blight is present, rot badly. In 1912, the Thumb district had only slight attack on the tops but suffered nearly a total loss of the tubers because of harvesting too soon.

Sort carefully in picking up the potatoes from blighted fields, and put only sound potatoes into the cellar. Keep the cellar cool and well ventilated. If these directions are followed your loss should be slight. G. H. C.

ROPY MILK.

I have a heifer nearly 3 years old that came in on July 4. She gives about eight quarts of milk twice a day. The milk looks all right when strained, but after setting in pans, a clabber-like sediment accumulates in the bottom. The milk is not sour but it looks unfit for use. A. U.

From this somewhat meager description, I am inclined to think that the trouble with this milk is due to ropy milk bacteria; if so, the heifer has nothing to do with it at all. This is a bacteria that gets on the udder and into the opening of the milk duct and causes the milk to assume this stringy lobbard condition, and yet it does not sour. You do not say that the milk seems to be stringy and I understand from your letter the milk will pass through a strainer. When you have ropy milk, it will not go through a strainer readily and it is stringy, so I am not sure that I am correct about this cause. I advise you to consult your veterinarian. If you have a case of ropy milk you can easily get rid of it. Make a very weak solution of sulphuric acid, wash the cow's teats before and after milking, rinse the strainer and pails and all dairy utensils in this weak solution. Two or three applications usually remove this entirely. C. C. L.

REFORMING CONVEYANCES.

A mortgaged his farm to B, who in turn assigned to C. A now has a guardian who sold the farm to D, subject to the mortgage. The description was wrong; it put the mortgage on an adjoining farm, which gives D a clear title without paying the mortgage. How can C get his pay? A has no means. The mortgage is due in two years. F. L. B.

If the purchaser from the guardian had notice in fact or by legal implication of the mortgage, C can, by filing a bill in chancery, have the mortgage reformed to conform to the intention of the parties and foreclosed. If the

purchaser had no notice of the incumbrance, the assignee's remedy would only be against the estate of the person under guardianship or against B. C should consult a good lawyer at once. J. R. R.

OATS FOR PIGS.

Can you give me some idea in regard to feeding oats to pigs. Last year I fed whole oats to pigs and they did all right, but this year I have been feeding ground oats and corn, equal parts by weight, also corn on cob, and some of my pigs are getting the piles. Now, what causes the piles and is there any cure for them? The ground feed has been fed in the form of slop. Clinton Co.

J. A. G.

Oats are so chaffy that they are not considered a good food for pigs. It would be entirely impracticable to feed pigs unground oats, as most of them would not be digested and assimilated. They are much better when ground, then the pigs will select out the meat of the oats and leave the hull. Oat meal proper is a splendid food for growing pigs. If you feed oats or oat meal to horses or ground oats to cattle of course this hull of the oat which the pigs refuse to eat is consumed by these other animals without waste. It is better ration, however, to feed corn and oats ground together to growing pigs than to feed corn alone.

I cannot understand why a feed of corn and oats or corn on the cob should give your pigs the piles. Corn is not a constipating food and ought not to affect them this way. I am not competent to judge but I should say that this comes from some other cause and you should talk with your veterinarian about it. Too close confinement, too thin a slop, or some condition not indicated in your letter, is in my judgment, the cause of this trouble. C. C. L.

THE CARE AND REPAIR OF TIRES.

Through your service department I would like to have you answer the following for the benefit of the writer and, no doubt, many other interested persons: Is it advisable to vulcanize and retread tires and what precautions can a farmer take to relieve him of some of the expense connected with keeping his automobile going? SUBSCRIBER.

One of the largest items of expense in operating a motor car is tires. This is particularly true of the farm car. Gravel roads are much harder on tires than city pavements. The farmer drives more in bad weather and carries heavier loads. All this takes its toll on the tires.

The cost of tires is almost wholly up to the driver; for the service from tires is very largely dependent on the care taken of them. A little cut, hardly noticeable, may let moisture in that in time will rot the fabric and eventually cause it to give way. Or sand working in will "blister," loosening the tread over a steadily increasing area.

Vulcanizing, properly done, will prevent this. The work should be done by a man who understands it. The fabric must be dry and clean—often some of it must be replaced. Every particle of moisture must be eliminated if the correct chemical action in rubber is to take place when the vul-

canization is going on. It requires men of experience to do the job correctly. The proper application of heat is necessary to cure rubber properly. Too little heat makes a soft, spongy mass that will soon wear off and drop away from the repaired spot. Over-heating the rubber makes a hard mass with no life, which cracks and crumbles under pressure.

Retreading offers a saving to the farmer. Many tires on automobiles and farm trucks are worn badly on the tread and are "rut-cut" while the "carcass" is still sound. A fully equipped shop, manned by skilled workmen, can take such a tire and put a new tread on it—one quite as good as the original one.

As regards the general care of tires the following "don'ts" should be practiced by every apto driver:

Don't run your tires under-inflated. Don't overload your car. It has the same effect on tires as under-inflation. Don't hit any obstruction or bad holes at a high rate of speed. It will save many blow-outs of perfectly good tires.

Don't drive your car with the wheels wobbling or out of true. The entire rubber tread of a new tire can be worn or rasped off in 200 miles of travel with front wheels out of line one inch.

Don't put a good tire on a rim that is bent out of shape or flattened down because the bead will not conform to it and thus cause it to break in the carcass.

Don't rely on a blow-out patch to mend a break or blow-out in your tires. The blow-out patch is only a temporary repair at the best and will not prevent the fabric from tearing further to exclude sand, mud or water.

Don't pump up tires without testing pressure with air gauge. It is impossible to guess within twenty pounds. Use the pressure specified by the tire manufacturer.

Don't run a tire with a bad cut in it. The cut will grow and finally cause a blow out.—C. Von P.

SEEDING TIMOTHY AND ALSIKE IN THE FALL.

We have been greatly helped by the Michigan Farmer. Would like to ask how it works to sow timothy and alsike clover on wheat stubbles this fall (or would it be better in the spring) on which I failed to get a catch from last spring's sowing? Eaton Co.

N. F.

If you care more about getting a catch of timothy and alsike than you do of getting a good crop of wheat, then the thing to do is to seed the grass when you sow the wheat. Most drills have a grass seed attachment, so the seed can be sown the same time you drill the wheat. The grass, especially the timothy, gets a good start in the fall, and if the wheat is injured a little by a severe winter, the grass is liable to get a start of the wheat in the spring and injure its growth. That is the only thing that prevents most everybody from seeding in the fall. On the other hand, if you wait till spring, the wheat, even though it be somewhat weakened by the winter, has the land all to itself and quite often improves wonderfully and makes a good

crop, but if the timothy has obtained a good start in the fall, many times it is so vigorous in the spring and starts so early that it does not give a weak wheat plant much chance to improve.

With a normal season, that is one containing a fairly well distributed rainfall, there is little risk in seeding to timothy and alsike in the spring on the wheat, and when the wheat is harvested, a timely shower will develop a good stand of the timothy and clover. C. C. L.

UNTHRIFTY TURKEYS

Two of my young turkeys seem shaky and their feathers are somewhat ragged. They seem to grow and are heavy enough but not as large as the others. They will walk a little distance, then seem to shake so badly that they will squat down. Please tell me what ails them and what is the remedy. Baraga Co.

P. H. M.

Some young turkeys in a flock may seem lacking in vigor even though the others are thrifty birds. Diarrhea is a common cause of weakness in poults. If it occurs try feeding boiled eggs and stale bread, heavily sprinkled with pepper. The trouble might be due to leg weakness brought about by a lack of protein in the ration. Plenty of sour milk is a good feed for poults and seems to help in preventing such troubles. If 4 out of 6 of the poults are healthy and they are all from the same breeding stock, probably the breeders are all right. But often a weakness in young turkeys is due to in-breeding or weak and immature breeders. It will pay to isolate the sick poults, so if the trouble turns out to be black-head there will be less danger of infecting the other poults. K.

RESULTS FROM ROAD TESTS.

(Continued from page 370).

government. All the goods will be offered at prices ranging from 40 to 50 per cent below their cost several years ago.

The War Department in co-operation with the federation representatives, is working out the details of handling these goods which will be announced soon, and the sale will be started in the different states. The Washington Federation office is receiving very favorable responses from the state organizations in reference to this War Department goods sale. The War Department now has something like \$800,000,000 worth of goods to dispose of, but only a part of which is useful for the farmers. The Department has already sold about one and a half billion dollars worth of lumber, wool, clothing and other goods.

AN infestation of the Japanese beetle, an unwelcome immigrant from the Orient, has been found in an area covering seventy miles in the southeastern part of Pennsylvania and in New Jersey. This has led the Federal Horticultural Board to send out a notice calling for a hearing on the proposal to quarantine the entire states of Pennsylvania and New Jersey. The Farm Bureau Federation has objected to this on the grounds that only the infested area should be quarantined, and that as the infestation spreads slowly, it would be unfair and not desirable to place sections of the two states far removed from the infestation under quarantine. It was decided, however, in favor of state-wide quarantine, but only the infested portions will be held as restricted area. E. E. R.



Harvesting Corn With Hogs

Growing Pigs are the Most Profitable Helpers

WHY is the hog classed as a soil robber? No other animal carries down corn for periods ranging from away so little fertilizing material as one to ten years, but five per cent re-the hog in proportion to its body ported unfavorably, during an investi-weight. Most of the weight of the gation carried on by the Iowa station. market hog is made up of fat, and it Some of their expressions in favor of hogging down corn are as follows: "Hogs gain one fourth faster than in dry lot and put on twelve pounds of pork without tankage as compared with ten pounds in dry lot with tankage." "I believe that twenty bushels of corn fed in the field will put on as much gain as twenty-five pounds fed in dry lot." "Hogs do better, grow faster and are in better tone; never lost a hog in the corn field."

Such answers are indicative of the enthusiasm displayed by all who have made the test.

At the same time let it be remembered that corn must be supplemented in the corn field as it is in the dry lot. Nevertheless, it can be accomplished with much less expense attached than when tankage is used as the supplement. Probably the most economical method is to plant a forage crop in the corn, such as rape, Dwarf Essex preferred, and allow the hogs to balance their own ration.

The best time to plant rape in corn is at the last cultivation, the corn being dented by the time the rape has made a good growth. The greatest advantage of rape as a field supplement for corn is that it is relatively cheap to produce and is easily grown. The price ranges from twenty to forty cents a pound, and two or three pounds suffice for an acre. The seed can be sown with a hand seeder immediately preceding the last cultivation, or may be sown shortly after with a drill, but the time and expense will be more than enough to offset the advantage of a more even distribution and covering of seed. With an acre of rape estimated at \$15, and two pounds of seed worth but fifty cents, the practice of sowing this crop in corn is indeed a good investment.

Some farmers advocate the use of soy beans drilled in the corn, but soy beans require a much longer growing season than does rape or most other supplemental crops. Many farmers experience some difficulty in obtaining a mature stand at the time the corn is dented. Then again it is necessary to inoculate for soy beans, while the seed costs more than that of rape. However, soy beans have a beneficial effect on the soil, adding that valuable element, nitrogen, an advantage that rape does not possess. When soy beans are used, they must be planted at the time the corn is drilled. Among other crops that are sometimes employed are rye, hairy vetch, pumpkins, Canadian field peas, cow peas and a mixture of rape and pumpkins.

Experience shows that, as a rule, lime and phosphorus are the elements needed to encourage the growth of desirable grasses and soil-improving forage crops. It follows of course that the supply of humus is generally inadequate, and that the physical condition of the soil precludes the best effects of tillage and the general thrift of the cultivated crops. Different farmers are going about the problem of improving conditions in different ways, but the ones who are on the road to success have introduced systems which include pastures, small colony houses, the growing of soil-improving crops, larger feedlots and utilizing the hogs to gather a portion of the field crops. The changing of feedlots and shifting pastures makes it possible to derive maximum benefit from the fertilizing elements in the stubble, roots and uneaten portions of the crops, reinforced by the droppings of the hogs. A system of this kind not only makes the hog a very efficient soil builder but it has many other advantages.

This explains why hogging down certain crops is proving so satisfactory on many farms where the practice has been given a fair trial. Hogging down the corn crop has helped to solve the labor problem and added many a dollar to the profits of those who have followed the practice for several years.

Ten years ago, hogging down corn was considered unprofitable, a lazy man's method of harvesting corn, which if gathered by man, would return a greater profit. But this theory has been reversed by the results of the practical experience and experiments carried on by the Minnesota and Iowa Experiment Stations. There are, of course, many disadvantages to the practice, but these are offset by the many advantages in its favor. It is significant that of 194 experienced

farmers, farmers who have hogged down corn for periods ranging from one to ten years, but five per cent reported unfavorably, during an investigation carried on by the Iowa station. Some of their expressions in favor of hogging down corn are as follows: "Hogs gain one fourth faster than in dry lot and put on twelve pounds of pork without tankage as compared with ten pounds in dry lot with tankage." "I believe that twenty bushels of corn fed in the field will put on as much gain as twenty-five pounds fed in dry lot." "Hogs do better, grow faster and are in better tone; never lost a hog in the corn field."

Such answers are indicative of the enthusiasm displayed by all who have made the test.

At the same time let it be remembered that corn must be supplemented in the corn field as it is in the dry lot. Nevertheless, it can be accomplished with much less expense attached than when tankage is used as the supplement. Probably the most economical method is to plant a forage crop in the corn, such as rape, Dwarf Essex preferred, and allow the hogs to balance their own ration.

The best time to plant rape in corn is at the last cultivation, the corn being dented by the time the rape has made a good growth. The greatest advantage of rape as a field supplement for corn is that it is relatively cheap to produce and is easily grown. The price ranges from twenty to forty cents a pound, and two or three pounds suffice for an acre. The seed can be sown with a hand seeder immediately preceding the last cultivation, or may be sown shortly after with a drill, but the time and expense will be more than enough to offset the advantage of a more even distribution and covering of seed. With an acre of rape estimated at \$15, and two pounds of seed worth but fifty cents, the practice of sowing this crop in corn is indeed a good investment.

Some farmers advocate the use of soy beans drilled in the corn, but soy beans require a much longer growing season than does rape or most other supplemental crops. Many farmers experience some difficulty in obtaining a mature stand at the time the corn is dented. Then again it is necessary to inoculate for soy beans, while the seed costs more than that of rape. However, soy beans have a beneficial effect on the soil, adding that valuable element, nitrogen, an advantage that rape does not possess. When soy beans are used, they must be planted at the time the corn is drilled. Among other crops that are sometimes employed are rye, hairy vetch, pumpkins, Canadian field peas, cow peas and a mixture of rape and pumpkins.

Use Growing Hogs.

More than ninety per cent of the farmers in Iowa have demonstrated their preference for spring pigs for hogging down the corn crop. Old sows are undesirable in many cases, owing to their tendency to break down the stalks, to ruin unless the range is limited. It is a good plan to follow up with brood sows later in the season. In this manner the sows are able to get much needed exercise and a lot of mineral matter that they would otherwise not receive.

Generally, the older the hogs, the less acreage fenced off at a time to prevent them from breaking down more than they eat. If the wind has blown down the corn, less space is required. A field of five to nine acres is to be preferred in such cases. Other

(Continued on page 387.)



Your Husband is a Busy Man, Mrs. Farmer!

THERE isn't any doubt that he has had it in mind to instal a modern lighting and cooking plant in the home some day—to give you and the family the comforts and conveniences you deserve. Other matters have caused him to overlook this important item.

That is why you should know all about the

COLT
TRADE MARK

CARBIDE LIGHTING AND COOKING PLANT

Just think of having a flood of bright, mellow light in any room in the house at a mere twist of the fingers! And carbide gas is the nearest light there is to actual sunlight,—bright, mellow and easy on the eyes. Best for reading and sewing, it makes the home cheerful and cozy and saves the children from eye-strain over their lessons. Think how convenient such light will be to your husband in the barns before sun-up and after night-fall!

The plant is easy to instal and requires no expert attention. In fact, it needs very little looking after of any sort. Takes up no more room than a couple of apple barrels and operates only when gas is actually being used for cooking and lighting. Between times it doesn't cost a penny.

In your kitchen, carbide gas will furnish the hottest known cooking flame. No more keeping a fire going all through the hot summer days; no more ashes to dirty your kitchen. It can be as clean and as cool as any room in the house. A carbide gas-burning iron will take the drudgery out of Tuesday.

There are over 300,000 country homes using Carbide Cooking and Lighting Plants. Many have been in use for years and years without costing one penny in repairs!

Wouldn't you like to have these city conveniences in your home? Then write us for full particulars so that you may remind your husband of this important matter.

J. B. COLT COMPANY

20 East 42d Street, New York

HOLDEN
LIME, PHOSPHATE
and FERTILIZER
DISTRIBUTOR

SPREADS WET or DAMP LIME ROCK

30 Days Free Trial

If the Holden does not do all we claim, return it.

Increase your crops by spreading. Get a hardier, more certain stand. Put life back into the soil. Save labor and time and make bigger profits by using this lime phosphate and fertilizer distributor.

(Write for trial offer and for folder)

Tells everything. Holden spreads 16 feet wide. Handles wet and damp limerock. Passes egg size rocks. Attaches to any wagon in 3 minutes. No heavy lifting. Light draft. Find out all about it. Write.

The HOLDEN CO., Inc.
Dept. 30 Peoria, Ill.

SPREADS 16½ FT. WIDE

Married Man Wanted for farm work. A good opportunity for the man that is industrious and conscientious. For particulars write to **BROOKWATER FARM**, Ann Arbor, Mich., J. B. Andrews, Mgr.

Mechanics
Earn 90¢ an hour

Come to the Sweeney School of Auto, Tractor & Aviation Mechanics—greatest in the world. Pack your grip—say good-bye to \$4 a day—and strike out for the big money.

Eight Weeks of the Sweeney System trains young men mechanically inclined to make and repair autos, tractors, gas engines, auto tires, etc. No previous experience. Use tools instead of books. 85,000 graduates.

FREE Send name for 72-page catalogue. Hundreds of pictures of men working in Million Dollar Trade School. Pack your grip—come to-day. I guarantee railway fare round trip if you find a single misrepresentation. Emory J. Sweeney, Pres.

LEARN A TRADE
Sweeney
SCHOOL OF AUTO-TRACTOR-AVIATION
67 SWEENEY BLDG. KANSAS CITY, MO.

LANDOLOGY Special Number just out containing 1920 facts of Clover Land in Marinette County, Wisconsin. If for a home or as an investment you are thinking of buying good farm lands where farmers grow rich, send at once for this special number of LANDOLOGY. It is free on request. Address **SKIDMORE-RIEHLER LAND COMPANY**, 381 Skidmore-Riehle Bldg., Marinette, Wis.

Paint Salesmen Wanted
We want good live salesmen, men or women, in every part of Michigan to sell the World's Best House and Barn Paint on our direct from Factory to Consumer plan at the factory price. Good commissions, steady employment summer and winter. Address **GRAND RAPIDS YARNISH CO., Paint Dept.**, Grand Rapids, Mich.

as they begin to ripen. The covering outside the seed is thin and leathery and while ripening, splits and peels outward and backward in curious fashion. Perhaps the only recognized variety of almond of this class which is known to have fruited in the East is the Ridenhower from southern Illinois. Trees can be had from some of the nurserymen.

The Beech.

One of Michigan's noblest, hardiest, and most often abused trees is the American beech. It is common from North to South. No tree is more handsome, and none, unless possibly it be the white birch, is so often defaced. The beech is not directly important as a nut-bearing tree, but indirectly it is as the nuts are rarely harvested. No food is better for turkeys and hogs than are beechnuts. A bushel of beechnuts that can be used in this way should replace at least a bushel of corn. The difference in cost of production should make beechnuts worth several times as much as corn.

In Europe a valuable oil used as a drug and for salads is expressed from beechnuts. Possibly individual trees could be found somewhere in Michigan which produce nuts large enough, good enough, and in quantity enough to justify their recognition and propagation as named varieties. No matter whether distinct varieties appear or not, the beech is well worthy of planting in many places about both the farm and the city lot.

Butternut.

A member of the walnut family known also as "long walnut" and as "white walnut" is the true butternut. It has a smaller range of adaptability than does the black walnut but is found considerably farther north. On the Atlantic coast, its native range extends into Nova Scotia. In parts of New York State and New England, it is one of the most common species. It is well known in Michigan where, to many people, it is the favorite of all nuts. The tree is less durable and long-lived than is the black walnut. It is less well suited for use in the landscape and its timber value is probably the least of any native walnut.

Within very recent years one or two promising varieties have been introduced by the nurserymen. The first and only one now available is the Aiken from New Hampshire. The nut cracks well and the kernels are of pleasant flavor, but as a variety it has not been tested long enough to determine its adaptability to conditions in other states nor the extent to which budded trees will be productive.

Chestnut.

Perhaps the greatest of all tree tragedies is represented by the chestnut. Once a dominant species in many parts of the East, it is now merely a wreck of its former self. In whole states along the Atlantic Seaboard, it has been wiped out by a fungus disease introduced from Japan some 25 years ago. Pennsylvania allows no chestnut trees to be shipped outside its limits for fear of further spreading this disease. So far as known, chestnut trees from west of the Wabash River are free from infection. From Illinois, there have recently been introduced several varieties of chestnut supposedly of pure American parentage which are quite the equal in size of the European sorts but which have the sweet flavor of true American strains. In protected places in the southern part of the Lower Peninsula these chestnuts should be well worthy of trial. They are, indeed, splendid chestnuts. The principal varieties are the Rochester, Progress, Fuller and Boone. The last is not related to the others; but is the result of an artificial cross between the American sweet chestnut and the Japan Giant.

Hickory.

Next to, or perhaps equal to the

Nut Culture on Farms

(Continued from page 367.)

black walnut, the hickories are among the best known of Michigan's nut trees. Belonging to the same family as do the walnuts, they require much the same soil for their best development. They are slower of growth and even harder to bud and graft or to successfully transplant. Nevertheless, some hickories bear splendid nuts in liberal quantities. Quite a number of good varieties have been named and a few propagated. They are mainly of the shagbark species, although some are shellbarks, some pignuts, and a few hybrids. The true shellbark is not found in Michigan and would probably not succeed there as well as do the others. In character of growth, the shellbark is much like the shagbark, but the nuts are much larger and the shells extremely thick. Among the good shagbarks there are the Swaim, Weikér, Kentucky, Monahan, Taylor and Vost. True hickories ordinarily do not attain important habits of bearing until from 15 to 25 years of age.

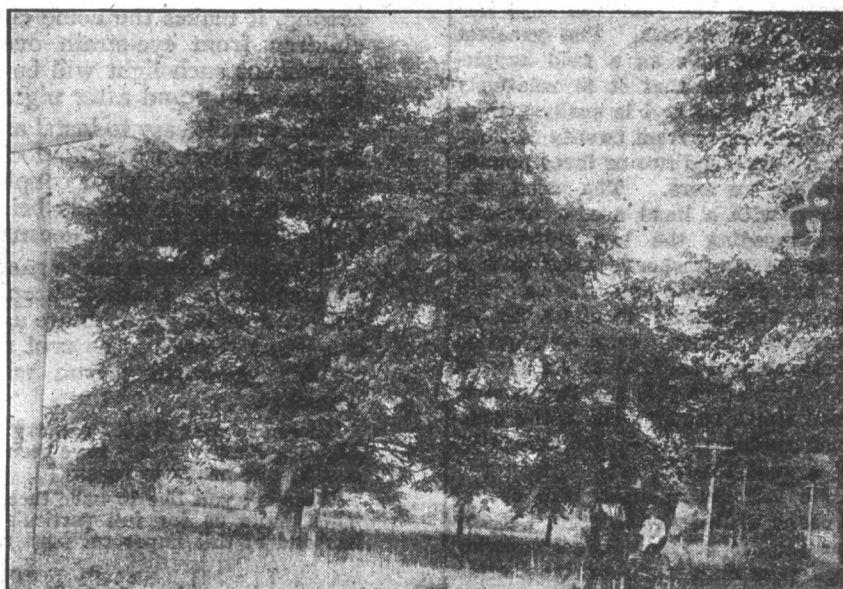
Pecan.

The pecan is easily the favorite and most important nut of American origin. Contrary to current ideas, it is not an introduced species nor are the best pecans grown in California. The pecan has become one of the leading

is sometimes a very rapid grower. Three varieties of black walnut are now available from the nurserymen. They are the Thomas from Pennsylvania, the Ohio from some 20 miles south of Toledo, and the Stabler from Montgomery County, Maryland, 15 or 20 miles outside the District of Columbia. All are prolific, precocious, and of superior cracking quality. The Thomas was discovered and first propagated some 30 years ago. The others are of less than 10 year record. The young grafted trees show a tendency to begin bearing in the nursery rows. At the present time, the black walnut is regarded as being of greater promise for planting in the northern states than is any other species, either native or introduced.

The Japanese Walnut.

To a considerable extent this species has been confused with the Persian walnut, although the two are quite unlike. This is a dwarfish species, with dull green rough leaflets often as many as 15 or 17 per leaf, which often bears nuts in clusters of a dozen or more. While green, the outer hulls of the nuts are rough and somewhat sticky. The Persian walnut is a standard-sized upright growing tree with bright green large leaflets, usually 3 to 7 per leaf, and smooth,



While the American butternut is not as valuable as its first cousin, the black walnut, it is capable of being grown farther north, and the nuts are preferred by a great many people.

nuts of this country by rapid but natural processes. In the forests, it is indigenous as far north as the southern part of Indiana, and in western Illinois it is found at the latitude of Chicago. Seedling trees at South Haven and on the campus of M. A. C. have borne occasional crops, but the climate of Michigan is too severe for pecans to bear regularly. The trees of northern origin should do well enough over much of lower Michigan to be worthy of planting. Good varieties are the Major, Greenriver, Niblack, Indiana, Busseron and Posey.

Black Walnut.

Already the black walnut has been referred to in this article. In its further behalf may be said that like the pecan it is one of America's most rapidly growing, valuable trees. It does not grow with the speed of a poplar, a willow, or a linden. Neither does any other tree of value or longevity. Two six-year-old trees of the eastern black walnut grown in the Willamette Valley of Western Oregon, bore approximately a peck of nuts apiece in 1919, when they were photographed by the writer. In good soil and under favorable conditions of growth, it will be seen that the black walnut is not always slow in developing but that it

present, seedling trees will have to be relied upon almost wholly, as very few varieties have been propagated. So far as the writer is informed, the only named variety available from a northern nursery is the Lancaster, introduced by J. F. Jones, a nurseryman at Lancaster, Pa.

Persian Walnut.

Perhaps no species of nut tree has attracted as great attention in Michigan as has the Persian walnut. Under some conditions it does well for a time in the eastern or northeastern states, but on the whole its performance is distinctly erratic. Commercially speaking, it is of importance in this country only on the Pacific coast. Trees on the campus at M. A. C. and at many private places in the central part of the state, have come to little. Usually they grow well in summer, only to freeze back nearly as much in winter. In Saranac County, eastern Michigan, close to Lake Huron, there are a few young orchards that are in good condition, but a half mile back from the lake the results are discouraging. The same is true next to Lake Michigan from Grand Rapids south to the Indiana line.

The only recommendations that can be made relative to planting the Persian walnut in Michigan are, that it be planted very cautiously in any part of the state and except under very favored circumstances it be not planted at all in the middle of the state.

Do not undertake to grow the trees by planting the nuts or by buying seedlings. The most desirable trees are those of hardy varieties, budded on the black walnut as a stock a foot or more above ground.

The Filbert.

The filbert has been one of our most tantalizing species of nut trees. In England, trees grow to ages of from one to two hundred years, bearing profusely meanwhile. There, for many years, they are grown under apple trees with currants below them. In Germany, we are told that strawberries are grown below the currants and gooseberries. We are waiting for the Yankee who will be first to grow peanuts or potatoes below the strawberries. In the eastern part of this country, plants of the European kinds are disappointing in two ways. First, they are uncertain as to their ability to bear; and, second, they are highly susceptible to a fungus disease found everywhere that the native hazels abound. The native species is suitable to resist this disease, but the introductions ordinarily succumb to it quickly.

In the Pacific Northwest, where by many filbert culture is believed destined to become a successful and paying industry within the next few years, not infrequently some varieties begin to blossom as early as in December. The season extends from then on until March. It is thought that this habit of early blooming is largely responsible for the failure of eastern trees to set and mature crops of nuts.

Several nurserymen are now endeavoring to find varieties of commercial value in the eastern part of the country. Apparently they are meeting with some success as far as their work has gone. Many of the varieties they are testing are proving inferior, but a few have borne good nuts in gratifying quantity for several years. During the past winter, a good many froze severely, although they are commonly hardy under severe weather.

Wherever they are planted, they should have fertile soil, from 20 to 25 feet of space each way, and should be trained to tree form. After 10 years or so, they should be headed back severely, unless regular pruning has been practiced in the meantime. Filberts fruit only on new wood.

To those who have read this article to this point, it is now apparent that

(Continued on page 377.)

Firestone

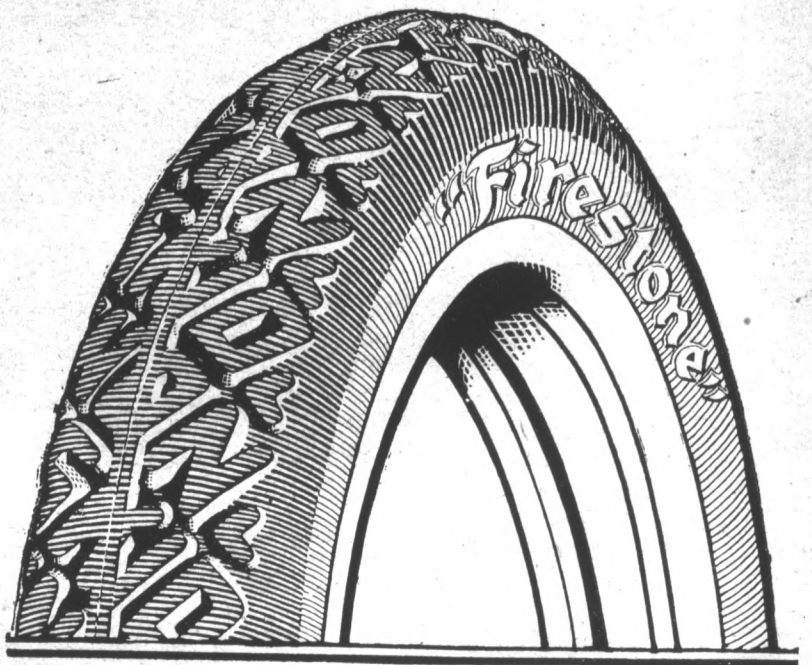
EXTRAVAGANCE has gone by the board. Thrift is in the air. Men are buying where the value is.

The Firestone thrifty 3½ is leading the small-tire field today. Because it is built on real thrift methods from start to finish.

Firestone experts on the spot in the raw material markets of the world are able to get first choice of quality at quantity purchase prices.

Firestone men have worked out the way to produce this tire by concentrated methods—no waste material, no waste motion, no waste space.

And Firestone volume output, through thousands of dealers, permits selling at a close margin. The user gets the benefit. Try this Firestone thrifty 3½.

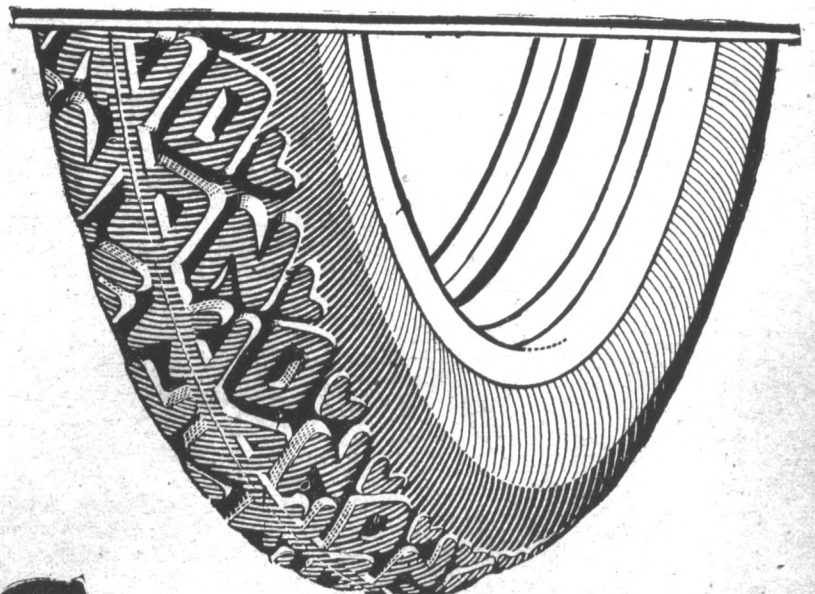


30x3½

(non skid)

\$22.50

Gray Tube \$3⁷⁵
Red Tube \$4⁵⁰



Most Miles per Dollar

Set Your Own Price

On these Prolific-Yielding

California Orange Groves

To be
Sold atPUBLIC
AUCTIONOct. 14th,
1920

First Time in History of California Such an Opportunity Has Been Offered.

337 Acres - - - 38 Groves

Trip to California FREE to Purchasers

This is the last announcement of this stupendous sale, that will be made prior to the big Auction on Oct. 14, 1920.

We earnestly request that you read and consider carefully, then write or wire for complete details.

These 38 groves located in Riverside Orange District, 53 miles from Los Angeles and 3 miles from Riverside. Close to 3 railways and 1 electric road; R. F. D. and deliveries from Riverside stores.

Groves range in size from 3 1/4 to 2 1/2 acres—average 5 to 10 acres. Fully fertilized and watered. Absence of pests and free from frosts. Fruit marketed through Fruit Growers' Exchange. About 60 per cent runs to famous "SUNKIST" Brand, commanding highest market price.

Plenty of water; water stock with each grove. Some groves have houses and buildings. No smudge pots ever used in this district. Fruit is Navel and Valencia, some groves mixed, others entirely of either variety. Navels have tested as high as 9.8 per cent sugar. Age of trees 9 to 16 years.

Groves well sheltered from winds; most boulevards and roads bordered with cypress and eucalyptus trees. Uniform water supply, with no diminution in dry years. Property held in trust by Los Angeles Bank.

Sale starts October 14, 1920. All groves sold at PUBLIC AUCTION. Liberal and convenient terms may be arranged. References, Hellman Commercial Trust & Savings Bank, or Union Bank & Trust Co., both of Los Angeles.

For full information write or wire

HART and BALL

Los Angeles' Progressive Auctioneers

1026-1028 South Figueroa St.,

Los Angeles, Calif.



Other sizes at the same low prices

\$7.10

We Save You 50%

for this Guaranteed 6 Volt 80 Ampere Starting and Lighting Battery

Why pay high prices for storage batteries when you can secure these high grade guaranteed C. A. H. Batteries at a 50% saving?

C. A. H. Batteries are sold direct to you. We have no service stations, distributors, dealers, agents or salesmen. Hence our low prices.

We realize that many car owners take care of their own batteries and seldom visit a service station. So we have simply devised a selling plan that

eliminates the expense necessary to maintain service stations and you get the benefit in direct saving.

C. A. H. Batteries are sold on approval and absolutely guaranteed for one year.

Write us, giving name and year of your car and we will send complete details and quote prices by return mail.

C. A. H. Battery Sales Co.

63 Bagley Ave.,

Detroit, Mich.

Farms and Farm Lands For Sale

350-Acre Farm With 40 Cattle, 3 Horses, Crops and

3 hogs, flock sheep, poultry, fodder to winter stock, machinery, wagons, tools; 275 acres machine-worked fields, wire-fenced pasture, 1,000 cords wood, market nearby; 200 sugar maples, apple orchard, 2-story, 12-room modern house, bath-room; 107-ft barn, 2 silos, spring water, 2 other barns, poultry house, other buildings; settling estate, everything goes to quick buyer for \$7200, easy terms. Details this and good farm with 11 cows, equipment and produce, only \$1,000 cash needed, page 22 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just Out. Copy free. STROUT FARM AGENCY, 814 BC, Ford Bldg. Detroit, Mich.

For Sale 240 A. stock farm, plenty productive tillage, and plenty low land pasture, always green, for 50 head cattle. Good buildings, good water, \$55 per acre cash or on terms. VERN L. FARLEY, R. 5, Bellevue, Mich.

FARMS FOR SALE

in New York State. 310 acres, good buildings, 200 acres tillable, 4 miles from station, 200,000 ft. lumber, 23 Holstein cows, 12 head young stock, all crops harvested or unharvested, complete equipment tools, hogs, poultry, etc. \$10,000. Write for catalog. H. M. BOWEN, Farm Settlement Agt., Cooperstown, New York

Owner Obligated To Go

to another state offers fully equipped 200 acre dairy farm with two good homes at big sacrifice if taken now. Convenient to best schools and college. Examine and make offer, with or without equipment. WILLIAM B. HATCH, Ypsilanti, Mich.

Wanted to Rent a fruit or general farm with or without equipment in Michigan. Address JAMES HILBERT, Gilman, Wis.

Don't Buy A Farm, before you get our free list of 50 good farms. DeCOUDRES, Bloomingdale, Mich.

Real Cooperation

Farm Bureaus Buy Large Quantities of Seed from Producers

ACTIVITIES of the Michigan State Farm Bureau are extended far beyond the boundaries of the state. What promises to be of much benefit to Wolverine farmers is the seed purchasing alliance of Michigan, New York, Ohio and Pennsylvania. To purchase in the far west and northwest, high-grade seeds for use in the east and middle-west, J. W. Nicolson, manager of the Michigan Farm Bureau seed department, and John H. Baron, of the New York State Farm Bureau have been named a committee to buy for all.

The purpose of this committee is to enable these states to bunch requirements, thus giving volume of buying power and keeping them from competing with each other for the same product. It will materially cut down expenses as the committee can just as easily buy in large quantities as small and the gross expense in operating in this way is not near as great as it would be if all were working independently.

This week Secretary Bingham is in Kansas in attendance at the meeting of representatives of middle-western farm bureaus. Representatives of the far western states are expected to be present also in response to Michigan's request that they cooperate in efforts to

out unnecessary alternating high and low spots as well as in cutting out unnecessary and wasteful costs and handling charges.

Closer understanding and cooperation between the bankers and farmers of the state will result from the attendance of farm bureau representatives at the group meetings of the Michigan Bankers' Association held in different parts of the state this month.

MICHIGAN REPRESENTED ON FEDERAL COMMITTEE.

MICHIGAN will have one of the few farm bureau representatives on the national committee appointed this week by President J. R. Howard of the American Farm Bureau Federation which is trying to work out a nation-wide plan for co-operative marketing of grain by producers. Secretary Bingham of the Michigan State Farm Bureau will serve on this committee, which will convene in its first meetings in Chicago the last week in this month.

In addition to the various farmers' organizations, the federal government, the public, the agricultural colleges and the agricultural press are represented on the committee. The biggest feature of this movement to remember is that it is practically the first time in the history of American agriculture when the bulk of the various farmers' organizations of the middle west have been linked up together in work for a common purpose. In the past there has been unfortunately division and jealousy, preventing the gaining of any unanimity of thought, but the big marketing congress held in Chicago last July when the appointment of this committee was authorized and which was attended by some four or five hundred producers indicated that the time is at hand for a merging of energies. The point which will perhaps dominate the discussions of this committee is whether the Californian crop contract scheme which has linked all the producers of fruit in that territory closely together may not be adapted to grain marketing in the middle west. The Californians have demonstrated that tight contracts are necessary if interests are to be held together and the success of their scheme has been demonstrated by the prosperity of the raisin, prune, orange and other fruit growers.

Besides Mr. Bingham, the members of the marketing committee are: J. M. Anderson, Equity Co-operative Exchange, St. Paul, Minn.; P. E. Donnell, Farmers' Grain Dealers' Association of Missouri, Waco, Missouri; John L. Boles, National Farmers' Equity Union, Liberal, Kansas; Wm. G. Eckhardt, Farm Bureau, 130 N. Wells St., Chicago, Ill.; C. V. Gregory, Agricultural Editors Assn., Chicago, Ill.; C. H. Gustafson, Farmers' Union, Lincoln, Neb.; William Hirth, Missouri Farmers' Clubs, Columbia, Mo.; C. H. Hude, Farmers' Union, Alva, Okla.; Dr. E. F. Ladd, Agricultural Colleges, Fargo, N. D.; Dr. George Livingston, U. S. Department of Agriculture, Bureau of Markets, Washington, D. C.; H. R. Meisch, Farmers' National Grain Dealers Assn., Argyle, Minn.; A. L. Middleton, Farmers' National Grain Dealers Assn., Eagle Grove, Iowa; Ralph Snyder, Farm Bureau, Oskaloosa, Kan.; L. J. Taber, Grange, Barnesville, Ohio; Clifford Thorne, Farmers' Nat'l Grain Dealers Assn., Chicago, Ill.; Dr. H. J. Waters, representing the Public, Kansas City, Mo.



J. W. Nicolson, the Capable Manager of Mich. Farm Bureau Seed Dept.

build a national wool pool or national wool sales agency for next year. This subject with live stock marketing will be the principal ones up for discussion in Kansas.

Within a few days after this Kansas meeting, it is expected that President Howard of the American Farm Bureau Federation will convene his newly appointed committee of seventeen, which is to endeavor to work out a national cooperative method of selling grain. Secretary Bingham is one of the few farm bureau representatives on this committee, which includes representatives of all farm organizations in the middle west interested in grain marketing and also of the agricultural press, the department of agriculture, and the public.

This committee will carefully investigate the plan followed by grain growers of western Canada and the plan of the California fruit growers, where favorable results have followed cooperative marketing enterprises.

In the activities of this committee better prices for the producer is not alone sought. It is believed that elimination of speculation in commodities will not only mean better prices for producers but fairer prices for consumers. Intelligent marketing, it is contended, will do much toward smoothing

STATE FAIRS SPUR TO DAIRY
SHOW CATTLE EXHIBITS.

THE SHOWING of dairy herds at the National Dairy Show, which will be held at the Union Stockyards, Chicago, Oct. 7-16, will be the largest and most varied exhibition of dairy cattle ever collected for show purposes. The increased interest in dairying and animal husbandry in general and the keen competition in the prize rings of state and county fairs, where big entry lists of purebreds are judged lead the officials of the Dairy Show to make this assertion without fear of exaggeration.

The dairy cow has come into her own and her admirers will be given a remarkable opportunity to compare breeds and qualifications. The grade cow, too, will have her just due at the show, and this good, dependable milk-er, not listed in the Bovine Blue Book, will be exhibited in large numbers. In fact, with the inability of thousands of dairymen to change abruptly to all thorough-bred herds, the grade cow will be featured.

The showing of cattle, however, is only a part of the many interesting things which the fourteenth annual dairy show has to offer. Every conceivable appliance for the handling, manufacturing and distribution of milk products will be there. From the shining milk pail and humble milking stool to the involved mechanism of refrigerating plants and creamery equipment, this section has grown to such an extent that a 25 per cent increase in floor space is demanded over last year. The cattle show space has been increased 15 per cent over 1919. The butter and cheese exhibits of Denmark, Holland, Argentine and Uruguay will be especially complete. The great educational advantages of such a gathering are obvious and hundreds of organizations from all parts of the United States will send delegations whose reports of the show will spread the gospel of Better Dairying.

NUT CULTURE ON FARMS.

(Continued from page 374.)

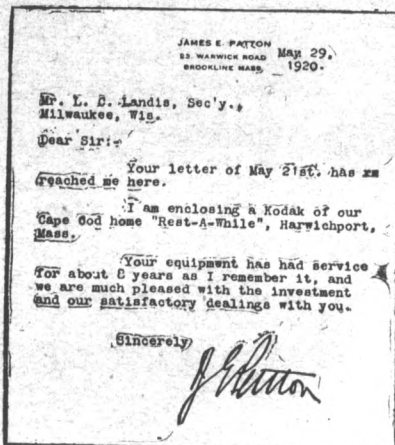
the nut industry of Michigan lies almost wholly in the future. The native varieties form an excellent ground work for that future, but to properly take advantage of that base, it will be necessary for practically every nut lover in the state to lend a helping hand. The first great movement necessary is to examine the nuts in the fall as they ripen, in order to find the best of the walnuts, hickories, native hazels, beeches and introduced chestnuts, walnuts and filberts. In this everyone can help. Whoever finds a tree of any kind bearing superior nuts will render a great service by sending specimens, together with his or her address, and that of the owner of the tree, to the federal Department of Agriculture, at Washington, D. C. Be sure to carefully note the exact tree from which the nuts were obtained, and if specimens are sent from more than one tree, they should be kept separate and each carefully labeled. Such nuts will be examined, and if found to be the equal or superior to the varieties already being grown, they will be named and arrangements made for this propagation and test.

No prizes are given by the Government, but good nuts sent the Government will be eligible to entry in the contests of the Northern Nut Growers' Association. If enough specimens are sent the Department, some will be forwarded to the Treasurer of that Association, who has charge of awards.

According to very recent reports, the outlook for a nut crop during the coming year was never better. This should, therefore, be an excellent year for finding the trees bearing the best nuts.



Mr. Patton's Home
—where a Milwaukee Air Power
System was installed by our Expert

Water and Light
on CAPE COD

There are two good reasons why Milwaukee Air Power Water and Light Systems appeal as strongly to the owners of country estates as to the thousands of farmers now using them.

They are the common-sense, simple and practical systems—automatic in action, economical and efficient; storing no water, but delivering it "direct from the well"—always fresh; and, second—in every locality there is an Expert who represents us—able to examine your water and light problem intelligently, and to recommend practically—without charge.

Write for full information

Milwaukee Air Power Pump Co.
868 Third Street, Milwaukee, Wis.

Milwaukee

Air Power WATER LIGHT Systems

Ask the Expert

Write to us for the name of the
Expert near you. He will give you
the kind of help and advice you want



Every Farm Needs a Concrete Mixer

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

SHELDON CONCRETE MIXER

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

MAIL COUPON TODAY

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

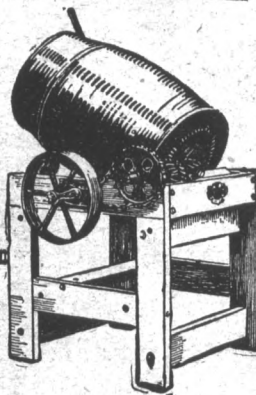
Sheldon Mfg. Company
Box 770 NEHAWKA, NEB.

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

Please send me your
new 48-page book.

Name

Address



WRITE QUICK!

Big Special Offer on Kerosene
Engines, Power Saws and Drag Log
Saws. Direct from Factory. Catalog Free.
WITTE ENGINE WORKS
2150 Empire Bldg., Pittsburgh, Pa. 2190 Oakland Ave.,
Kansas City, Mo.

LEARN AUCTIONEERING

at the World's Original and Greatest School and become
independent with no capital invested. Every branch of
the business taught. Write today for free catalog.
JONES NAT'L SCHOOL OF AUCTIONEERING
28 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.

INSYDE TYRES

—genuine inner armor for auto tires. Double mileage;
prevent punctures and blowouts. Easily applied
without tools. Distributors wanted. Details free.
American Accessories Company Dept. 712 Cincinnati, Ohio

Make \$40 a Day

Wood will be in demand this winter. You can make
big money with the Phillips One-Man Drag Saw—

Saws 15 to 35 Cords Daily

Fells trees—makes ties. Engine also runs other
farm machinery. "I ran my Phillips Saw one day
and made \$36.80 sawing stove wood lengths. All
done with one man—easily.—J. A. Coverdale."
Just send name—a card will do—for free folder
and money saving prices.

PHILLIPS DRAG SAW MFG. CO.
803 Phillips Bldg. Kansas City, Mo.

DO DITCHING THIS FALL

Prevent winter rains smothering the soil. Put
land in shape for early spring work. Get your
ditching and terracing done now with
the *Marx* Farm Ditcher
Terracer
and Grader
Works in any soil. Makes "V" shaped ditch
or cleans ditches down 4 ft. deep. All steel.
Reversible. Adjustable. Write for Free Book.
OWENSBORO DITCHER & GRADER CO., Inc.
Box 315, Owensboro, Ky.

10 Days Free Trial

Tire Agent

We want one exclusive repre-
sentative in each locality to use
and sell the new Mellinger Extra-Ply,
hand made tires. Guarantee Bond for
\$5000 Miles. (No seconds). Shipped pre-
paid on approval. Sample sections furnished. Don't
buy until you get our Special Direct Prices. Write
MELLINGER TIRE & RUBBER CO.
Dept. 957 Kansas City, Mo.

BUY FENCE POSTS direct from for-
est. Prices deliv-
ered your station. M. M. care of Michigan Farmer

Mention The Michigan Farmer When Writing Advertisers

Half the Wearing Parts

In the *ordinary* battery there are *two* wearing parts—the lead plates, and the insulation between the plates. These are the parts of the battery exposed to the chemical action of the solution—the parts most likely to give out.

The Still Better Willard has only *one* wearing part—for Threaded Rubber Insulation is *not* affected by the solution—it will outlast the battery every time.

Threaded Rubber Insulation has all the high insulating qualities of ordinary rubber, yet allows easy flow of current from plate to plate.

With this acid-proof insulation there are no rotted separators, no expensive replacements. No internal short circuits due

to carbonizing or punctures. No checking or cracking.

Finally, the Still Better Willard is shipped and stocked "bone-dry"—not a drop of moisture in it, no possibility of deterioration. It starts its service in your car as fresh and "peppy" as if just built.

Of the 191 passenger cars and trucks using Willard Batteries as standard equipment 152 have adopted the Still Better Willard with Threaded Rubber Insulation.

Willard Service



This trademark is branded in red on one side of the Still Better Willard Battery—the only battery with Threaded Rubber Insulation.

152 Manufacturers Using Threaded Rubber Insulation

Acason	*Buick	Fargo
Acme	Cannonball	Federal
All American	Capitol	Fergus
Allis-Chalmers	*Case	Ferris
*American	*Chevrolet	F W D
Beauty	Clydesdale	Franklin
American	Cole	Fulton
LaFrance	Collier	Garford
Apex	Colonial	G M C
*Apperson	Comet	Giant
Armleder	Commerce	Glide
Atco	Commodore	Great Western
Atterbury	Corliss	
*Auburn	Cunningham	Hahn
Austin		Hatfield
Bacon	Daniels	H C S
Bell	Dart	Hawkeye
Belmont	Denby	Haynes
Bessemer	Dependable	Henney
Betz	Diamond T	Highway
Biddle	Dixie Flyer	Holmes
*Bour-Davis	Dodge	Holt
Brockway	Dorris	Hupmobile
Buffalo	*Elgin	Hurlburt

Willard STORAGE BATTERY



Independent	Nelson &	Service
Indiana	LeMoon	Shelby
International	Noble	Signal
(I. H. C.)	Northway	Singer
*Jordan	Ogren	Southern
*Kissel	Old Hickory	Standard 8
Koehler	*Olds	Standard
Lancia	Oneida	Stanley
Landa	Oshkosh	Studebaker
Lewis-Hall	*Paige	Stutz
Lexington	Parker	Sunbeam
*L. M. C.	Peerless	
Luverne	Peugeot	Tarkington
Madison	Phianna	Thomart
Marmon	Pierce-Arrow	Titan
Master	Premier	Tow Motor
Menges	Preston	Transport
Menominee	Rainier	Traylor
Mercer	Renault	Ultimate
Mercury	*Reo	Velie
Meteor (Phila.)	Republic	Vulcan
M H C	ReVer	Ward LaFrance
*Mitchell	Riddle	*Westcott
Murray	Robinson	White
McFarlan	Rock Falls	Wilson
*McLaughlin	R & V Knight	Winther
	Rowe	Winton
Napoleon	Sandow	Wolverine
Nash	Sayess	
Nelson	Seagrave	*For Export

WORLD EVENTS IN PICTURES



Proof that the summer is fast waning, is evidenced when the football warriors start to kick around the pigskin. This picture shows the Harvard football men out for their first practice. A number of Crimson players are shown at work on the charging machine. In another week all of the large colleges will be practicing for the coming season.



A part of the crew of the U. S. submarine S-5, who were rescued after a 42-hour battle below the surface. Picture was taken at League Island Navy Yard.



Women pickets in launch alongside S. S. Baltic as she stopped to take on Spaniards in place of striking firemen.



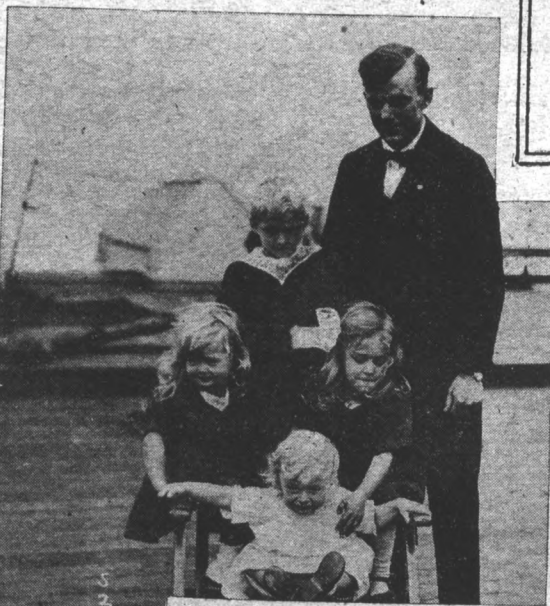
This Pilgrim maid of 1920 is just as quaint and pretty as the Pilgrim maid of 1620.



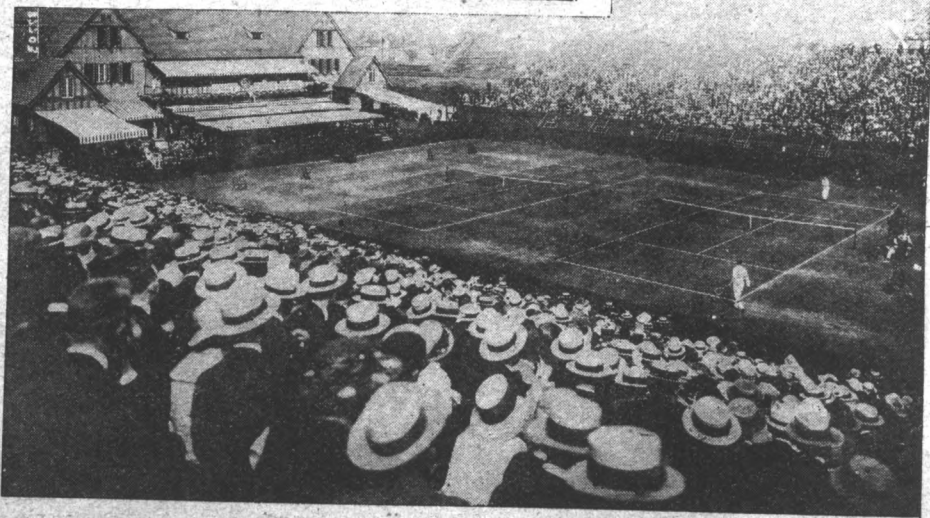
This device enables Mr. Murphy, who is blind, to walk about the streets without stumbling en route.



Each of these four children of Frank Gibler, Vice Counsel from U. S. to Great Britain, were born in a different state.



One of the many families waiting at the gateway to America, Ellis Island, for admittance into the United States. Within a brief period of seven days, 37,000 foreigners will have set foot at Ellis Island, eager to start life in America.



William Johnston is shown defeating Carner of Boston in the semi-final round at Forest Hill, L. I. Tilden defeated Johnston in the final round.

THE VALLEY OF THE GIANTS

A ROMANCE OF THE REDWOODS

By Peter B. Kyne

CHAPTER XXVII.

AN EXPERIENCE extending over a very active business career of thirty years had convinced Colonel Seth Pennington of the futility of wracking his brains in vain speculation over mysteries. In his day he had been interested in some small public-service corporations, which is tantamount to saying that he knew peanut politics and had learned that the very best way to fight the devil is with fire. Frequently he had found it of great interest and profit to him to know exactly how certain men spent their time and his money, and since he was a very busy man himself, naturally he had to delegate somebody else to procure this information for him. When, therefore, the Northern California Oregon Railroad commenced to encroach on the Colonel's time-appropriation for sleep, he realized that there was but one way in which to conserve his rest and that was by engaging to fathom the mystery for him a specialist in the unravelling of mysteries. In times gone by, the Colonel had found a certain national detective-agency an extremely efficient aid to well-known commercial agencies, and to these tried and true subordinates he turned now for explicit and satisfying information anent the Northern California Outrage!

The information forthcoming from Dun's and Bradstreet's was vague and unsatisfying. Neither of these two commercial agencies could ascertain anything of interest regarding the finances of the N. C. O. For the present the corporation had no office, its destinies in San Francisco being guarded by a well-known attorney who had declined to make any statement regarding the company but promised one at an early date. The board of directors consisted of this attorney, his two assistants, his stenographer, and Mr. Buchanan Ogilvy. The company had been incorporated for five million dollars, divided into five million shares of par value of one dollar each, and five shares had been subscribed! Both agencies forwarded copies of the articles of incorporation, but since the Colonel had already read this document in the Sequoia Sentinel, he was not further interested.

"It looks fishy to me," the Colonel commented to his manager, "and I'm more than ever convinced it's a scheme of that Trinidad Redwood Timber Company to start a timber-boom and unload. And that is something the Laguna Grande Lumber Company does not view with favor,

for the reason that one of these bright days those Trinidad people will come to their senses and sell cheap to us. A slight extension of our logging-road will make that Trinidad timber accessible; hence we are the only logical customers and should control the situation. However, to be sure is to be satisfied, Telephone the San Francisco office to have the detective-agency that handled the longshoremen's strike job for us send a couple of their best operatives up on the next steamer, with instructions to report to me on arrival."

When the operatives reported, the Colonel's orders were brief and explicit. "I want to know all about a man named Buchanan Ogilvy, who is up north somewhere procuring rights of way for the Northern California Oregon Railroad. Find him. Get up with him in the morning and put him to bed at night. Report to me daily."

Buck was readily located in the country north of Arcata, and one of the operatives actually procured a job as chainman with his surveying gang, while the other kept Ogilvy and his secretary under surveillance. Their reports, however, yielded the Colonel nothing until the first day of Buck's return to Sequoia, when the following written report caused the Colonel to sit up and take notice. It was headed: "Report of Operative No. 41," and it read:

Ogilvy in his room until 12 o'clock noon. At 12:05 entered dining room, leaving at 1 p. m. and proceeding direct to office of Cardigan Redwood Lumber Company. Operative took post behind a lumber-pile at side of office so as to command view of interior of office. From manner of greeting accorded Ogilvy by Bryce Cardigan, operative is of opinion they had not met before. Ogilvy remained in Cardigan's private office half an hour, spent another half-hour conversing with young lady in general office. Young lady a brunette. O. then returned to Hotel Sequoia, where he wrote several letters in writing-room. At 3 p. m. called to telephone. At 3:02 p. m. left hurriedly for Cardigan Redwood Lumber Company's office. Entered private office without waiting to be announced. Emerged at 3:12, walking slowly and in deep thought. At B and Cedar streets stopped suddenly, snapped his fingers and started walking rapidly, in the manner of one who has arrived at a decision. At 3:24 entered the telephone building and placed a long-distance call. Operative standing at counter close by heard him place call with the girl on duty. He asked for the Cardigan Redwood Lumber Company in San Francisco.

Concluded his conversation at 3:32 and proceeded to the city hall, entering the Mayor's office at 3:43 and emerging at 4:10. He then returned to the Hotel Sequoia and sat in the lobby until handed a telegram at 4:40; whereupon he entered the telephone-booth and talked to someone, emerging at 4:43 to go to his room. He returned at 4:46 and hurried to the law-office of Henry Poundstone, Junior, in the Cardigan Block. He was with Poundstone until 4:59, when he returned leisurely to the Hotel Sequoia, carrying a small leather grip. He also had this grip when he entered Poundstone's office.

Arrived at the hotel at 5:03 and went to his room. At 6:45 he entered a public automobile in front of the hotel and was driven to No. 846 Elm Street. The brunette young lady who works in the Cardigan Redwood Lumber Company's office emerged presently and entered the car, which then proceeded to No. 38 Redwood Boulevard, where the brunette young lady alighted and entered the house. She returned at 7 sharp, accompanied by a young lady whom she introduced to O. All three were then driven to the Canton restaurant at 432 Third Street and escorted to a reserved table in one of the screened-off semi-private rooms along the right side of the dining room. At 7:15 Bryce Cardigan entered the restaurant and was escorted by the waiter to the table occupied by O. and party.

At 9:30 entire party left restaurant and entered a Napier car driven by a half-breed Indian whom the second young lady hailed as George. O. and the brunette young lady were dropped at 846 Elm Street while Cardigan and the other young lady proceeded directly to No. 38 Redwood Boulevard. After aiding the lady to alight, Cardigan talked with her a few minutes at the gate, then bade her good-night and after waiting until she had disappeared inside the front door, returned to the automobile and was driven to his home, while the chauffeur George ran the car into the Cardigan garage.

Upon returning to Hotel Sequoia, found O. in hotel bar. Saw him to bed at 10 sharp.

Needless to relate, this report had a most amazing effect upon Colonel Pennington, and when at length he could recover his mental equilibrium, he set about quite calmly to analyze the report, word by word and sentence by sentence, with the result that he promptly arrived at the following conclusion:

(1) His niece Shirley Sumner was not to be trusted in so far as young Bryce Cardigan was concerned. Despite her assumption of hostility toward the fellow since that memorable day in Pennington's woods, the Colonel was now fully convinced that she had made her peace with him and had been

the recipient of his secret attentions right along. The Colonel was on the verge of calling his niece up to demand an explanation, but on second thought decided to wait a few days and see what his gum-shoe men might have to report further.

(2) The N. C. O. was still a mystery, but a mystery in which Bryce Cardigan was interested. Moreover, he was anxious to aid the N. C. O. in every way possible. However, the Colonel could understand this. Cardigan would aid anything that might possibly tend to lift the Cardigan lumber interests out from under the iron heel of Colonel Pennington and he was just young enough and unsophisticated enough to be fooled by that Trinidad Redwood Timber gang.

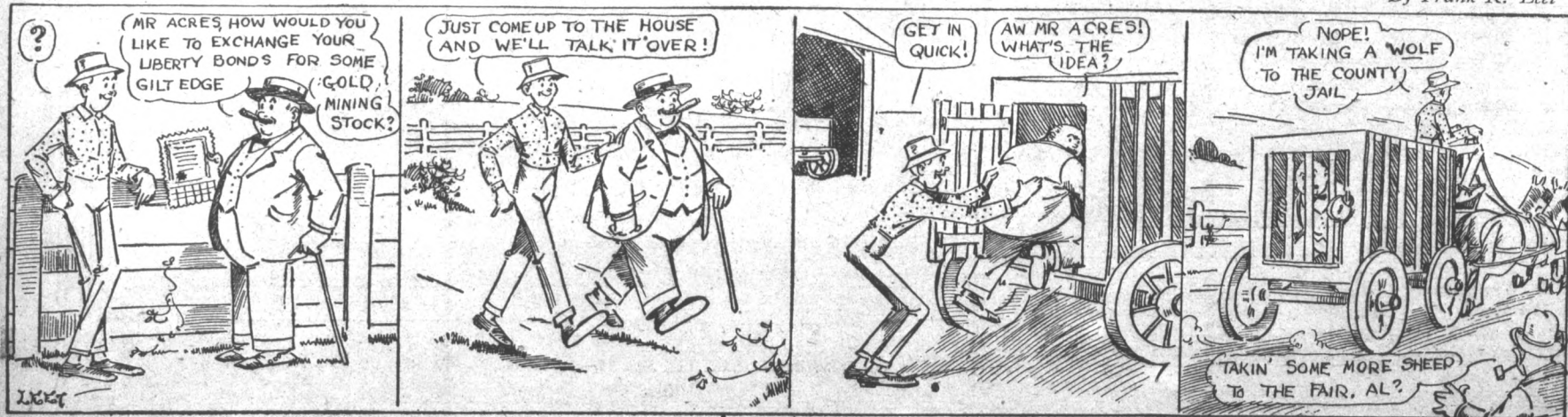
(3) The N. C. O. was going to make a mighty bluff, even to the extent of applying for a franchise to run over the city streets of Sequoia. Hence Ogilvy's visit to Mayor Poundstone—doubtless on the advice of Bryce Cardigan. Hence, also, his visit to young Henry Poundstone, whom he had doubtless engaged as his legal representative in order to ingratiate himself with the young man's father. Coarse work!

(4) Ogilvy had carried a small leather bag to and from Henry Poundstone's office. That bag was readily explained. It had contained a bribe in gold coin, and young Henry had been selected as the go-between. That meant that Mayor Poundstone had agreed to deliver the franchise—for a consideration; and like the smooth scoundrel he was, he wanted his bit in gold coin, which could not be marked without the marks being discovered! Ogilvy had called first on the Mayor to arrange the details; then he had called on the Mayor's son to complete the transaction.

(5) If a franchise had been arranged for and the bribe already delivered, that meant the prompt and unadvertised commencement of operations. Where (the Colonel asked himself) would these operations begin? Why, close to the waterfront, where materials could be landed from the steamer that brought them to Sequoia. At whose mill-dock would those materials be discharged? Why, Cardigan's dock, of course. Ogilvy had probably called first on Cardigan to arrange that detail. Yes, the N. C. O. was going to carry its monumental bluff to the point of building a mile of track through town. . . . No—no, they wouldn't spend that much money on a bluff; they wouldn't bribe Poundstone unless the road was

AL ACRES—The Biter Bit. Al Knows When and How.

—By Frank R. Leet



meant. And was it a common carrier, after all? Had Cardigan in some mysterious manner managed to borrow enough money to parallel the Laguna Grande Lumber Company's logging-road, and was he disguising it as a common carrier?

The trail was growing hot; the Colonel mopped his brow and concentrated further. If the N. C. O. was really going to start operations, in order to move its material from the Cardigan dock to the scene of operations it would have to cut his (the Colonel's) tracks somewhere on Water Street. Damnation. That was it. They were trying to slip one over on him. They were planning to get a jump-crossing in before he should awake to the situation; they were planning, too, to have the city council slip through the franchise when nobody was looking, and once the crossing should be in, they could laugh at Colonel Pennington!

"The scoundrels!" he murmured. "I'm on to them. Cardigan is playing the game with them. That's why he bought those rails from the old Laurel Creek spur! Oh, the sly young fox—quoting that portion of our hauling contract which stipulates that all spurs and extensions of my road, once it enters Cardigan's lands, must be made at Cardigan's expense! And all to fool me into thinking he wanted those rails for an extension of his logging-system. Oh, what a blithering idiot I have been! However, it's not too late yet. Poundstone is coming over to dinner Thursday night, and I'll wring the swine dry before he leaves the house. And as for those rails Cardigan managed to hornswoggle me out of—"

He seized the telephone and faintly shouted to his exchange operator to get his woods-foreman Jules Rondeau on the line.

"That you, Rondau?" he shouted when the big French Canadian responded. "Pennington talking. What has young Cardigan done about those rails I sold him from the abandoned spur up Laurel Creek?"

"He have two flat-cars upon ze spur now. Dose woods-gang of hees she tear up dose rails from ze head of ze spur and load in ze flat-cars."

"The cars haven't left the Laurel Creek spur, then?"

"No, she don't leave yet."

"See to it, Rondeau, that they do not leave until I give the word. Understand? Cardigan's woods-boss will call you up and ask you to send a switch-engine up to snake them out late this afternoon or to-morrow afternoon. Tell him the switch-engine is in the shop for repairs or is busy at other work—anything that will stall him off and delay delivery."

"Suppose Bryce Cardigan, she comes around and say 'Why?'" Rondeau queried cautiously.

"Kill him," the Colonel retorted coolly. "It strikes me you and the Black Minorca are rather slow playing even with young Cardigan."

Rondeau growled. "I theenk mebbe so you kill heem yourself, boss," he replied enigmatically, and hung up.

CHAPTER XXVIII.

THE dictograph which Shirley had asked Bryce to obtain for her in San Francisco arrived on the regular passenger-steamer on Thursday morning and Bryce called her up to ask when she desired it sent over.

"Good morning, Mr. Cardigan," she greeted him cheerily. "How do you feel this morning? Any the worse for having permitted yourself to be a human being last night?"

"Why, I feel pretty fine, Shirley. I think it did me a lot of good to crawl out of my shell last night."

"You feel encouraged to go on living, eh?"

"Yes."

(Continued on page 383.)

Mitchell

Extra Room and Comfort in each New Mitchell Model

New body design gives roominess

You can judge car comfort largely by whether they are roomy or crowded. For this decides whether there is a generous or skimpy policy behind the car.

Mitchell models typify Mitchell policies. They are extra roomy, extra comfortable. The Mitchell Touring Car seats six instead of five. The Road-

ster seats three instead of two. The Sedan seats six instead of five. The Coupe seats four instead of three.

This is due to designing and building our own bodies. We can afford to put in extras because we do not have to pay profits to outside builders. You get that money.

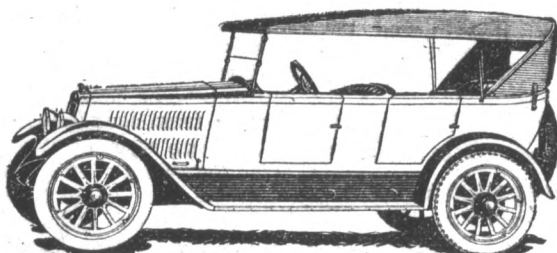
Make a thorough examination

Generous proportioning is evident throughout all New Mitchells, in the chassis as well as in the body. Ask a Mitchell dealer to point them out. You can never know the real worth of this car until you examine it and contrast it with other cars of the same price or more.

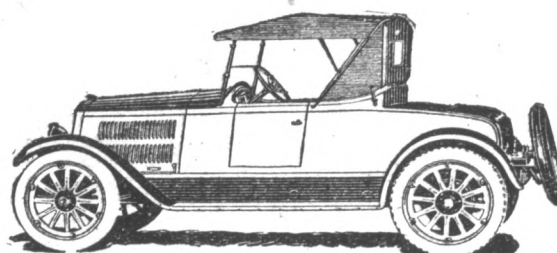
Where can you find a car offering so much at these prices: six passenger Touring Car, \$1750; six passenger Sedan, \$2,900; four passenger Coupe, \$2,800; three passenger Roadster, \$1750. F. o. b. Racine, Wis.

Before you decide upon your car, just make a comparison.

MITCHELL MOTORS COMPANY, Inc.
RACINE, WISCONSIN



\$1750



\$1750

PRICES F. O. B. RACINE, WISCONSIN

Sheriff of Shiawassee County J. W. Sproule, Sheriff

Both Telephones: Nights and Sunday,
Call through Owosso

Corunna, Michigan, Sept. 9, 1920

W. E. Robb, Secretary,
Citizens' Mutual Auto. Ins. Co.,
Howell, Michigan.

Dear Sir:

I wish to thank you for check sent to me for the recovery of Dr. Mahaney's auto.

More gratifying to me were the words of appreciation relative to the enforcement of the law in my county, it would really reduce auto stealing if all insurance companies were as interested in the prosecuting of thieves as your company. At any future time this department can be of use to you advise me.

Very sincerely,

(Signed) Jos. W. Sproule,
Sheriff

Save Your Lambs

At this season thousands of lambs die every year in the State of Michigan from the ravages of worms. Entire pastures become infected. The only way to prevent this is to kill the larvae as soon as they develop in the sheep's stomach and before they become large enough to migrate to other portions of the sheep's anatomy.

BIG FOUR STOCK SALT contains four of the best worm expellers known to medical science. Try it at our risk.

15 pound pails \$1.75 40 pound pails \$3.50
100 pound kegs \$7.00



We prepay the freight on 100 lb. kegs only. Other sizes may be sent C. O. D. by parcel post or express.

We are headquarters for salt of all grades for the farm trade and want a dealer or agent in every county.

Eastman Salt
Products Co.
Saginaw, Mich.

CARBO STEEL POSTS
Self aligning
TENSION FENCING SYSTEM
10 Times Strongest, No Breaking, Buckling Etc.
Half the Cost — No Concrete
CARBO STEEL PRODUCTS CO. 2615 W. 11th St. CHICAGO

The cost
is small
The benefit
is great

Those who feel
ill results from tea or
coffee drinking soon
profit by a change to

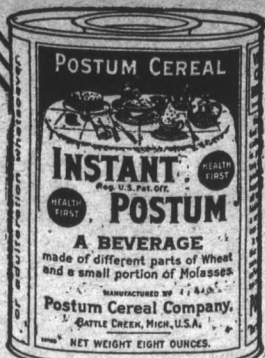
INSTANT POSTUM

Its pleasing flavor, ease of
preparation, healthfulness
and practical economy com-
mend this table beverage.

Sold in 50 and 100 cup tins,
A purchase from your grocer
soon proves

"There's a Reason"

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



God's Vacation Country

Our Weekly Sermon—By N. A. McCune

MICHIGAN is becoming the the nineties, not one farmer in five breathing spot of the middle hundred could have afforded a car. west. All up and down the shores of Lake Michigan and Lake Huron are cottages and resorts. In addition to these are the hundreds of recreation places near the inland lakes, in which Michigan abounds. It looks as though the Creator had designed this part of the world as a region where jaded humanity may come and be recreated, and repossess themselves of the zest of life. And that is the interpretation that the people put upon it. For they come from every state in the Union. Up here at Bay View, there are dozens of cars from south of Mason and Dixon's line, and from the states south-west. And one really is re-created here. There is a something in the air that makes you breathe deeper, sleep longer, eat more, and exercise harder than you do at home. The vegetation is considerably different from that of southern Michigan. Very few oaks are found, but the beech and the birch, the wild cherry and the maple reach perfection. Driving at night, one may almost be guided by the white trunks of the birches along the road. It is too short a season for peaches to do well, but apples and plums and cherries smile from the loaded trees. And the buildings on many a farm are such as to make farmers from other sections envious.

BUT WHY take a vacation, any way? A man once said, "I never have taken a vacation. I always keep working." He would have been a bet-

ter man if he had taken an occasional outing. A vacation is an investment. To do the same things all the time, see the same objects, move in the same environment, talk with the same people, is deadening. A change means new life. Nature does this right along. Trees drop their leaves and take their winter rest. Birds travel farther than the autoist from California or Oklahoma. The soil that has produced a beautiful crop of three dollar potatoes is allowed a respite of six months and is strengthened with fertilizer, besides. And no man can look at one of Lake Michigan's sunsets, when the great ball of fire slips down behind the silent, glorified waters, if he has any soul at all, without being a more thoughtful and a better man. "The earth is full of the goodness of the Lord."

This country has meant health and life to thousands of people. Men and women whose nerve forces seem to have been exhausted are rejuvenated by this climate. The hay-fever affliction disappears here. This curious and exasperating disease which has been the despair of the doctors and the victims, cannot withstand the air that dances across the lake, or sweeps the northern hills. And this is one of God's ways of blessing mankind. Here and there he creates a climate where certain ills disappear.

Sunshine Hollow Items

By Rube Rubicon

When Grant Manning came home from the county fair he picked up the mirror and said, "My goodness, Grant, you do need a shave." Just then his wife Myra came in and said, "Grant, what are you looking at that hair brush for?" Grant says he didn't know two glasses of sody pop would make a man take a hair brush for a mirror.

THOSE DAYS are past. Many people say they were the "good old days," much better than the present. That is an exaggeration, for the good old days are a myth. The good days are now. But, however that may be, the automobile has changed the face of the landscape. No farmer comes in the two-seated surrey. If he comes at all, it is in his "flivver," which he parks by the side of a super-six that has just arrived from Arkansas. In

Charles Farley bought some lighting rods after the house was struck. He bought an air guage after ruining a set of tires by running under pressure. Now he expects to buy a fire extinguisher and is only waiting for something to burn up so as to be sure and have some use for it.

LIME YOUR LAND Make More Money



Excelsior Lime Sowers
Sow hydrated lime, ground rock and land plaster. Broadcast oats and all fertilizers. Endorsed by National Agricultural Limestone Association—the only spreader used exclusively by them.

Built complete with double lid, screen and scattering board. Copper, rust-resisting steel bottom. Throw out of gear from either wheel. Have agitators for keeping lime loose. Guaranteed to do the work claimed or your money promptly refunded.

Write today for our interesting free book "Dollars and Sense" and special proposition showing how you can save money in buying your own machine.

Excelsior Drill Company

"Makers of Good Seeding Machines"

Dept. 3-B Springfield, Ohio

Double the Mileage Of Your Tires

**1,000 to 5,000
More Miles**

**Vulcanize Them While
They're Worth It**

Worn, cut or blistered tires can be made as good as new with the Henderson Parcel-Post Vulcanizing and Retreading Service—a service no farther away than your mailbox. Prompt repairs will get double mileage or more and save you lots of money.

Henderson "Snappy Service"
build the largest tire repair business in Detroit. Now it is open to you no matter where you live. A few cents postage brings your tire to our shop. In 24 hours it will be repaired and on its way back postpaid. Inspection Free.

Send no Money

Write Today. We will send complete information and price list of this Guaranteed parcel-post vulcanizing and retreading service—"How to Save Your Tires"—how to get thousands of miles more service at trifling cost. A post card with your name and address brings all particulars. No obligation. Send it today.

HENDERSON TIRE CO.

80-82 Bagley Ave. DETROIT, MICH.

**SEND NO
MONEY—
JUST YOUR NAME
AND ADDRESS**

**SAVE
By MAIL**

Get this beautiful Men's-Wear Serge skirt at a guaranteed saving of at least \$3.00.

We will send you this splendid skirt shown here at an extremely low price—subject to your approval and satisfaction. Just send your name and address, giving size and color wanted and we will send skirt, all charges prepaid. On arrival if not satisfactory, return at our expense and get your money back.

**Pay Mailman
Only \$5.45**

When Skirt is Delivered. Made of fine quality, Men's-Wear Serge, and handsewnly tailored; has wide heavy inside girdle; side pockets, trimmed with four rows of silk braid, with the buttons spaced to match, terminating in side panels with tuck pleating; cut full and falls in graceful folds, and will not bag. Colors—Navy Blue or Black. Sizes 24 to 32 waist; 36 to 40-in. length. Extra sizes 46c additional. Order by mail, 1281502.

(51) **THE HOWARD-LUX CO.**
Dept. 120, 810 Lakeside Ave. N. W. Cleveland, Ohio

Sale Of

U. S. Army & Navy Goods

For Camp and Summer Outfits
Ask for big catalog 110 today

Army Khaki Shirts \$2.00
Navy Underwear... 1.75
Army Ponchos... 1.25
Army Wool Brooches 2.50
Khaki Trousers... 2.50
Army Pup Tents... 3.50
Army Mess Plates... .25
Army Blankets... 5.00
Army Raincoats... 3.50
and all other articles
for camp or outdoor use
Send 10c for Army & Navy
Catalog—110—and buy at
Auction Bargain Prices.

ARMY & NAVY STORE CO.

245 West 42d St., New York
Largest Camp & Military Outfitters



BOOK ON DOG DISEASES And How to Feed

Mailed free to any address by
the Author

H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York



America's
Pioneer
Dog Medicines

Dickey Glazed Tile Silos

Best of materials, six different diameters,
everlasting hollow tile roof, easiest to
build—such features as these have made
the Dickey pre-eminent among silos.

The Fruit Jar of the Field
Send for catalog No. 9

W. S. Dickey Clay Mfg. Co.
Macomb, Ill.
Kansas City, Mo. Chattanooga, Tenn.

Please Mention The Michigan Farmer
when writing to advertisers

THE VALLEY OF THE GIANTS.

(Continued from page 381.)

"And fighting?"

"By all means."

"Then something has occurred of late to give you new courage?"

"Oh, many things. Didn't I give an exhibition of my courage in accepting Ogilvy's invitation to dinner, knowing you were going to be there?"

She did not like that. "You carry your frankness to extremes, my friend," she retorted. "I'm sure I've always been much nicer to you than you deserve."

"Nevertheless there wasn't any valid reason why I should tantalize myself last night."

"Then why did you come?" He had a suspicion that she was laughing silently at him.

"Partly to please Ogilvy, who has fallen head over heels in love with Moira; partly to please Moira, who wanted me to meet you, but mostly to please myself, because, while I dreaded it, nevertheless I wanted to see you again. I comforted myself with the thought that for the sake of appearances we dared not quarrel in the presence of Moira and my friend Ogilvy, and I dare say you felt the same way. At any rate, I have seldom had more enjoyment when partaking of a meal with an enemy."

"Please do not say that," she answered. "I am your opponent, but not your enemy."

"That's nice of you. By the way, Shirley, you may inform your uncle at breakfast Friday morning about my connection with the N. C. O. In fact, I think it would be far better for you if you made it a point to do so."

"Why?"

"Because both Ogilvy and myself have a very strong suspicion that your uncle has a detective or two on our trails. There was a strange man rather prevalent around him all day yesterday and I noticed a fellow following my car last night. He was on a bicycle and followed me home. I communicated my suspicions to Ogilvy, and this morning he spent two hours trying to shake the same man off his trail—and couldn't. So I judge your uncle will learn to-day that you dined with Ogilvy, Moira, and me last night."

"Oh, dear! That's terrible." He could sense her distress.

"Ashamed of having been seen in my company, eh?"

"Please don't. Are you quite serious in this matter?"

"Quite."

"Uncle Seth will think it so—so strange."

"He'll probably tell you about it. Better beat him to the issue by 'fessing up, Shirley. Doubtless his suspicions are already aroused, and if you inform him that you know I am the real builder of the N. C. O., he'll think you're a smart woman and that you've been doing a little private gum-shoe work of your own on behalf of the Laguna Grande Lumber Company."

"Which is exactly what I have been doing," she reminded him.

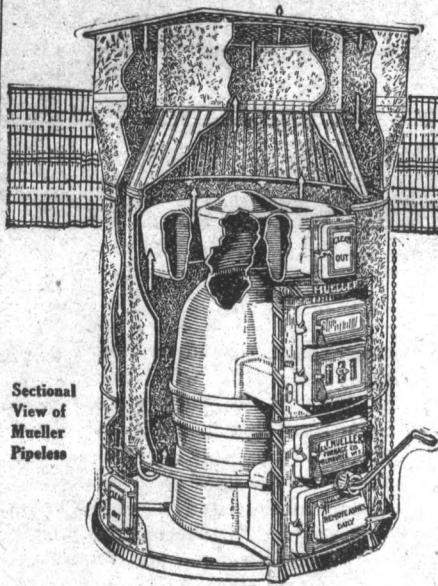
"I know. But then, I'm not afraid of you, Shirley—that is, any more. And after Friday morning I'll not be afraid of your uncle. Do tell him at breakfast. Then watch to see if it affects his appetite."

"Oh, dear! I feel as if I were a conspirator."

"I believe you are one. Your dictograph has arrived. Shall I send George Sea Otter over with it? And have you somebody to install it?"

"Oh, bother! Does it have to be installed?" (Continued next week.)

A Better Heating System MUELLER



Sectional
View of
Mueller
Pipeless

MUELLER PIPELESS FURNACE

Install Your Mueller Now

Make sure of real heating comfort and big fuel saving for all winters to come by installing your Mueller now. It is made in eight sizes, a size for any home, can be installed in less than a day. No cellar too small, no pipes or heat in cellar, no tearing up of floors or walls.

The Mueller Guarantee Protects You

When you install your Mueller you are given a binding guarantee that it will heat your entire house—upstairs and down—comfortably. Moist, healthful, warm air in every room—a cozy home in coldest weather.

The "Big 3" PIPELESS FURNACE

THE cheerful old fireplace and the radiant parlor stove were picturesque—but decidedly impractical.

Modern living conditions demand better heating. That is why thousands of home owners have replaced stoves and other inferior heating systems with the Mueller, the "BIG 3" Pipeless Furnace.

The final test of any heating system is its ability to heat your house comfortably and economically. Measured by these standards the Mueller Pipeless scores 100%. Thousands of users will tell you that it heats effectively with hard or soft coal, coke, wood, lignite or gas and saves $\frac{1}{3}$ to $\frac{1}{2}$ on any fuel used.

The Mueller Pipeless is an assured success because three vitally important and exclusive features, the "BIG 3", are mainly responsible for its infallible heating efficiency and fuel economy. Study these features carefully—they are your guide and safeguard in the selection of a better heating system.

The "BIG 3"

The Answer to your Heating Question

- 1 Large and Properly Proportioned Register Face**—Insures delivery of a big volume of warm, moist air and rapid distribution of heat to every room.
- 2 Spacious, Unobstructed Air Passages**—Permit unrestricted air travel in furnace and withdrawal of large volume of cool air from rooms while delivering an equally large volume of warm air into them.
- 3 Vast and Scientifically Designed Heating Surface**—(every inch effective) insures full benefit from fuel burned and big fuel saving. Prevents hard firing, overheated castings and fuel waste.

You'll Want This Book

The Mueller Book is yours for the asking. Not mere advertising but profitable pointers on home heating. Explains and illustrates the principles of pipeless heating—tells about the "BIG 3" features and what the Mueller will do for your home. Write TODAY.

L. J. MUELLER FURNACE CO., 195 Reed St., Milwaukee, Wis.

Makers of Heating Systems of All Types Since 1857

DISTRIBUTORS:

L. J. Mueller Furnace Co., 278 Jefferson Ave. East, Detroit, Mich.
23 other distributing points. Immediate shipment to any part of the country.



Sent Free

and Post Paid

This Book Will Show You How To Save Hundreds of Dollars

Just fill out the coupon below and we will gladly mail you Free and postpaid our big new catalog that tells how Martin Steel "Corn Saver" Cribbs and Bins will protect every bushel of your crops from loss and save you money. All your life people have been trying to tell you how to raise more crops to the acre. Write for this valuable book and let us tell you how to save every bushel of corn and grain you raise this year by storing it in Rat-proof—Fireproof—Weather-proof

Martin Steel Cribbs

Find out how a Martin Crib will save enough on your farm to pay for itself in a short time. Learn why these rat-proof, fire-proof, weather-proof cribs and bins are cheaper than wood cribs, and last ten times longer.

Read how many farmers have claimed they have even cured soft corn in them because of their superior ventilation. If you grow corn or grain, you need this book. Write for it today. We will send it free and postpaid by return mail.

MARTIN STEEL PRODUCTS CO.
2513 Adams St., Mansfield, Ohio

Martin Steel Products Co.
2513 Adams St., Mansfield, Ohio

Gentlemen: Please send me your big free book on Martin Steel "Corn Saver" Cribbs and Bins. This does not obligate me in any way.

Name.....

Town.....

State..... R. F. D.....

I am interested in a corn crib holding about.....bushels

(13)

THE NEW DE LAVAL CREAM SEPARATORS

in a class by themselves

They are as much superior to other separators as other separators are to gravity setting systems.

The De Laval Separator Co.
New York Chicago San Francisco

Lump Jaw

The farmer's old reliable treatment for Lump Jaw in cattle.

Fleming's Actiniform

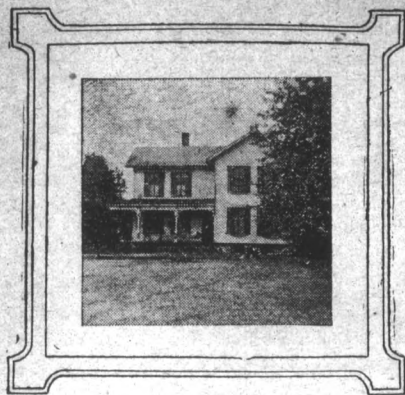
Sold for \$2.00 (war tax paid) a bottle under a positive guarantee since 1896—your money refunded if it fails. Write today for FLEMING'S WEST-POCKET VETERINARY ADVISER. A book of 197 pages and 67 illustrations. It is FREE.

FLEMING BROS., Chemists, 252 Union Stock Yards, Chicago

WE WANT

a live honest man to represent us in each farm district. You furnish us listings. We furnish the buyers. If you understand land and would like to connect with a live Farm Agency write our Mr. George Green, Mgr. of Farm Dept. at once. This only takes part of your time and will bring you good returns for time invested. CITY AND COUNTRY REALTY CO. 24 McGraw Bldg., Detroit, Mich.

When You Write to Advertisers Please Mention This Paper.



Woman's Interests

Giving Old Furniture a New Lease of Life



SHE had just come back from a visit to a friend to whom money was no object. Everything had been "right." Furniture of good lines and fresh, unmarred finish, floors, perfectly finished, rugs in tone with the decorations and furniture, and draperies that just fitted.

Her own home had looked good when she went away, but now everything jarred. She really looked at it for the first time in many busy months. Money wasn't so plentiful here as at her friend's, and everything showed signs of the wear which a family can give furniture. The couch and easy chair showed sagging the springs, varnish was noticeable large-

of wood and putty. The carving was filled in with a mixture of putty and cement, smoothed off so cunningly that not a line could be seen, but this extra work was not done until the old varnish had been removed.

This was rather a hard job, and it was done in this way: She made a paste of gold dust and hot water, of the consistency of cream, adding sal soda to soften the water, and applied it with a paint brush. This was left on a half hour, then scrubbed off with a wire brush borrowed from a decorator and meant for this purpose. It was a sticky job, but effective, when all the varnish was removed, the board was

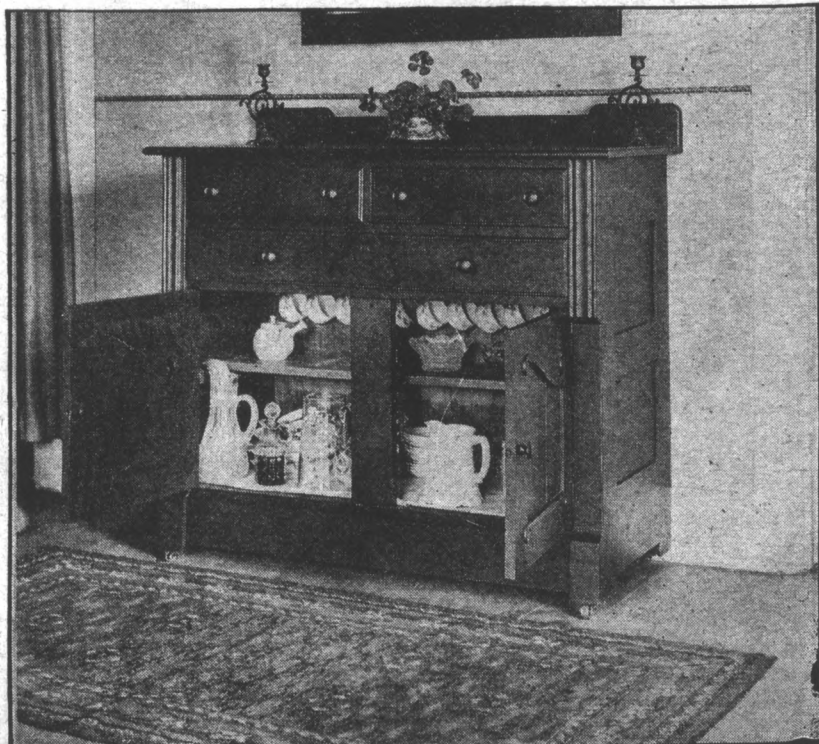
go across the front and end. The back, shoved against the wall, needed no fringe, anyway. Springs were retied, cushions refurbished, and the couch was as easy a resting spot as a new davenport would have been.

Bedroom chairs and dressing table received coats of white enamel. Wicker chairs were scrubbed and varnished, loose rockers and rounds in easy chairs were glued in, screws tightened up, leather rubbed with a coat of oil,

and velours dusted and freshened. The kitchen cabinet, which had been scarred with the food chopper, was planed down and varnished, and everything that showed the signs of use of old age had its bit of renovating. It took three weeks for the housekeeper and her handy man to do the work, but the result justified the time and expense. New furniture didn't seem half so necessary, and anyhow it wouldn't have had the associations of the old.

Cookies and Kisses

By Ida May De Bra



The Narrow Shelf Leaves Space Below for Extra High Dishes.

ly by its absence. Carvings and applied decorations on sideboard, and table added to the work of keeping them clean, and detracted from their appearance. At first she was discouraged and a little inclined to self-pity. But she got no further, for she was an up-and-coming woman. If things weren't right, why make them right! And she could see a dozen ways to improve the looks of her belongings.

She began with the sideboard. It was one of those golden oak boards, with a high top, little shelves abutting a mirror, leaves and fruit glued on, and fruit and leaves carved in. If that top were taken off, and the decorations amputated and a new finish given it, straight to the telephone she marched and called up the handy man who did odd jobs for the women of the neighborhood.

A half hour's consultation started her on the way to three weeks of doing over, which left her house in a holiday dress and herself in a contented state of mind.

First, they attacked the sideboard. The top was taken off entirely and all the glued-on decorations chiseled off. The brass knobs, which were tarnished badly, were removed, and the holes left by screws skillfully filled with pegs

sandpapered, first with coarse sandpaper, then with fine.

The old top was made use of to finish the board. The beveled-edged top was cut off and fastened to the sideboard to give the back a finish, and the mirror was cut out, leaving a frame about an inch wide. Then mirror and board were given two coats of black finish, with a most satisfactory result.

One good feature of the remodeled board is the arrangement of the space for dishes below the drawers. There was originally one large compartment. A shelf half the width of the space was put in, to leave sufficient height in front for tall pitchers and other dishes, and still give extra room for plates and smaller pitchers and salad bowls. This feature is worth copying in cupboards where shelves are so close together that some dishes cannot be put in the cupboard at all. Tables and chairs were stained to match the board, and the dining room was complete.

But the frenzy of refurnishing was upon her, so the whole house was metamorphosed. The ragged fringe on the leather couch which went off, and enough good fringe secured to

"PLEASE do not kiss me!"

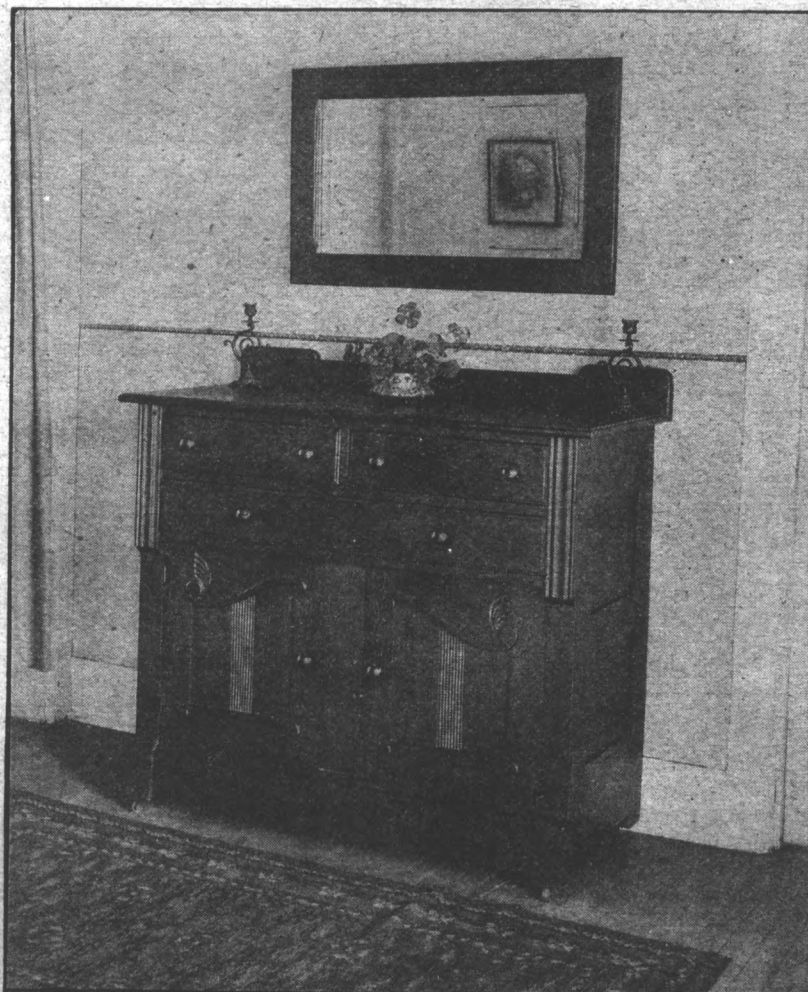
I looked again at the strange sign, and which she ate. It was written in large letters on a cardboard that hung around the neck of a very pretty girl of about seven years, who sat opposite me in the coach. The girl, I learned, was traveling across the continent alone. To safeguard her from possible contagion, her parents had hung that cardboard around her neck to keep over affectionate persons from kissing her.

A good idea, I thought! But as I watched the girl and the interested admirers who had gathered around her it appeared to me that her danger was not so much from kisses as from cookies. In less than an hour she was showing your own thoughtlessness, and fed more cookies than a child of her age should eat in two days. And that

and cake that were thrust upon her

Students have come to believe that most cases of impaired digestive organs in adults can be traced to improper eating early in life. The child who is "stuffed" with all sorts of truck invariably suffers for it in later life. The colics and cramps of childhood are often only warnings of more serious trouble to come in after years. A child is a very simple proposition and should have simple food at regular intervals. You cannot show your love for children by shoving a conglomeration of indigestible stuff at them all the time; you are merely showing your own thoughtlessness, and to the child's injury.

In my nursing work I have seen sturdy youngsters who lived on milk



Transformed Sideboard with Framed Mirror Instead of Over-decorated Top Part.

until the age of three. This, however, would be a very difficult thing in most households where the little ones insist on eating at the table with "Daddy."

But milk is the ideal food for them. If possible, milk should constitute almost the sole food the first year. Then other foods may be added to the diet, slowly, and with the exercise of good judgment as to combinations.

In the second year boiled or poached eggs may be given. Plain corn-starch puddings are good. Good bread and butter is fine if the little one will chew it well. Meat should not be fed, but it does no harm to give the child a piece of tough meat that can be chewed but not swallowed. Meat broths are good. A raw apple, scraped fine, is excellent. Baked apples are good if not loaded with sugar. An excellent evening meal is well toasted homemade bread softened in warm (not boiled) milk.

After the second year the child may eat a wider variety of food but indigestible mixtures should be avoided. If care is taken first to satisfy the hunger with plain, nourishing food, then a little dissipation in the way of cake or candy may be indulged in occasionally. But do not "stuff" the little ones. Let the motto be: "Plain, nourishing food at regular times."

JAVELLE WATER FOR BLEACHING.

I have found Javelle water excellent for bleaching garments, which have become yellow through being stored away, or by poor laundering. To make this, place one pound of washing soda and one quart of boiling water in an enamel kettle and stir until soda dissolves. Allow solution to cool. Dissolve one-half pound of chloride of lime in two quarts of cold water. When settled, pour into the soda solution. Strain, bottle and place in a dark place, as exposure to light causes loss in strength of solution. To use, mix with equal parts or more of water, and do not allow garments to remain in the solution, as the fibres would be weakened by the action of the Javelle water. Rinse well and to the last rinse water add a little vinegar, which will remove any odor and offset the action of any chloride of lime remaining in the goods.—Mrs. F. M.

HOME.

BY L. M. THORNTON.

I have not seen them, but I know
In orchards cool the apples grow;
And every Bartlett beauty bears
A burden rich of ripening pears.
Oh would I were a vagrant bee
In some dear, well-remembered tree.

I have not heard then but I ken
Now sound the songs of thrush and wren,
And mocking birds their voices raise
In matin hymn and vesper praise.
Would I cut put my tasks away
And list their songs again today.

Field, forest, mountain side and stream,
There daisies nod and willows dream.
A shaded lane, a farmhouse old,
A doorway bright with sunset gold.
Blest am I still where'er I roam,
Because I still can call them home.

Household Editor—Will someone please tell me, through The Michigan Farmer, how to prepare, at home, wool from the raw fleece, for filling for comfort.—Mrs. M. A. N.

Household Editor—Could anyone inform me what would remove the lime from a cast aluminum teakettle?—C. S.

Uncle James Cooley says he is often happiest on stormy days when he is thankful for simple things like shelter, food and fuel. He gets the blues most often on sunny days when he is working hardest for the things that do not seem to come fast enough.



Our Reputation As Millers is Behind Lily White

"The Flour the Best Cooks Use"

We have built up a solid patronage among the home baking women of Michigan by the quality of our flour. We have always guaranteed it to give perfect satisfaction, and will continue to do so so long as we are in business. Our reputation and our business is founded solely upon that rock of Quality. LILY WHITE never has and never will be allowed to deteriorate.

It is a flour containing the choicest selection of soft and hard wheat grown in America. The soft wheat improves the flavor and color. It insures the baking of a good looking loaf of bread. The flour is correctly balanced to make as good bread as it does biscuits and pastry. There is just enough hard wheat in LILY WHITE to make it the ideal all-around flour.

After being cleaned four times it is scoured three times, then actually washed, so that every bit of dirt is removed from the kernels of the wheat.

And we use only the best part—the heart of the grain for LILY WHITE FLOUR.

Our milling processes are accurate, scientific, modern. LILY WHITE is of unmatched color and texture and has perfect uniformity of granulation. Bread, rolls and biscuits baked from it are flavory, tender, and delicious. It makes pastry so flaky and fine that it melts in the mouth.

Give the family a treat by trying a sack of LILY WHITE FLOUR. It is guaranteed to give satisfaction.

Ask for it at your dealer's.

VALLEY CITY MILLING CO.
GRAND RAPIDS, MICHIGAN

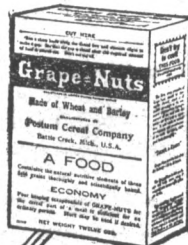
"Millers for Sixty Years"

Comes already sweetened
Its own sugar is developed in the
baking. It solves your sugar prob-
lem among ready-to-eat cereals.

Grape-Nuts

Order a package from
the grocer.
Its flavor appeals and
there is no waste.

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



HOOSIER STOVES & RANGES FREE

To try in your home 30 days free no matter where you live. Show your friends, send it back at our expense if you do not want to keep it. Million members of families enjoying the comforts and pleasures of "Hoosier" Stoves & Ranges, perfect bakers and heaters, beautifully finished, smooth latest design, guaranteed for years. Write for our big free book showing photographs, describing large assortment of sizes and designs of Steel and Cast Ranges, Cooks, Soft and Hard Coal Stoves, to select from, explaining our free trial. Send postal today.

HOOSIER STOVE CO.
131 State St., Marion, Ind.



20 POT BULBS 25c

1 Chinese Sacred Lily, 6 New Parity Freesia, 2 Double Rosebud, 3 Buttercup, 2 Bowi and 6 Grand Duchess Oxalis. These 20 bulbs and Catalog
MAILED FOR 25 CENTS
Hyacinths, Tulips, Narcissus, Peonies, Lilies, Irises, Phloxes, Hardy Plants, Shrubs, Vines, Berries, in great variety. Also splendid window plants for winter. Seeds for Fall sowing, etc.
Large beautiful Catalog free
John Lewis Childs, Inc.
Floral Park, N. Y.

GENUINE ASPIRIN



Name "Bayer" identifies genuine Aspirin introduced to physicians in 1900. Insist on unbroken packages of

BAYER-TABLETS of ASPIRIN

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid

WANTED Reliable agents, who will work and tell the truth. Write The French Nursery, Clyde, Ohio, Established 1863.

Please Mention The Michigan Farmer When Writing to Advertisers



Every Outdoor Miss Wants a Vassar Sweater

The girl who loves the outdoors finds a sweater a wardrobe necessity.

For motoring, skating or wear at any time in cold weather, a Vassar Sweater provides warmth and protection, as well as style and chicness.

The Vassar line contains sweaters for every member of the family. Ask your dealer to show you Vassar Sweaters

Vassar

SWEATERS

Victor-Vassar Knitting Mills

48-50 Jefferson Avenue, Detroit, Michigan

Factories at Detroit, and Bay City, Mich., Cleveland, O., and Brooklyn, N. Y.

Several Hundred Ohio Farms For Sale

WE are offering several hundred of the best farms in Ohio at prices that are low in comparison to the value of the property and the income assured purchasers.

These farms are a part of the Miami Conservancy District, which is a political subdivision of the State of Ohio, and represent a surplus acreage that we own in the Miami Valley.

Rich silt loam top-soil deposits make this land very productive—practically inexhaustible.

It is our earnest desire to bring more good farmers to this community, which lies within a thirty mile radius of Dayton. Quick markets are available by rail, interurban and highway.

We Would Like to Send You Booklets Giving Detailed Information. Just Address "Farm Division"

THE MIAMI CONSERVANCY DISTRICT
DAYTON, OHIO

Only \$2 DOWN ONE YEAR TO PAY

\$44 Buys the New Butterfly Jr. No. 214
Light running, easy cleaning
close skimming, durable.

NEW BUTTERFLY Separators are
guaranteed a
lifetime against defects in material and work-
manship. Made also in four larger sizes up to
No. 8 shown here; sold on
30 DAYS' FREE TRIAL
and on a plan whereby they earn their own cost
and more by what they save. Postal brings Free
Catalog Folder. Buy from the manufacturer
and save money.

ALBAUGH-DOVER CO., 2165 Marshall St., Chicago

PAINT BARN PAINT
\$1.35
PER GALLON

GET FACTORY PRICES ON ALL PAINTS. We
guarantee quality. WE PAY THE FREIGHT.

FRANKLIN COLOR WORKS,
Dept. M., FRANKLIN, IND.

45 Years on the Line
Come to Headquarters for

Cotton Seed Meal

OWL DOVE JAY
Brand Brand Brand

F. W. Brode & Co.

Established 1875.
Incorporated 1915.
MEMPHIS, TENN.

Our Brand on the Tag
Means Quality in the Bag

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

Our Boys' and Girls' Page

Why Not Off for College?

By G. O. Stewart

DO FARM BOYS have dreams? Do farm boys ever determine by hours.

themselves whether or not they should seek a college education? I know they do. It was only a few years ago that I had this proposition in my own hands. Before graduating from high school, I did not think seriously about college. Had I considered it more, there is no question but what many embarrassing financial pains might have been averted. But the point at issue is that one should plan to begin saving money early in life instead of depending on jobs that are found during school days to furnish all of the expense money.

As a freshman in college, I found it rather difficult to earn all of my expenses while it was fairly easy for an upper classman to succeed. He had become familiar with existing opportunities because of one, two or three years' previous schooling. As my father was then a tenant and we were contemplating buying our own farm, I had to hunt my own jobs the first year.

The freshman entering college will find he must compete with the older men who are more experienced and well acquainted with the men who have good positions to offer. That is why the freshman should take along the money he has saved during his high school days. It will be found that many of the good jobs for a collegiate year will be cornered in the spring term. The new man entering in the fall has a handicap. However, if he has some help during the freshman year he will be able to look up some of the good jobs in the spring that have been held by his friends in the upper classes. A good friend among the seniors has been the financial salvation of many a young man while struggling through college.

Boys, did you ever consider the advantage of working for the department in which you expect to specialize? In that way you become intimately acquainted with the professors and instructors and this frequently results in the first chance at some good position to be filled at the close of the senior year. The practical experience of working in the department is valuable and you gain a large number of facts that will help you to out-distance your classmates who never think of the sub-

ject outside of regular classroom hours.

If you are interested in chemistry, there is an opportunity for you to find a position in the chemical laboratory. The work will be rough and consist largely in doing odd jobs, such as cleaning apparatus and filling bottles with chemicals, but you will become familiar with supplies and learn facts as valuable as any received in the class room. I can trace salesmen and chemists of prominent fertilizer companies back to doing odd jobs in chemical laboratories.

You may be interested in forestry, botany, horticulture, dairying or farm crops. All of the special departments controlling this work can offer occasional work to anyone who enjoys getting out of doors and working in the flower beds or the forestry nursery. If you have been a live stock club member and want to specialize in stock you will find ample opportunity to spend many hours after school and Saturdays, working around the barns. In almost every department there are positions that furnish a valuable experience to the worker, and while the pay may be small, it will prove a great aid in paying the necessary expenses.

There are many ways of earning money to pay or assist in paying the college expenses. The large part of the work might be classed as rather ordinary but the average American college is a very democratic institution, and you will not lose the friendship of any fellow because you wait on table in a boarding club or care for a furnace. The job of waiting on table usually brings free board as a compensation, and as board is an important item in the expense just now, the job is considered a first class opportunity. However, it is more difficult for a freshman to obtain this work when first entering school than it is after forming friendships with the upper classmen. The work is usually performed around the hour of meal time, when a large number of the boys will waste their time. It interferes in no way with the program of studies. During the latter part of the spring term, most seniors will be so busy that they will need a substitute. Here is where you make good use of friendship and then put the best you have in your new venture.

Agencies offer many chances for a



Agnes and Lucius Lane Out for a Spin.

student to make money, and more than one strong, healthy boy has entered school with scarcely any money and finished with more than he had when he came. However, examples of this kind are very rare and the boy who can sell articles to his friends and still hold their friendship has a valuable asset. He is able to develop his ability as a salesman and he learns to approach the prospective buyer in exactly the right manner.

If you have to enter college on your own resources do not be discouraged regarding your future. Our colleges are training men to be independent and the cost of the training is not great compared to what it means to you later in life. The first year in college often marks the hardest struggle. Determined to be a finisher, a large portion of your expenses can be earned in school.

If you have not considered going to college, why not do it now? It is easier to start while young than later in life.

The sayings of A. P. Sandles, of Ohio, might well be analyzed:

"Twenty plus fifty is more than fifty plus twenty. This rule is true when life's work is added up.

"Today a boy is twenty—a man is fifty.

"Today we give to both a scientific knowledge of agriculture and the secret of growing more crops per acre.

"Three score years and ten, they live and labor.

"At the end of life the boy's product from soil and toil will exceed and excel that of the man who waited until fifty to begin to farm the best he could.

"After the lesson was learned, the boy had fifty years to labor. The man had only twenty.

"Persuading boys to start aright, in life, is building better than we know. The good that's done reaches into years far ahead.

"There is gold in dirt. The riches of commonwealth are multiplied by giving to farmer boys skillful hands and cunning brains.

"He who plows and plants adds wealth to the nation. Twenty plus fifty is more than fifty plus twenty."

Harvesting Corn With Hogs

(Continued from page 373).

factors being equal, the greater number of hogs used, the better their appetites, the bigger the hogs, the lighter yield of corn and the less danger of hail, wet weather and muddy fields the larger may be the fenced areas to insure uniform results.

Most farmers familiar with the practice of hogging down corn, make use of large fields, but fence off a few acres at a time with ordinary twenty-six-inch woven wire, thus making sure that all the corn is utilized. A majority of corn belt farmers use corn stalks for posts, and if necessary reinforce with stakes set where needed to greatest advantage. The most practical suggestions that might be passed on to the prospective convert is first of all to use strong, well set corner posts. If the stalks are strong and heavy, the wire may be tied to them with binder twine. In case the stalks are inclined to be weak, drive a few stakes with a sledge, stretch tight and the hogs will not break out.

Advantages and Disadvantages.

Among other disadvantages hogging down corn hardens the land, there is some waste in wet weather, some loss of stover, brood sows and gilts get too fat, heavy hogs may cause a waste—taxes extra care to turn into new corn and the stalks are harder to plow under. But for one of these disadvantages there are three advantages.

The advantages to be obtained are numerous. Labor is saved in handling the corn. It eliminates the necessity of husking, cribbing and reloading to feed in the yard. It stimulates the gathering of early seed corn. As the hogs are in the corn, there is no holding back because of the danger of breaking down the rows. Some farmers prefer to carry a sack, but this is heavy, discouraging work. It is possible for two men with a wagon and team to gather enough seed for 100 acres in half a day and in no way injure the corn for hogging down.

Among other things storage charges are eliminated; no cribs or elevators are deemed a necessity. There is no loss from rats and mice getting in the cribs. Hog manure is nearly as high in value as poultry manure, which contains a greater fertilizing value than that from any other animal, and is of great advantage that none is wasted. When the hogs are foraging their own corn, the manure is evenly and uniformly distributed over the field.

The hogs are turned much quicker a war baby. He was born while his father was fighting fiercely to keep is a great advantage owing to the les-

ser risk involved, and the farmer's money may be used for some other enterprise. The hogs are able to utilize every grain, some of which would be lost in an attempt to harvest by hand.

Brood sows that are to farrow spring litters may be advantageously turned into the field to gather their own corn and supplement, receiving a much needed wealth of exercise.

Oftentimes, it occurs that during the rush of the farrowing season a goodly portion of the spring plowing must receive attention. These circumstances may be removed by allowing the hogs to clean up the field and put the ground in readiness for early fall plowing.

Pigs which have been receiving all the grain they will eat should be accustomed gradually to new corn and full feed before they are turned into the standing corn. This is especially true if much of the corn is down and the pigs are well grown. Under average conditions the corn should be well dented before hogging down begins. Well grown shoats are best adapted to this method of feeding and they will grow faster and clean the corn up more thoroughly if not fat when turned into the field. Gilts that are intended for the breeding herd should be watched closely and removed from the field before there is any tendency of overfatness. It is often necessary to turn in a few brood sows to clean up after the pigs, or to break down the corn stalks for the youngsters that are not able to do it for themselves. They should not be allowed to become so heavy that their breeding qualities may become impaired.

It is of great advantage to the farmer to have some inkling as to the number of pigs a given area will accommodate, and how long. The farmer should not turn over more acres than the hogs are capable of utilizing, before the winter season arrives. This season usually ranges from fifty to sixty days. Many farmers recommend fencing off the plots in such areas that each field will be cleaned up in fifteen to twenty days.

Little Willie Morrison was the fastest auto driver in our section. He never slowed down for soft gravel, railroad crossings or anything. Little Willie's grave is the third one on the right hand side as you go down the hill past the Soldier's Monument.

Folks say that little Timothy Blud is from being taken in the draft.

DAIRY, HORSE AND HOG BARN EQUIPMENT

DREW

BARN FIXTURES



INCREASE PROFITS

Because They

REDUCE LABOR

and Give You

HEALTHY

Productive

LIVE STOCK

The DREW experts have studied the practical every-day needs of the dairy farmer for over 22 years. The result is that every Drew Barn Fixture is so exactly suited to your needs that you cannot suggest the slightest improvement.

Drew Fixtures not only lighten barn labor but give you the greater satisfaction that comes from the increased profits you get from healthier, contented live stock—conveniently fed and satisfactorily watered. Study the Drew Exclusive Features of Convenience and Durability.

DREW STANCHIONS

All improvements in convenience and comfort. Many are exclusive Drew ideas. Unusual strength and long service. Drew stanchions are ingenious in design, superior in construction. They last indefinitely, are trouble-proof.

MAIL COUPON TODAY

For Complete Information on

Stalls Waterbowl Calf Pens Bull Stalls Hay Tools
Stanchions Bull Pens Hog Pens Ventilators Door Hang-
Litter Carriers Cow Pens Feed Carriers Feed Trucks ers, Etc.

ASPINWALL-DREW COMPANY

Successors to DREW CARRIER COMPANY

WATERLOO

WISCONSIN

DREW BARN FLOOR PLANS FREE

Mail This Coupon

DREW CARRIER CO., Waterloo, Wis.
Send the Drew Barn Book No. 89, without obligation of cost to me. I want to know about: Stanchions, Stalls, Carriers, Drinking Bowls, Steel Pens, Bull Stalls, Barn Plans for New Building, Remodeling—(date).

Name _____
P.O. _____
City _____



Get The Facts Now

About This Wonderful Oil-less Wind-Mill

No more tower climbing. At last a powerful, noiseless windmill that needs **no oiling**. Self lubricating phosphor bronze bearings that wear 12 to 17 years without a drop of oil and are then easily and cheaply replaceable.

Cheapest Pumping Power Known

Pumps all the water you want for about 1 cent a day. Cheapest pumping power in the world. Simple, easy to operate, runs in lightest wind, quiet as a new bicycle, direct stroke, pumps water with every revolution. Ball bearing turn table; automatic safety governor; automobile-type crankshaft, easy to erect, fits any tower. Users say outlasts and outpumps two ordinary windmills. 24 hour service on replacement parts. Write us today.

PERKINS CORPORATION
42 Main Street Mishawaka, Indiana

PERKINS WIND MILLS

Standard for More Than 60 Years

Bourbon, Ind.
"I have had one of your wood wheel windmills in use for over 30 years. I have a steel mill that has been in use for but 10 or 12 years, the mill is completely demoralized. I want a new mill and, of course, I prefer a Perkins to anything else."
WM. ERWIN.

Salisbury, Vermont.
"We have a Perkins Windmill, erected in 1885 by M. O. Snow which is still in good running order while other mills erected at that time have long ago ceased to work."
C. L. BARKER.

Howell, Michigan.
"I have a Perkins Windmill erected 26 years ago which is still giving me good service."
HERBERT LA WSON.

Write for Free Book

Write now for factson cheapest and best farm water supply system. Post card will do.



Phonograph Agents Wanted

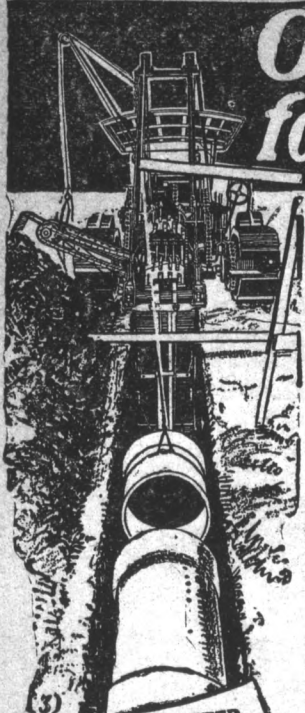
Make big money selling phonographs. Only small capital required. Men owning automobiles preferred. For particulars, address Box J. 925, Michigan Farmer, Detroit, Mich.

Married Farm Hand Wanted

Good wages and good living condition. School on farm. Michigan Farm, Kalamazoo County, Pavilion, Mich.

When writing to advertisers please mention the Michigan Farmer.

Opfer Got \$160 for 48 Hours Work



In every locality there's plenty to do. You'll be busy 7 to 10 months in the year. The income is from \$15 to \$20 a day, the expense little. Mr. Opfer is only one of many of our friends who are making that much and more with a

"A Perfect Trench at One Cut" **BUCKEYE** Traction Ditcher

With one helper you can dig more ditches each day than can fifteen men by hand. You make a perfect ditch at one cut. Farmers want traction ditching—it's better, can be done quicker and at less cost. When they know you have one, you'll be kept busy; you won't have to look for work, it will come to you. Many Buckeye owners have six to twelve months' work ahead. \$15 to \$20 daily is the net average earnings of hundreds of Buckeye owners. Here is a proposition that will give you a standing and make you a big profit each year.

Send for Free Book

A book of solid facts, tells how others are coining money, how they get the work, how much it costs to do it and all the details of operating.

Our service department is at your call to get you started and keep you going, to tell you the prices to charge and how to make big money with a BUCKEYE. Send now for this book, you can make big money too.

THE BUCKEYE TRACTION DITCHER CO.

367 Crystal Avenue

Findlay, Ohio

READ THIS LETTER

I excavated a trench 16,000 feet long, average depth 25 inches. I received 10 per lineal foot, or \$160 for the job, and operated the machine just 48 hours. The manager of that company had a length of 2,200 feet which he said would hold me down for the day. I just laughed at him. I tightened the governor to gain speed and in 2 1/2 hours had the 2,200 feet finished. Average of 300 feet per hour for the two and three-fourths hours at 10 per foot is \$8.00 per hour.

JOHN C. OPPER, Sandusky, O.

A Newly Invented **SAW RIG**

Will saw your winter's wood in a few hours and then you can make money sawing for others. Many users say they make upwards of \$11.00 a day cutting wood for neighbors. Expensive cumbersome rigs used in the past are made unnecessary by the Ottawa Saw Rig. Does all practical work any other saw rig can. For a small part of the cost of one of these high-priced and obsolete rigs you can now own the

**LOW
INTRODUCTORY
OFFER**



OTTAWA SAW RIG

Strictly a one-man outfit. Easy to operate, light to move, simple to handle. Powerful 4-cycle motor that drives any belt machinery when not sawing. It will pay for itself in cash in two weeks, just cutting wood for neighbors.

30 Days' Trial; 10 Year Guarantee. Let the Ottawa work a month for you to prove our claims. Write for FREE BOOK TODAY.

OTTAWA MANUFACTURING COMPANY 394 Main Street, OTTAWA, KANSAS.

MICHIGAN LIVE STOCK INSURANCE COMPANY

INDEMNIFIES Owners of Live Stock—Horses, Cattle, Sheep and Hogs
Against Death by Accident or Disease

308 Davidson Building,

Bay City, Michigan

POULTRY

PULLETS

If you want good laying Hens for this winter, we can help you into a fine stock, a surplus taken from the breeding colonies of the past season.

YEARLING PULLETS

600 S. O. White Leghorns
300 S. O. Brown Leghorns
200 S. O. Anconas
THREE MONTHS OLD PULLETS
200 S. C. White Leghorns
300 S. C. Anconas

COCKERELS

Barred and White Rocks; Rhode Island Reds; White Wyandottes, English White Leghorns; S. O. Anconas. We shall be pleased to answer inquiries about any of this stock. Pure Breed Practical Poultry, well bred up for practical purposes. Have you a copy of our 1920 Catalog? Everything is guaranteed.

STATE FARMS ASSOCIATION,
Desk 1, Kalamazoo, Michigan

BARRED ROCKS

Cockerels, Pullets, April hatched, get Norman's superior strain direct. Catalogue 25c. Circular free. **NORMAN POULTRY PLANT,** Chatsworth, Ill.

S. C. White Leghorns. Foris 254 egg strain. Fine cockers \$4.50. Selected yearling hens \$2.50, \$3. each. **ALVAH F. STEGENGA,** Portland, Mich.

Pullets and cockerels. From thorough-bred Baron White Leghorns the type that are bound to make good producers. Raised on free range. Every bird guaranteed and shipped on approval. Send for prices and catalog. A few Barred Rock Pullets. Brummers Poultry Farm, Holland, Mich.

BARRED ROCKS. Park's 200-egg strain cockerels which will produce fine layers next year, \$3 each. **E. R. G. KIRBY,** R. 1, East Lansing, Mich.

Barred Rocks egg contest winners, eggs from strain with records to 230 a year. \$2.00 per setting prepaid by P. P. Circular free. **FRED ASTLING,** Constantine, Mich.

Whittaker's Red Cockerels

Both combs. Special discount on early orders. Write for Price List. **INTERLAKES FARM,** Box 39, Lawrence, Mich.

Cockerels and Hens: Leghorns, Minorcas, Campines, Red Rocks, Orpingtons, Brahmas, Wyandottes. **Tyrone Poultry Farm,** Fenton, Mich.

Fowler's Buff Rocks. We are now booking orders for eggs. A few choice cockerels left. **B. B. FOWLER,** Hartford, Mich.

LOOK! BABY CHICKS \$14 A 100 UP!

By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Aug. and Sept. chicks for February and March layers. Catalog free, stamps appreciated. **NABOB HATCHERIES,** GAMBIER, OHIO

R. C. Brown Leghorn C'k'rls \$1.00 each. White Pekin ducks \$2.00 each. **Mrs. Claudia Betts,** Hillsdale, Mich.

Silver Laced Golden and White Wyandotte eggs from S best quality only \$1.75 per 15, \$3.25 per 30 by prepaid parcels post. **C. W. Browning,** R. 2, Portland, Mich.

Single Comb White Leghorns

Cockerels from our exhibition matings April hatched \$3.50 each. Four fine cock birds \$5.00 each. **SUNNYBROOK POULTRY FARM,** Hillsdale, Mich.

Rhode Island Whites

Are the best all purpose birds being year round layers. Egg and chicks and a few good males. **H. H. JUMP,** Jackson, Michigan.

For Sale: High quality S. O. Anconas, 20 yearling hens, 10 early pullets, 1 winning cock, 1 cockerel, \$75.00 takes them all and many of the females are winners. **C. O. STERLING,** R. 3, Hillsdale, Mich.

For Sale: Handsome, large type, S. O. White Leghorn cockerels from flock winning Purdue University prize for Rock laying. **A. W. Gardner,** Sturgis, Mich.

The Seasonal Trend of Fat Cow and Heifer Prices

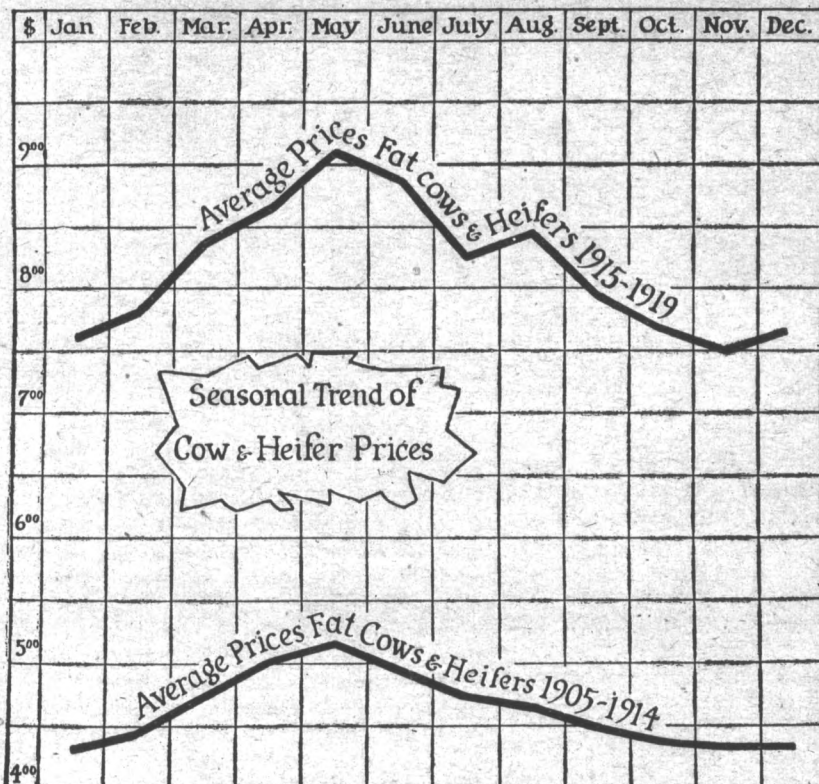
THOSE who have an occasional surplus cow or heifer to sell on the beef market, those who make a practice of fattening cows and heifers, and those who feed cheap steers which compete with butcher stock in the dressed beef trade will find something useful in the accompanying graphs of fat cow and heifer prices. A normal seasonal trend is indicated by the average prices by months at Chicago. Except for the difference in level, it holds for the five years affected by the war, much the same as for the ten years prior thereto.

It appears that fat cows and heifers or butcher stock are scarcest in the early spring, which fact usually serves to bring the level of prices upon such cattle to a climax in May. On the

centers. These compete with butcher stock for the favor of consumers of the cheaper grades of beef, and fat cow and heifer prices are bound to sag.

As the season advances the cows and heifers, fat from grass, are ready to market in increasingly large numbers. The range rush becomes more and more potent, as a depressing influence. The lowest level arrives during the general fall clean-up season, preparatory to the approach of winter.

During the last five years the average difference between May and November, the high and low months respectively, has been \$1.60, a decline of 17 1/2 per cent from the high month. During the ten-year interval from 1905 to 1914 this difference has



farms most of females that have been carried over the winter have calves at foot at this time. The weeding out process and disposal of surplus has been completed long before this season is reached. During the spring months cows and heifers are wanted to restore depleted breeding herds, and to occupy grazing lands, as well as for beef, which fact furnishes another pillar of support under butcher stock prices.

During the last half of June and in July declines are the customary order. Some if the early calves are ready to wean, Texas usually sends a good deal of suitable stock, and later in July range cattle begin to appear at market

amounted to 85 cents, or a decline of 16 1/2 per cent from the high.

The butcher stock market in a measure is a shadow of the beef steer market. If conditions in the fat cattle trade are unfavorable to the expression of the normal tendency in fat cow and heifer prices, the result will not be the usual one.

Some corn belt feeders have found it profitable to purchase the lower grades of feeders in the late fall and feed them for the spring market. Part of the reason for the success of this operation lies in the usual deficit of the stock on the market at that time, which helps the sale of the cheaper grades of beef steers.

Our County Farm Bureaus

(Continued from page 370.)

of Forestry of the Michigan Agricultural College.

In but few places do we find poultry raising being conducted on a large scale in rural districts, but in the southern part of Ottawa County and extending over into Allegan County for a short distance is the best poultry raising area in the state, and there are not more than three or four better areas in the United States. There are about 20 hatcheries operated on a large scale, and this area is estimated to produce an average of 35,000 to 40,000 day-old chicks every day during the hatching season. The capacity of the individual plants ranges from 10,000 to 50,000 eggs each three weeks. Day-old chicks are shipped throughout

Michigan and neighboring states, some going as far as Missouri. Pure bred White Leghorns are the principal breed in this area, although there are some Brown Leghorns, Anconas, and Barred Rocks. Some of the leading hatcheries are: Wyngarden Hatchery, Zeeland; William Van Appledorn, Holland; Lakewood Farm, Holland; Walter Van Dam, Alexander Klooster, Marinus Brandt, Garrit Keizer, and Miss Margaret Strick, in the locality of Forest Grove. Zeeland and Holland have live poultry associations which hold annual shows and otherwise manifest keen interest in the industry.

The dairy industry is making steady progress in the county, and some fine herds of Holsteins and other breeds

are being developed. Aside from the Ottawa County Holstein Breeders Association already mentioned, the commercial end of the industry is represented by a milk condensary at Coopersville; creameries at Conklin, Alledale, Berculo, Beaver Dam and Holland; a cheese factory at Zeeland; and a dried milk plant at Holland.

OTTAWA COUNTY is also noted for its production of vetch seed. The growing of vetch is becoming increasingly popular throughout the state as the virtues of this legume are better understood, and the demand for vetch seed is very good. As it is a climbing plant, it is sown with rye, the rye straw acting as a support. It yields from four to eight bushels of seed per acre, and its presence does not apparently affect the yield of the rye. The two grains are easily separated by machinery after threshing. As vetch seed brings around \$12 per bushel at the present time, it may readily be seen that it is a profitable crop when grown in conjunction with rye. It is particularly adapted to the lighter soils and, being a legume, is a natural soil builder.

Truck farming is far from the least of Ottawa County's agricultural industries. There are large tracts of very valuable muck lands in the vicinity of Hudsonville, on which many carloads of celery, head lettuce, tomatoes, cabbage, onions and early potatoes are grown each year. These crops are also grown in lesser quantities around Grand Haven and in other localities. It is claimed that Ottawa County actually produces and ships more celery annually than does Kalamazoo County.

Many sections of the county are adapted to fruit. There are some splendid orchards of apples, peaches and cherries in the southern part and in the northeastern part. The small fruits are grown in the vicinity of Grand Haven and Spring Lake. The quality of these fruits is excellent, and growers secure profitable returns because of the excellent shipping facilities by boat from Grand Haven. There is seldom any damage from severe winters because of the protecting influence of Lake Michigan, and men with a vision are predicting that the small fruit industry will materially expand in the vicinity of Grand Haven within the next few years. Excellent markets are obtained at Chicago, Milwaukee, and other points north and west. The Dagget Canning Company at Coopersville and the Holland Canning Company at Holland buy and can large quantities of both fruits and vegetables each year.

Sugar beets are grown to some extent in the southern part of the county, where there is much land well adapted to the crop. The main office of the Holland-St. Louis Sugar Company is located at Holland, one of its three factories being also located there. The cucumber industry is also represented in the county. Considerable quantities of pickles are grown each year, and delivered to salting stations that are scattered throughout the county. A small acreage of mint is also generally grown in the southern sections of the county.

GOOD ROADS are now recognized as one of the greatest assets to any county. Ottawa County was one of the pioneers in road building, and today no farm in the county is more than three miles from an improved road. Senator William Connelly of Spring Lake was the father of this movement, and author of the bill providing for the \$50,000,000 bond issue by the state. Dr. William De Kleine, who originated the idea of the West Michigan Pike, was a resident of Grand Haven. Not only is the county a leader in good roads, but it is also a firm believer in higher education. It is the second county in the state for more can mortals wish?

standard schools, and many of her native sons are graduates of leading colleges and universities. Duncan McMillan, director of the State Experiment Farm at Chatham, owns a farm in Ottawa County. Professor L. C. Plant, in charge of the Department of Mathematics at the Michigan Agricultural College, was a resident of Ottawa County. Walter Van Heitsma, of the Michigan Agricultural College staff, did his first work in tile drainage in Ottawa County.

In these days when nearly all soils are more or less deficient in lime, marl deposits have come to be recognized as a valuable asset from which to obtain this chemical. There is an abundance of this material scattered throughout the county and readily accessible for use.

Some of the newer and very profitable industries in the county are fox farming and Christmas tree production. There are two fox farms in Spring Lake Township, where the black and silver fox is bred and raised. These probably bring the highest price of any of the wild fur-bearing animals in America today. Two Christmas tree plantations are located in Crockery Township, where the trees are planted and grown for market. The business is said to be very profitable.

Thus we might continue at great length describing in detail the numerous and varied industries of this county, but space has only permitted a brief mention of the more important ones. It is safe to conclude that Ottawa County, with possibly 12 townships of excellent land and an area equal to perhaps five more of light sand, much of it too light for farming purposes, possesses an enviable record for crop production, diversity of crops, and co-operative and educational development, and more than all else, a sturdy disposition to overcome all obstacles at whatever cost. The Farm Bureau campaign was launched in the middle of last winter, when roads were almost impassable, when sickness was prevalent, and when the weather was intensely disagreeable and cold. Notwithstanding these handicaps, a surprisingly large membership was secured. A follow-up campaign is under way which will result in securing a large proportion of those not visited last winter.

Notwithstanding the brief time since the campaign for increased membership, arrangements have been made for the securing of 300 tons of fertilizer this fall, coal and seeds have been ordered for many of its members, and a plan developed for the marketing of the seeds grown in the county for market. There is a Farm Bureau unit in each township. A Farm Bureau picnic is held each year. Two years ago the attendance was 3,500; in 1919, it was 5,000; this year it was held at the Marne fair grounds, with a good attendance but not as large as last year. In the earlier years it was held at Riverside Park, a beautiful grove on the bank of Grand River.

Nor would our story be complete without a brief mention of the advantages for play as well as work in Ottawa County. It is growing, year by year, more famous for fishing, camping and resorting. Macatawa Park and Ottawa Beach at Holland, Highland Park at Grand Haven, Port Shel and don on Pigeon Lake, and Spring Lake are well known resorts that attract summer visitors from every part of the United States. There are many resort and camp sites along Grand River and around Spring Lake for those who prefer the inland privileges over those of the Lake Michigan shore. Thus Ottawa County offers a chance for all to work and a place for all to play, a tempered winter and a tempered summer climate, an abundance of good things to eat, and comfortable homes. What is the second county in the state for more can mortals wish?



Juneau, Alaska.
Jan. 22, 1920.
I have installed in my house one of your No. 48 Caloric Pipeless Furnaces. We are quite pleased with it. It has heated our seven-room house through the months of November and December, with about 1 1/4 tons of soft coal screenings per month. By putting in a good fire at 8 A. M., it requires no further attention until 6 P. M.
F. W. Hebert.

PIPELESS
CALORIC
FURNACE



You—like over 100,000 families—can solve the problem of high-priced fuel by installing the patented Caloric Pipeless Furnace.

Records everywhere show that the Caloric saves 1/3 to 1/2 the fuel—this in addition to heating the entire home more thoroughly and uniformly than any other system.

The Caloric is the original pipeless furnace triple-casing patent, No. 1,346,801. This exclusive feature makes pipeless heating successful, and cannot be had in imitations.

The Caloric is made by largest manufacturers of warm-air furnaces in world. Sold under Money-back Guarantee of your satisfaction. For old or new homes. No expensive installation. No plumbing—no pipes to freeze. Many users in this state—in your own neighborhood. Decide now for Caloric warmth this winter. Write for book or see nearest dealer.

THE MONITOR STOVE COMPANY
(The Monitor Family)
101 Years in Business
110 Woodrow St., Cincinnati, Ohio

CALORIC
THE ORIGINAL PIPELESS FURNACE TRIPLE-CASING PATENT
© THE M. S. CO. 1920

Warmth Without Weight

Ellsworth

Sheepskin-lined Coats



YOU never forget the economy of an Ellsworth Sheepskin-lined Coat—a full measure of comfort, style and sturdy wear. Keeps the warmth in, the cold out.

Made from selected woolskins tanned to a delightful softness; tailored to graceful lines. Thick Kersey reinforcement in front holds the garment in shape. A generous fur collar adds to appearance and comfort.

There isn't a garment made that equals the Ellsworth in style, service and quality value. So why pay more? Any length; various styles.

Ellsworth gloves and leather vests are other products favored by careful buyers.

Sold only through dealers

Ellsworth & Thayer
Mfg. Co., Milwaukee
Dept. 24

When You Write to Advertisers Please Say "I Saw Your Ad. in The Michigan Farmer."

SHORTHORN SALE

40 - - HEAD - - 40

Good, High Class Registered
Cows, Heifers and Bulls

INCLUDING A FEW COWS OF THE DUAL
PURPOSE OR MILKING STRAIN

*This sale will be held under the auspices of the
Southern Michigan Shorthorn
Breeders' Association*

All stock is sold on consignment from members of this Association and is of a quality which commands attention

Hillsdale, Mich.

FAIR GROUNDS

Tuesday, Oct. 5, 1920

For Particulars and Catalog Address

John Southworth, Sec., Allen, Mich.
ANDY ADAMS, Sales Manager and Auctioneer

BREEDERS' DIRECTORY

Change of Copy or Cancellations must reach us
Ten Days before date of publication

Wildwood Farms Angus

Effies Lass 238203 sold on May 6th for \$7100. She was sired by Black Monarch 3rd. We are offering for sale Editor of Wildwood 295059 a full brother in blood lines to Effies Lass also four more choice bulls which are old enough for service and sired also by the champion show and breeding bull Black Monarch 3rd.

Our herd is under State and Federal Supervision.

WILDWOOD FARMS ORION, MICHIGAN

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

WOODCOTE ANGUS

Imported Herd Bulls
ELCHO OF HARVESTOUN (45547)
by Jason of Ballindalloch (38048)
EDGARDO OF DALMENY (45501)
by Escort of Harvestoun (38006)
Woodcote Stock Farm, Ionia, Mich.

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

SPRING DELL FARM GUERNSEYS

For sale: Choice of two bulls two and three years old; also bull calves three to twelve months. Registered. Splendid individuals and breeding. Prices right.
WHITE BROTHERS, R. 2, Box 20, La Porte, Indiana.

Guernsey Bull Busto of Smallidge Farm, born Feb. 2nd, 1920. Sire Bennie of the Ridge, who's dam Trixie of the Ridge holds first place in class EE in Michigan. Granddam Abbie of Riverside is champion of Mich. Dam May Kings Ezalia of Eau Claire an A. B. cow.
E. J. SMALLIDGE, Eau Claire, Mich.

Pure bred Guernsey bulls from one to four weeks old. Registered \$30, not registered \$25. Orders shipped in rotation received. No excuse for scrub bulls.
WALTER PHIPPS FARM, 80 Alfred St. Detroit, Geo. E. Currie, Mgr.

FOR SALE

Serviceable May Rose Guernsey Bull, Dam record 553 lbs. fat 2 yr. old. Priced to sell. Herds Federal Accredited. Gilmore Brothers, Camden, Mich.

For Sale: Guernsey bulls from 3 months to 6 months old. Their sire is DOTTIE'S PRINCE No. 44666; his dam has an official yearly record of 647 lbs. butter fat.
L. J. BYERS, Coldwater, Mich.

GUERNSEYS—Federal Inspected. Headed by only son of Carrie of Hillhurst, exchampion of A. A. class. 5 bulls under 10 mos., 1 a dandy whose dam in class D has given over 50 lbs. milk. No females to spare.
G. W. & H. G. RAY, 4 mi. east of Albion, Mich.

Registered Guernseys a very fine show calf, this bull calf is out of a cow milking 40 lbs. a day, the price will surprise you, better get his pedigree.
J. M. WILLIAMS, North Adams, Mich.

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

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

FOR SALE Registered Guernsey heifers, yearlings and calves.
E. A. BLACK, Route 3, Howard City, Mich.

May Echo Sylvia Bull calf. 2 crosses to May Echo Sylvia, and 3 crosses to King of the Pontiacs. Dam a 2 yr. old daughter of a 29 lb. cow, 6 of his nearest tested dams average 34.49 lb. of butter and 759 milk.
C. H. GIDDINGS, Gobleville, Mich.

GUERNSEYS Registered Guernsey Bulls for sale.
GEO. N. CRAWFORD, R. 2, Holton, Mich.

31.06 lb. butter 571.46 lb. milk in 7 days, is dams of 2 mo. old bull. Price \$150. Terms M. L. McLAULIN, Redford, Mich.

-WinnWood Herd- Flint Maplecrest Boy No. 166974 Has Made Good

one of his SONS will raise your herd to a higher standard and better production we have them for sale at moderate prices.

A Few Females For Sale

—OUR JUNIOR HERD SIRE—

Sir Ormsby Skylark Burke No. 264966 A brother to the world champion cow over all breeds.

DUCHESSE SKYLARK ORMSBY Michigan's best bred Ormsby bull. Better get on the list for one of his sons out of a daughter of Flint Maplecrest Boy.

JOHN H. WINN, (Inc.)
Roscommon, Michigan

Long Distance HOLSTEINS. HERD-SIRE PRINCE ONA Five dams av. 3186 lbs. butter and 24771 lbs. milk in 1 yr. Bulls all sold. State and Federal Supr.
A. FLEMING, Lake, Mich.

State's Greatest Stock Show

(Continued from last week)

Holstein-Friesian.

Senior yearling heifer—Lenawee, 1st on Owona Korndye Lyons; Lenawee, 2nd, 3rd and 4th.

Junior yearling heifer—Lenawee 1st on Tonawanda Star 2nd; Lenawee, 2nd; Carl Hitchcock, Charlotte, Mich., 3rd; Spencer, 4th.

Senior heifer calf—Lenawee 1st on Hartland Marjorie; Hehl, 2nd; Spencer, 3rd and 4th.

Junior heifer calf—Hehl, 1st on Lady Boon Canary; Lenawee, 2nd; Hehl, 3rd; Shubel, 4th.

Senior champion bull—Lenawee on King Pietertje Lakeside.

Junior champion bull—Lenawee on Maple City King Lyons.

Senior champion female—Michigan Agricultural College on Takoma Mutual Girl.

Junior champion female—Hehl on Lady Boon Canary.

Grand champion bull—Lenawee, Maple City King Lyons.

Grand champion female—Michigan Agricultural College, Johanna Mutual Girl.

Exhibitor's herd—Lenawee, 1st; Spencer, 2nd; Geo. E. Bench, Plymouth, Mich., 3rd.

Breeder's herd—Lenawee, 1st; Spencer, 2nd.

Calf herd—Lenawee, 1st; Spencer, 2nd; H. D. Box & Sons, Lansing, Mich., 3rd.

Four get of sire, at least three females—Spencer, 1st on Model King Segis Glista; Lenawee, 2nd and 3rd; Box, 4th.

Two produce of cow—Lenawee, 1st and 3rd; Spencer, 2nd; Bench, 4th.

Ayrshire.

W. H. Murphy and Shuttleworth Bros. of Michigan presented some good individuals and shared the winnings as follows:

Bull 2 years old—W. H. Murphy, Birmingham, Mich., 1st on Willobank Torrs Mayor; Shuttleworth Bros., Ypsilanti, Mich., 2nd.

Yearling bull—Shuttleworth Bros., Senior bull calf—Murphy, 1st; Shuttleworth, 2nd.

Junior bull calf—Shuttleworth, 1st. Cow 4 years old or over—Murphy, 1st and 2nd; Shuttleworth, 3rd and 4th.

Cow 3 years old or over—Murphy, 1st; Shuttleworth, 2nd and 3rd.

Heifer, 2 years old—Shuttleworth, 1st.

Yearling heifer—Murphy, 1st and 2nd; Shuttleworth, 3rd and 4th.

Senior heifer calf—Murphy, 1st; Shuttleworth, 2nd and 3rd.

Junior heifer calf—Shuttleworth, 1st; Murphy, 2nd and 3rd.

Senior champion bull—Murphy.

Junior champion bull—Shuttleworth Bros.

Senior champion female—Murphy.

Junior champion female—Shuttleworth.

Grand champion bull—Shuttleworth.

Grand champion female—Murphy.

Exhibitor's herd—Murphy, 1st; Shuttleworth, 2nd.

Breeder's herd—Shuttleworth, 1st; Murphy, 2nd.

Calf herd—Shuttleworth, 1st; Murphy, 2nd.

Four get of sire, at least three females—Shuttleworth, 1st; Murphy, 2nd.

Two produce of cow—Shuttleworth, 1st; Murphy, 2nd.

Brown Swiss.

Bower & Bower of Ohio presented the only herd at the fair.

SWINE

Berkshire.

One of the outstanding animals of the entire swine exhibit was Baron Mastodon, the aged Berkshire boar exhibited by Parker Bros. of Michigan. In the various classes they shared honors with F. E. Kite of Ohio, as follows:

Boar 6 mos. and under 12 mos.—Parker Bros., Niles, Mich., 1st; F. E. Kite, St. Paris, Ohio, 2nd.

Boar 6 mos. and under 12 mos.—Parker Bros., 1st; Kite, 2nd.

Boar 12 mos. and under 18 mos.—Kite, 1st, 2nd and 3rd.

Boar under 6 mos.—Kite, 1st and 2nd.

Sow 18 mos. and under 2 years—Kite, 1st.

Sow 12 mos. and under 18 mos.—Parker Bros., 1st; Kite, 2nd, 3rd and 4th.

Sow 6 mos. and under 12 mos.—Kite, 1st, 2nd and 3rd.

Sow under 6 mos.—F. E. Kite, 1st and 2nd.

Senior champion boar—Parker Bros., Junior champion sow—Kite, 1st; Parker Bros., 2nd.

Grand champion sow—Parker Bros., Exhibitor's herd—Kite, 1st.

Breeder's young herd—Kite, 1st. Four either sex get of one boar—Kite, 1st.

Four under 6 mos. produce of one sow—Kite, 1st.

Premier champion for exhibitor—Kite.

Premier champion for breeder—Kite.

Sow 2 years or over—Parker Bros., 1st.

Senior champion sow—Parker Bros., Grand champion boar—Parker Bros.

Boar 2 years or over—Parker Bros., 1st; Kite, 2nd.

Poland China.

Nearly 150 head of Poland China swine, representing some of the best herds in Michigan, made a splendid show. The extreme size of the mature breeding stock and the heavy weights attained by some of the young animals impressed many farmers and breeders with the importance of buying better foundation animals and breeding for more bone and greater weight. One of the outstanding winners was a young boar of Clansman breeding, exhibited by A. A. Feldkamp, of Manchester, Mich. Stokes & Hile, Leonard, Ramsdall, Haynes, Hawkins, Allen Bros. and Ordway all presented good exhibits and did their share toward making the show a credit to the breeders of the state.

Poland China.

Boar 12 mos. and under 18 mos.—A. A. Feldkamp, Manchester, Mich., 1st; W. B. Ramsdell, Hanover, Mich., 2nd; Stokes & Hile, Greenville, Mich., 3rd; John P. Hawkins, Hudson, Mich., 4th.

Sow 6 mos. and under 12 mos.—E. R. Leonard, St. Louis, Mich., 1st and 4th; Hawkins, 2nd; Stokes & Hile, 3rd.

Sow under 6 mos.—Leonard, 1st, 2nd and 3rd; Feldkamp, 4th.

Senior champion boar—Allen Bros.

Senior champion sow—Leonard.

Junior champion sow—Leonard.

Grand champion sow—Leonard.

Breeder's young herd—Leonard, 1st; Ramsdell, 2nd; Hawkins, 3rd; Feldkamp, 4th.

Four either sex, get of same boar—Leonard, 1st; Feldkamp, 2nd; Hawkins, 3rd; Ramsdell, 4th.

Four either sex under 6 mos. produce of same cow—Leonard, 1st; Ramsdell, 2nd; Feldkamp, 3rd; Hawkins, 4th.

Premier champion for exhibitor—Leonard.

Premier championship for breeder—Leonard.

Boar 2 years or over—Allen Bros., 1st; E. W. Ordway, Millington, Mich., 2nd; Ramsdell, 3rd; Stokes & Hile, 4th.

Boar 18 mos. and under 2 years—Stokes & Hile, 1st; F. E. Haynes, Hillsdale, Mich., 2nd; Hawkins, 3rd.

Junior champion boar—Feldkamp.

Grand champion boar—Feldkamp.

Exhibitor's herd—Allen Bros., 1st; Feldkamp, 2nd; Stokes & Hile, 3rd; Ramsdell, 4th.

Boar 6 mos. and under 12 mos.—Feldkamp, 1st; Leonard, 2nd; Ramsdell, 3rd and 4th.

Sow 2 years old and over—Leonard, 1st; Stokes & Hile, 2nd and 3rd.

Sow 18 mos. and under 2 years—Hawkins, 1st; Leonard, 2nd.

Sow 12 mos. and under 18 mos.—Stokes & Hile, 1st; Feldkamp, 2nd and 4th; Ramsdell, 3rd.

Duroc Jersey.

The Duroc Jersey show surpassed all expectations, both in quality and number of animals in the barns. Nearly 200 animals, some of which would be a credit to any exhibition, made the task of placing the awards rather a difficult one for the judge. Complaints that the judge failed to follow a definite choice of type in placing the winners were numerous, although as a whole the show was very satisfactory and the breeders enthusiastic at the interest being taken in breeding better swine in Michigan. The breeders have come out strong for more size and

greater bone development, and fail to see anything good about an animal that is lacking in these points. The awards were placed as follows:

Boar 2 years or over—Phillips Bros., Riga, Mich., 1st; F. W. Havens, Bungalow, O., 2nd; C. E. Davis & Son, Ashley, Mich., 3rd; Newton Barnhart, St. Johns, Mich., 4th.

Boar 18 mos. and under 2 years—Havens, 1st; Michigana Farms, Ltd., Pavilion, Mich., 2nd; Inwood Bros., Romeo, Mich., 3rd; H. W. Mumford, Ann Arbor, Mich., 4th.

Boar 12 mos. and under 18 mos.—Havens, 1st, 2nd and 3rd; Barnhart, 4th.

Boar 6 mos. and under 12 mos.—Barnhart, 1st; Mumford, 2nd; Michigana Farms, 3rd.

Boar under 6 mos.—Havens, 1st and 3rd.

Sow 2 years or over—Mumford, 1st; Havens, 2nd; F. Heins & Son, Davison, Mich., 3rd; Davis & Son, 4th.

Sow 18 mos. and under 2 years—Mumford, 1st; Havens, 2nd; Phillips Bros., 3rd; Harry Fouts, West Milton, O., 4th.

Sow 12 mos. and under 18 mos.—Havens, 1st, 2nd and 3rd; Mumford, 4th.

Sow 6 mos. and under 12 mos.—Heins & Son, 1st and 2nd; Mumford, 3rd and 4th.

Sow under 6 mos.—W. C. Taylor, Milan, Mich., 1st; John A. Rinke, Warren, Mich., 2nd; Phillips Bros., 3rd; Heins & Son, 4th.

Senior champion boar—Havens.
Senior champion sow—Havens.
Junior champion boar—Havens.
Junior champion sow—Heins & Son.
Grand champion boar—Havens.
Grand champion sow—Havens.

Exhibitor's herd—Havens, 1st; Mumford, 2nd; Barnhart, 3rd; Michigana, 4th.

Breeder's young herd—Heins, 1st; Mumford, 2nd; Michigana, 3rd; Barnhart, 4th.

Four get of same boar—Havens, 1st; Heins, 2nd; Barnhart, 3rd; Michigana, 4th.

Four under 6 mos. produce of same sow—C. L. Shafley & Son, Ithaca, Mich., 1st; Heins, 2nd; Michigana, 3rd.
Premier champion for exhibitor—Havens.

Premier championship for breeder—Havens.

Spotted Poland Chinas.

Alfred Grueber of Michigan, and Ohio breeders divided honors in Spotted Poland China classes as follows:

Boar 2 years or over—Alfred Grueber, Frankenmuth, Mich., 1st and 2nd; A. J. Pevick, Utica, O., 3rd.

Boar 18 mos. and under 2 years—Adam Alt, Rockford, Sunset View, O., 1st; A. J. Pevick, Utica, O., 2nd.

Boar 12 mos. and under 18 mos.—Pevick, 1st, 3rd and 4th; Alt, 2nd.

Boar 6 mos. and under 12 mos.—Pevick, 1st; Alt, 2nd; Grueber, 3rd.

Boar under 6 mos.—Alt, 1st; Pevick, 2nd and 3rd.

Sow 2 years or over—Alt, 1st; Pevick, 2nd and 3rd; Grueber, 4th.

Sow 18 mos. and under 2 years—Alt, 1st; Grueber, 2nd.

Sow 12 mos. and under 18 mos.—Alt, 1st and 2nd; Pevick, 3rd and 4th.

Sow 6 mos. and under 12 mos.—Alt, 1st, 2nd and 3rd; Pevick, 4th.

Sow under 6 mos.—Pevick, 1st; Alt, 2nd, 3rd and 4th.

Senior champion boar—Alt.
Junior champion boar—Alt.
Junior champion sow—Alt.
Grand champion boar—Alt.
Grand champion sow—Alt.

Exhibitor's herd—Alt, 1st; Pevick, 2nd; Grueber, 3rd.

Breeder's young herd—Alt, 1st; Pevick, 2nd; Grueber, 3rd.

Four either sex get of one boar—Alt, 1st; Pevick, 2nd; Grueber, 3rd.

Four either sex under 6 mos., produce of same sow—Alt, 1st; Karl A. Muehlfeld, Frankenmuth, Mich., 2nd.

Premier champion for exhibitor—Alt, special.

Premier championship for breeder—Alt, special.

Hampshires.

Geo. Coupar & Sons of Michigan and two herds from Ohio shared the prize-money in the Hampshire classes as follows:

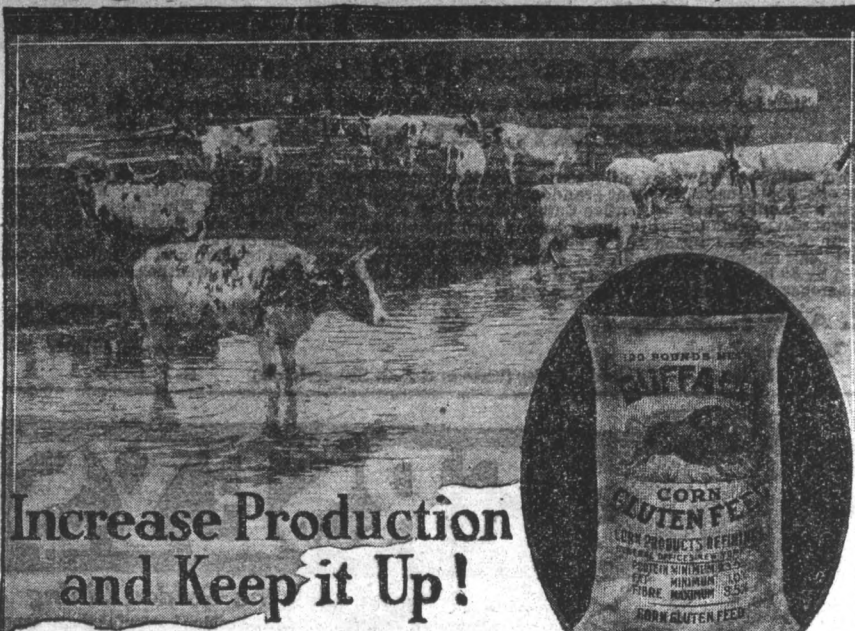
Boar 2 years old or over—Keystone Farms, Marion, O., 1st; Depew Head, Marion, O., 2nd; Geo. Coupar & Sons, Marlette, Mich., 3rd and 4th.

Boar 18 mos. and under 2 years—Depew Head, 1st.

Boar 12 mos. and under 18 mos.—Coupar, 1st and 4th; Depew Head, 2nd and 3rd.

Boar 6 mos. and under 12 mos.—

(Continued on page 393.)



Urging them to "KEEP UP PRODUCTION," which cannot be done without feeding a grain mixture of quality to bolster up the pasture—especially in the fall, *The New England Dairyman*, official paper of some 20,000 good dairymen, says "the outlook for high prices for milk is very promising."

Milk prices have been going up generally this summer. Probably without an exception anywhere in the country, the best prices ever paid for September milk are being paid now.

With September milk bringing \$3.50 or more per 100 lbs., a ton of productive grain mixture composed of BUFFALO CORN GLUTEN FEED, wheat bran or millfeed, etc., costing \$75 or less, liberally

fed with good roughage, is producing from good milkers \$200 to \$300 worth of milk.

The man who feeds BUFFALO CORN GLUTEN FEED generously, summer as well as winter, never complains of a lack of profit in dairying, nor does he say much about poor cows. BUFFALO CORN GLUTEN FEED, abundantly fed makes cows better cows heavier milkers.

FEED UP! Your dealer should have BUFFALO CORN GLUTEN FEED. If he does not, write us for sample and literature, and give us his name.

Corn Products Refining Co.
New York Chicago

Write to
National Starch Co., 606 Ford Bldg., Detroit, Mich.

Holstein Dispersion Sale Chaslen Farms

24 registered and 48 grade Holstein cattle will be sold at eleven o'clock, Thursday October 7 at Chaslen Farms three miles from Northville, Mich.

Pure bred Holsteins consist of 12 cows that will be fresh at date of sale or heavy with calf, 9 heifers under one year of age and 3 young bulls fit for service.

Grade Holsteins consist of 42 cows under six years of age, a majority of which will be fresh or heavy with calf at date of sale, balance heifers under one year of age.

One 2800 lbs. pair of mules, full brothers 4 and 5 years of age and 4 horses will be sold.

Farmers desiring a herd boar will find 200 Duroc Jersey swine on the farm to make selections from. 10 head of pure bred Shorthorn bulls will be priced right at private sale.

Thursday, October 7

C. H. & L. A. YOUNG, Props. Northville, Mich.

225 Registered Holsteins 225

At Public Sale

Three Great Days

Tuesday,	October 19th	Jackson, Michigan
Wednesday,	October 20th	Lansing, Michigan
Thursday,	October 21st	Owosso, Michigan

Sales Managed by

The Michigan Holstein-Friesian Association.

H. W. NORTON, JR., Field Secretary,
Old State Block,
Lansing, Michigan

Facts in BLACK & WHITE

Purebred Holstein Cattle For Profit

"Both milk and fat are produced at lowest rate in general by the cows consuming the MOST FOOD." This conclusion reached by Prof. H. H. Wing, Professor of dairy husbandry at Cornell, after a year's observation of the herd at the University experiment station. Holsteins are large and healthy, capable of converting large quantities of coarse feed into the best of milk suitable for all purposes, particularly in demand for infant feeding and for cheese making.

If you are keeping cows for profit, investigate Holsteins.

Send for Free Illustrated Booklets. They contain valuable information for any Dairyman.

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
Brattleboro Vermont.

OUR HERD SIRE Model King Segis Glista

By a 30 lb. son of Lakeside King Segis Alban De Kol. His dam Glista Fenelle 22.37 lbs. Her dam Glista Ernestine 35.96 lbs. His three nearest dams average over 35 lbs and his forty-six nearest tested relatives average over 30 lbs. of butter in seven days. Write for prices on his sons.

Grand River Stock Farms
Cory J. Spencer, Owner Eaton Rapids, Mich.

"TOP NOTCH" HOLSTEINS

McPHERSON FARMS COMPANY
has raised many great milk cows:—
1 Officially Produced 842 lbs. milk in 7 days
3394 lbs. milk in 30 days
120 lbs. milk in 1 day
811 lbs. milk in 7 days
over 10000 lbs. milk in 100 days
105 lbs. milk in 1 day
696 lbs. milk in 7 days
2669 lbs. milk in 30 days
100 lbs. milk in 1 day
20654 lbs. milk in 1 year
100 lbs. milk in 1 day
659 lbs. milk in 7 days
18675 lbs. milk in 1 year
Others under test are making large milk records
A fine lot of young bulls from 3 months to 2 years old for sale. Get a "milk" bull, and increase milk production in your herd.
Our herds are under U. S. supervision.
McPHERSON FARMS CO., Howell, Mich.

HOLSTEIN BULL CALVES FOR SALE

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

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

\$100 Buys Reg. Holstein Bull ready for service & white good individual and richly bred.
B. B. REAVEY, Akron, Mich.

CLUNY STOCK FARM

A Semi-Official Bred Bull to Head
Your Herd
Maplecrest Application Pontiac No. 132652, heads
Our Herd
His dam's record is 1344.3 lbs. butter 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515'6 lbs. milk in 7 days.
One of his sons from our good record dams will carry these great blood lines into **Your Herd.**
For Pedigrees and Prices write to
R. Bruce McPherson, Howell, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

Holstein-Friesian heifer and bull calves, purebred registered and high-grade. Price \$20 up. Splendid individuals and breeding. Write us your requirements. Brownroft Farms, McGraw, N. Y.

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.

Holsteins of Quality

for sale. Heifers from 8 to 24 months old. All registered and sold subject to tuberculin test.
E. A. HARDY, Rochester, Mich.

BARGAIN PRICES on pure bred Holstein heifers and young bulls ready for service.
JOSEPH H. BREWER, Grand Rapids, Michigan

HEREFORDS

20 Cows and Heifers of popular breeding for sale also bulls not related.

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 McCARTYS, Bad Axe, Mich.**

Herefords: 4 Reg. bulls 5 to 8 mo. old. Prices reasonable for quick sale visitors welcome. **Reed Schultz, R. 3, Homer, Mich.**

HEREFORDS

D. S. Polled Herefords

Herd headed by Renner Bullion, \$15933, (18242) son of grand champion Bullion 4th.

For Sale—A few good polled and horned cows bred to this great bull. Also three fine bull calves not related to him. Correspondence solicited.

Cole & Gardner, Hudson, Mich.

Five Months Old Jersey bull calf, sired by Fisherton Torona Duke 15153, a double grandson of Hood Farm Pogs 9th, whose dam a granddaughter of Figgis 76106, Senior and Grand Champion at the World's Fair; and out of Dunes Eminent Byrne 541557, an excellent cow. Come and look over his full sisters. One hundred dollars takes him to October first. **IRA W. JAYNE, R. F. D. 2, Fenton, Michigan**

The Wildwood Farm

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

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

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

Registered Jersey bull calves of pleasing type, backed by high production. Priced very low, quality considered. **C. S. BASSETT, Kalamazoo, Mich.**

Jerseys For Sale, Register of Merit stock of both sex. **Smith and Parker, Howell, Michigan.**

Lillie Farmstead Jerseys 2 R. of M. bull calves, one year old this fall. **C. O. LILLIE, Coopersville, Mich.**

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

BIDWELL SHORTHORNS

You Can Buy

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

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

St. Joseph Valley Shorthorn Ass'n has for sale males and females of all ages and best breeding. **AARON HAGENBUCH, Sec-treas. Three Rivers, Mich**

We Now Have

a number of choicely bred scotch females of any age for sale also three bulls from 6 to 18 months old. Visit our herd before buying. Sold 5 calves for \$5400. **CARR BROS., & CO., Bad Axe, Mich.**

Richland Shorthorns

Imp. Lorne, Imp. Newton champion and Sterling Supreme in Service. We offer for quick sale: Five Scotch Bulls, best of breeding. Three whites at \$1000 each. One roan at \$500, one red at \$400. No females for sale. Public sale Chicago Oct. 28th. **C. H. PRESCOTT & SONS, Tawas, City, Mich.**

Fairfield Shorthorns. For Sale: cows and heifers bred to Imp. Scottish Emblem 68332. Open heifers all ages. Also a few choice Scotch bulls of serviceable age. Come and see them. **H. B. PETERS & SON, Carland, Mich., P. O. R. R. Elsie, Mich.**

Shorthorns Scotch and Scotch Topped bulls and heifers priced right. Sultan Champion heads herd, one scotch two yr. old herd bull by Red Cumberland priced right. **H. J. FLOWER & SON, Milo, Mich.**

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

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

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

Milking Shorthorns of best Bates breeding, bulls 6 to 8 mo. for sale. **E. H. KURTZ, Mason, Mich.**

Shorthorns of Merit Both males and females for sale. **ARTHUR DODDS, Lapeer, Michigan**

Shorthorn Bulls Eight to ten months old Topped breeding. Lawrence P. Otto, Charlotte, Mich.

SHORTHORNS—Imp. Mysie Prince in service bred by J. Durno, sire bred by Wm. Duthie. Stock for sale. **J. A. BARNUM, Union City, Mich.**

For Sale 19 Shorthorn registered good breeding will sell cheap to close out. Apply **THE JENNINGS FARMS, Bailey, Mich.**

Milking Shorthorn 3 mos. heifer calf \$125 bred heifers and serviceable bulls at farmers' prices. **Central Mich. Shorthorn Assn. Oscar Skinner Sec. Gowen, Mich.**

Red Polled cattle for sale bulls from 4 to 18 mos. also cows with calves by side and heifer's. **G. A. CALHOON, Bronson, Mich.**

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

DISPERSION SALE

30 HEAD OF HOLSTEIN-FRIESIAN

on the farm of C. A. Wilson 1 mile east and 1 mile south of M. A. C.

WEDNESDAY, OCT. 6th 1920 at 12.00

There will be 8 cows in milk, some to freshen immediately after the sale and some a little later. Our offerings consist of 3 great granddaughters of Sarcastic Lad, the St. Louis World's Fair Champion, a granddaughter of Pontiac Butter Boy and several granddaughters of King Segis. We have several serviceable bulls of good breeding and individuality. Creston Alexis Segis Pontiac a 31.83 lb. son of Creston Pontiac Segis, who has made two records above 30 lbs. one as a 3 yr. old. Many cows are in calf to him and some of the young heifers and bulls are sired by him, a 27 lb. bull, 2 others sired by 30 lb. bulls ready for service. Sale will be held regardless of weather, under cover. Remember the date and send for catalog to

C. A. WILSON,
Lansing, Mich.
R. F. D. No. 7

or **C. A. DANIELS,**
Okemos, Mich.
R. F. D. No. 1
(Herds Under State and Fed. Supervision)



JERSEYS

The Milkpail with the Golden Lining

YES, a Jersey milkpail has a lining of golden butterfat that means profit in any market. More returns from your feed investment. Learn about these new gold mines today. Our Information Bureau will give you Jersey facts about Dairy Profits, which you will find invaluable, whether you're interested in one cow or a hundred. Free. "The Profit Breed."

THE AMERICAN JERSEY CATTLE CLUB, 324-RW. 23d St., New York

An Institution for the Benefit of Every Jersey Owner

Leonard's Champion Poland China Herd

Showed ten head at the Michigan State Fair and won second on under a year boar, second and fourth on under 6 months pig. First aged sow, second senior yearling. First and fourth under a year. First, second, third on sow pigs. First on breeders herd, first on exhibitors herd, first on get of sire, first produce of dam. Grand Champion sow, senior champion sow and junior champion sow. All of these winners, except three, were sired by Leonard's Big Bob and his blood will be represented strongly in the sale. Sale date October 28. Write for catalog and information. All hogs on the farm cholera immune. **E. R. LEONARD, ST. LOUIS, MICH.**

O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan

Young sows due to farrow in September. Spring boars ready for shipment. Choice individuals of BIG TYPE breeding. I ship C. O. D. pay express and register in buyer's name. **J. CARL JEWETT, R. 5, Mason, Michigan.**

Reg. Red Polled Bull calves for sale, from 3 mos. to 1 year old, sired by Famous Champion grand son of Charmer 1918 International Grand Champion. **WESTBROOK BROS., Ionia, Mich.**

Steers For Sale Several bunches of good stockers and feeders weighing from 650 to 1050 lbs. Each bunch even in size and color write at once stating your wants. **W. W. DYER, Ottumwa, Iowa**

HOGS

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

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



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

DUROC JERSEY SWINE for sale 2 yr. old herd boars, yearling boars and boar pigs, also bred sows and gilts. Write for pedigrees and prices. Come and see them. **THOS. UNDERHILL & SON, Salem, Mich.**

Duroc sows and gilts bred to Walts King 29499, who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat. and price list **NEWTON BARNHART, St. Johns, Mich.**

OAKWOOD FARM DUROCS We can furnish you with anything from a weanling pig to a boar of herd heading caliber at reasonable prices. Your inspection and correspondence is solicited. **RUSH BROS., Romeo, Mich.**

12 Choice Duroc gilts bred to farrow July and August. Daughters of Michigan Cherry Col. bred to Jacks Cherry Oriol Jack Number 169259. Son of the \$10,000.00 champion Jacks Oriol King 2nd. All large type, heavy bone gilts, 250 to 300 lbs. **THE JENNINGS FARMS, R. 1, Bailey, Mich**

Duroc Boars and Gilts for sale at \$25 to \$50 each, crated and registered in buyer's name. Satisfaction guaranteed. These are some of the best pigs in the state. Visitors welcome. **MICHIGANA FARM LTD., Pavilion, Mich.**

Duroc Jersey hogs. Cholera Immune. Orion Cherry King and Col. breeding. O.O.K. Boar 1 yr. old O. O. K. Boar 3 yrs. old wt. 800 lbs. Fifty September pigs, sired by Michigan Panama Special 2nd. Also some fall gilts. **HARRY MARTIN AND SON, Spring-Brook Stock Farm, Paw Paw, Mich.**

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

Duroc Jerseys of the right type, good blood lines and in good condition at a price you can afford to pay. Guaranteed to suit you. **W. E. Bartley, Alma, Mich.**

Duroc Jersey's. Herd headers in boars. Why? Because they are bred right, fed right, grown right and from Grand Champion stock. Write or bet. ter come and see. **F. J. Drott, R. 1, Monroe, Mich.**

DUROCS spring hogs. A few gilts bred for Sept. farrow at bargain prices. **W. C. TAYLOR, Milan, Mich**

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

Duroc Jerseys Do you want a young boar sired by Mich. Pathfinder? I have them. **E. D. HEYDENBERK, Wayland, Mich.**

Big Type Chester Whites. Choice, stretchy spring boars, also tried sows and fall gilts bred for Sept. litters. These hogs are big and will fatten at any age. Grand champion blood lines of the breed, Wildwood Prince Jr., Rajah, and Champion X. Cholera immune. Satisfaction guaranteed. **N. L. HILL JR., Ackinaw, Tazewell Co. Ill**



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

The World's Champion

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

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

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

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

CHESTERS two good fall gilts bred to a boar of Wildwood Prince Jr. breeding for Sept. farrow; spring pigs. **F. W. ALEXANDER, Vassar, Mich.**

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

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

O. I. C's Booking orders for spring pigs, we register free and ship C. O. D. **A. J. BARKER & SON, Belmont, Mich.**

Look for Miller Meadows L. T. P. C's at Marshall Calhoun Co. Fair, Sept. 21-25. **CLYDE WEAVER, Ceresco, Mich.**

FOR SALE Registered Big type Poland China gilts bred for Sept. farrow, weighing 225 lbs. for \$50, spring pigs all sold, guarantee satisfaction. **DORUS HOVER, Akron, Mich.**

Bred Sow Sale at Fairgrounds
August 5th. **Carey U. Edmonds, Hastings, Mich.**

Poland China Special

Boar pigs sired by Monster Big Bob and from our best sows, priced right for immediate shipment. Big-boned, strong-backed, smooth fellows from popular blood lines. Write for information or visit the farm. **BOONE-HILL CO., Blanchard, Mich.**

L. S. P. C.

Everything sold previously ad. 25 spring pigs placed on the bargain counter for mo. of Sept. pairs or trios not akin. **H. O. SWARTZ, Shoolcraft, Mich.**

Big Type Poland Chinas

Our herd is representative of the best in Big Types. Choice boars for sale now. **Wesley Hile, R. 6, Ionia, Mich.**

L. T. P. C. We have a large number of spring and summer pigs ready to ship sired by such boars as "Hart's Black Prince," "Leonard's Big Bob," the "Model Clansman" and "Prospect Yank" a great son of the \$40,000 Yankee. Write for prices or come and look them over if you are in the market. **HART, FULCHER & OLIVE, address F. T. Hart, St. Louis, Mich.**

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

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

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

Big T. P. Chinas for sale. A few tried sows, spring boars. Aug. pigs both sex. Recorded free in buyer's name. **L. L. Chamberlain, Marcellus, Mich.**

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

Lindhurst Poland Chinas
Stock for sale at all times. Public Sale Oct. 23. **WM. H. LIND, Alto, Mich.**

POLAND CHINAS
W. J. HAGELESHAW, Augusta, Mich.

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

I constantly D. W. F. O. See exhibit at Mich. State Fair, let your name on mailing list for public sale Oct. 23. **Double Immune. B. R. Leonard, St. Louis, Mich. R. 3.**

Large Type Poland Chinas. Everything immuned by double treatment. Meet me at Detroit, or Jackson Fairs. **A. A. Feldkamp, R. 2, Manchester, Mich.**

O. I. C. Gilts bred for July and Aug. farrow. Also spring farrowed pigs. **G. P. ANDREWS, Dansville, Mich**

O. I. C. Gilts bred for Sept. farrow and spring pigs. **F. C. BURGESS, R. 3, Mason, Mich.**

O. I. C's Some fine spring pigs and yearling gilts. Will ship O. O. D. register, and guarantee right in every way. **JOHN C. WILK, Alma, Mich.**

O. I. C's. One last fall boar wgt. 425, two last fall gilts, bred lots of spring pigs and this fall pigs either sex, good growthy stock 3/4 mile west of Depot, Oitz's. Phone 124. **Otto B. Schulze, Nashville, Mich.**

BARGAINS on Big type spring and summer Poland China Pigs also yearling Shorthorn bulls, bull and heifer calves. **Robert Neve, Pierson, Mich.**

HAMPSHIRE

1914 1920
Choice Spring boars, popular breeding. Booking orders for fall pigs. All stock Cholera Immuned and guaranteed Breeders. Satisfaction guaranteed.

STEBEN'S HAMPSHIRE FARM
R. 3, Angola, Ind.

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

Hampshires get your boar pigs, now a few bred gilts left new blood lines of quality. **JOHN W. SYNDER, R. 4, St. Johns, Mich.**

YORKSHIRES BRED GILTS
WATERMAN & WATERMAN
Packard Rd. Ann Arbor, Mich.

SHEEP.

Delaine Rams B. & C. type, having size, quality, best of breeding, priced to sell, write. **S. H. SANDERS, R. 2, Ashtabula, O.**

WHITTUM FARM SHROPSHIRE

A fine lot of imported and house bred yearling ewes and fall farrow, and a fine chance to start a new flock or improve the old one call at the farm or write for just what you want. **C. H. WHITTUM, Eaton Rapids, Mich.**

Hillcrest Shropshires
A nice lot of Ewes and Rams of all ages our flock is headed by McKerrrow 3164 a son of Senator Bibby write or call on **R. J. & C. A. WILLIAMS, Middleville, Mich.**

FOR SALE 35 Registered Shropshire yearling rams and ram lambs. Also some choice Duroc Jersey boars and gilts. **CLIFFORD MIDDLETON, Clayton, Mich.**

SHROPSHIRE Yearling and Lamb rams sired by Imp. Berry No. 163 for sale. Also a few ewes. **ARTHUR DODDS, Lapeer, Michigan**

Shropshires Am offering one choice two year ram and a few good yearlings. **O. J. THOMPSON, Rockford, Mich**

Shropshires sire imported Minton Ram ram and a few good yearlings. **DAN BOOHER, R. 4, Evart, Mich.**

Shropshires yearling Rams that have size and type for sale. **ARMSTRONG BROS., R. 3, Fowlerville, Mich.**

State's Greatest Stock Show

(Continued from page 391.)

Keystone, 1st; Depew Head, 2nd and 3rd; Coupar, 4th.

Boar under 6 mos.—Depew Head, 1st and 3rd; Keystone, 2nd and 4th.

Sow 2 years or over—Depew Head, 1st; Keystone, 2nd and 3rd; Coupar, 4th.

Sow 18 mos. and under 2 years—Depew Head, 1st and 4th; Coupar, 2nd; Keystone, 3rd.

Sow 12 mos. and under 18 mos.—Keystone, 1st and 2nd; Depew Head, 3rd; Coupar, 4th.

Sow 6 mos. and under 12 mos.—Keystone, 1st; Depew Head, 2nd and 4th; Coupar, 3rd.

Sow under 6 mos.—Depew Head, 1st; Keystone, 2nd and 3rd; Coupar, 4th.

Senior champion boar—Keystone, 1st; Depew Head, 2nd.

Senior champion sow—Keystone.

Junior champion sow—Depew Head.

Junior champion boar—Keystone.

Grand champion boar—Keystone.

Grand champion sow—Depew Head.

Exhibitor's herd—Depew Head, 1st; Keystone, 2nd; Coupar, 3rd.

Breeder's young herd—Keystone, 1st and 3rd; Depew Head, 2nd; Coupar, 4th.

Four get of same boar—Keystone, 1st; Depew Head, 2nd and 4th; Coupar, 3rd.

Four under 6 mos. produce of same sow—Coupar, 1st and 4th; Depew Head, 2nd; Keystone, 3rd.

Premier champion for exhibitor—Depew Head.

Premier championship for breeder—Depew Head.

O. I. C.

Among the O. I. C. exhibitors were Harry T. Crandell, Newman's Stock Farm, Andrew Adams, Weber Bros., Hooper & McGrath. It was one of the best exhibitions in recent years, and goes to emphasize the fact that Michigan is fast coming to be recognized as a state where they breed good swine. The winners were as follows:

Boar 2 years or over—Weber Bros., Royal Oak, Mich., 1st; Hooper & McGrath, Cass City, Mich., 2nd; Harry Crandell, Cass City, Mich., 3rd.

Boar 18 mos. and under 2 years—Crandell, 1st; Weber Bros., 2nd; Hooper & McGrath, 3rd; Adams, 4th.

Boar 12 mos. and under 18 mos.—Crandell, 1st and 2nd; Albert Newman, Marlette, Mich., 3rd; Hooper & McGrath, 4th.

Boar 6 mos. and under 12 mos.—Crandell, 1st; Newman, 2nd; A. J. Adams, Litchfield, Mich., 3rd; Weber Bros., 4th.

Boar under 6 mos.—Adams, 1st and 4th; Crandell, 2nd; Newman, 3rd.

Sow 2 years or over—Newman, 1st; Crandell, 2nd; Weber Bros., 3rd; Adams, 4th.

Sow 18 mos. and under 2 years—Newman, 1st; Hooper & McGrath, 2nd; Adams, 3rd; Crandell, 4th.

Sow 12 mos. and under 18 mos.—Newman, 1st and 3rd; Adams, 2nd; Hooper & McGrath, 4th.

Sow 6 mos. and under 12 mos.—Adams, 1st; Newman, 2nd; Crandell, 3rd and 4th.

Sow under 6 mos.—Adams, 1st; Crandell, 2nd and 4th; Newman, 3rd.

Senior champion boar—Weber Bros.

Senior champion sow—Newman.

Junior champion boar—Crandell.

Junior champion sow—Adams.

Grand champion boar—Weber Bros.

Grand champion sow—Newman.

Exhibitor's herd—Crandell, 1st; Newman, 2nd; Hooper & McGrath, 3rd; Adams, 4th.

Breeder's young herd—Crandell, 1st; Hooper & McGrath, 2nd; Adams, 3rd; Weber Bros., 4th.

Four get of same boar—Hooper & McGrath, 1st and 2nd; Adams, 3rd; Weber Bros., 4th.

Four under 6 mos. produce of same sow—Adams, 1st; Newman, 2nd; Crandell, 3rd; Weber Bros., 4th.

Mich. O. I. C. Swine Breeders' Association Special Prizes.

Boar 2 years or over—Weber Bros., 1st; Hooper & McGrath, 2nd; Crandell, 3rd.

Boar 18 mos. and under 2 years—Crandell, 1st; Weber Bros., 2nd; Hooper & McGrath, 3rd; Adams, 4th.

Boar 12 mos. and under 18 mos.—Crandell, 1st and 2nd; Newman, 3rd; Hooper & McGrath, 4th.

Boar 6 mos. and under 12 mos.—Crandell, 1st; Newman, 2nd; Adams, 3rd; Weber Bros., 4th.

Boar under 6 mos.—Adams, 1st; Crandell, 2nd; Newman, 3rd; Adams, 4th.

Sow 2 years or over—Newman, 1st; Crandell, 2nd; Weber Bros., 3rd; Adams, 4th.

Sow 18 mos. and under 2 years—Newman, 1st; Hooper & McGrath, 2nd; Adams, 3rd; Crandell, 4th.

Sow 12 mos. and under 18 mos.—Newman, 1st and 3rd; Adams, 2nd; Hooper & McGrath, 4th.

Sow 6 mos. and under 12 mos.—Adams, 1st; Newman, 2nd; Crandell, 3rd and 4th.

Sow under 6 mos.—Adams, 1st; Crandell, 2nd and 4th; Newman, 3rd.

SHEEP

Shropshires.

Ram 2 years old or over—P. D. Lockwood, Bellefontaine, O., 1st; Kope-Kon Farms, Coldwater, Mich., 2nd; H. E. Powell, Ionia, Mich., 3rd; F. E. Woodward, Forest, O., 4th.

Ram 1 year old—Kope-Kon Farms, 1st; Powell, 2nd; Clifford Middleton, Clayton, Mich., 3rd; Woodward, 4th.

Ram lamb—Kope-Kon, 1st and 2nd; W. S. Hutchings, Lincoln Park, N. Y., 3rd; Woodward, 4th.

Ewe 2 years old or over—Lockwood, 1st and 2nd; Kope-Kon Farms, 3rd; Pearl Wurts, Attica, Ohio, 4th.

Ewe 1 year old—Lockwood, 1st; Kope-Kon Farms, 2nd; Hutchings, 3rd; Wurts, 4th.

Ewe lamb—Wurts, 1st; Lockwood, 2nd; Hutchings, 3rd; Powell, 4th.

Champion ram—Lockwood, 1st; Kope-Kon Farms, 2nd.

Champion ewe—Lockwood, 1st and 2nd.

Flock—Lockwood, 1st; Kope-Kon, 2nd; Powell, 3rd; Wurts, 4th.

Breeder's young flock—Kope-Kon, 1st; Wurts, 2nd; Powell, 3rd; Hutchings, 4th.

Lamb flock—Wurts, 1st; Lockwood, 2nd; Hutchings, 3rd; Kope-Kon, 4th.

Get of sire—Wurts, 1st; Lockwood, 2nd; Hutchings, 3rd; Kope-Kon, 4th.

Hampshires.

Ram 2 years old or over—Walnut Hall Farm, Donerail, Ky., 1st and 2nd; Kope-Kon Farms, Coldwater, Mich., 3rd; Monroe Stock Farm, Lucas, O., 4th.

Ram 1 year old—Walnut Hall, 1st and 2nd; Monroe Stock Farm, 3rd; Kope-Kon, 4th.

Ram lamb—Walnut Hall, 1st and 2nd; Monroe, 3rd and 4th.

Ewe 2 years or over—Walnut Hall, 1st and 3rd; C. L. Mitchell & Son, 2nd; Monroe Stock Farm, 4th.

Ewe 1 year old—Walnut Hall, 1st and 2nd; Monroe Stock Farm, 3rd and 4th.

Ewe lamb—Walnut Hall Farm, 1st and 2nd; Monroe Stock Farm, 3rd and 4th.

Champion ram—Walnut Hall Farm, 1st and 2nd.

Champion ewe—Walnut Hall Farm, 1st and 2nd.

Flock—Walnut Hall Farm, 1st; Monroe Stock Farm, 2nd; Mitchell, 3rd.

Breeder's young flock—Walnut Hall Farm, 1st; Monroe Stock Farm, 2nd.

Lamb flock—Walnut Hall Farm, 1st; Monroe Stock Farm, 2nd.

Get of sire—Monroe Stock Farm, 1st.

Warranted to Give Satisfaction

Gombault's
Caustic Balsam

Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diphtheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

Bean Thresher for sale, like new. Half price. Round trip fare paid buyer. H. ARNDT, Sunman, Indiana.

Poland China Sale Circuit

Wesley Hile	Oct. 26	Ionia
Boone-Hill Co.	Oct. 27	Blanchard
Leonard & Fisher	Oct. 28	St. Louis
Chas. Wetzel & Sons	Oct. 29	Ithaca
W. Brewbaker & Sons	Oct. 30	Elsie

These firms, members of Central Michigan Poland China Breeders' Assn., will present to the public an offering of Poland China swine, such as has never before been offered in the state. The sales will be held at above named places and will give the farmer an opportunity to fit his exact needs with breeding swine that will produce more pork for the same amount of feed consumed. This is an opportunity of a lifetime, for these firms will sell to the highest bidders sows and boars of the highest individual merit from the best blood lines of the breed. Col. Harry A. Eckhart of Illinois and Col. Ed. Bowers of Indiana will do the selling. These men are artists as livestock salesmen, and it will do the breeders and farmers of our good old state an untold amount of good to be at the sales. It will help to get them acquainted with the breed from an educational standpoint. Michigan is recognized today, as never before, as a state that produces as good hogs as any state in the Union. It is now up to the breeders and farmers to produce hogs of more and better quality. Quality always brings the top price on the open market as well as in the sales ring.

Write for catalogs to the above firms or the secretary of the association. Poland China breeders are urged to join the association. Write to secretary.

CENTRAL MICHIGAN POLAND CHINA
BREEDERS' ASSOCIATION

E. R. LEONARD, St. Louis, Pres. C. A. BOONE, Blanchard, Sec'y.

W. M. KELLY, For The Michigan Farmer

AUCTION SALE
OF PURE BRED HORSES

W. B. Otto. On account of continued ill health will Disperse his Famous Stud of

21 Belgian and Percheron Mares

Imported and American Bred

4 Belgian Stallions

including the Outstanding Imported Herd Header

LE COQ DU PLATOIT No. 7202 (VOL. XX)
P. 850

This stock will be on exhibit at the EATON COUNTY FAIR, CHARLOTTE, MICHIGAN, Sept. 28 to Oct 1, and will be sold there at

PUBLIC AUCTION

Monday, Oct. 4, At 1:00 P. M.

Write For Catalogue

W. B. OTTO,

Charlotte, Michigan

Eaton County

I Want to Send You My New **GATE BOOK**

of "Can't-Sag" Gates

FREE! Just send me your name and address. I will mail you my big new Gate Book Free—postpaid. Quotes prices lower than it costs you to build homemade all-wood gates. Can't-Sag Gates are the only farm gates that are

GOOD Enough to Use ANYWHERE
CHEAP Enough to Use EVERYWHERE

Always hang straight and true. Never sag, drag or warp or twist out of shape. No nails used. No wood joints. Every board double bolted between eight angle steel uprights. Self-locking hinges—won't injure stock—easily repaired—outlast several all wood, steel, wire or gas pipe gates. Cost less than any other gates you can build or buy. More than a million now in use. Write for free Catalog today. ALVIN V. ROWE, President

ROWE MFG. CO., 1001 Adams St., Galesburg, Ill.

"More than a million Can't-Sag Gates now in use."
ALVIN V. ROWE, President.

HEREFORDS

20 Cows and Heifers of popular breeding for sale also bulls not related.

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 McCARTYS, Bad Axe, Mich.

Herefords: 4 Reg. bulls 5 to 8 mo. old. Prices reasonable for quick sale visitors welcome. Reed Schultz, R. 3, Homer, Mich.

HEREFORDS

D. S. Polled Herefords

Herd headed by Renner Bullion, \$1593, (1824) son of grand champion Bullion 4th.

For Sale—A few good polled and horned cows bred to this great bull. Also three fine bull calves not related to him. Correspondence solicited.

Cole & Gardner, Hudson, Mich.

Five Months Old Jersey bull calf, sired by Fisherton Torona Duke 1st, whose dam a granddaughter of Fiddis 7006, Senior and Grand Champion at the World's Fair, and out of Dunes Eminent Byrne 541557, an excellent cow. Come and look over his full sisters. One hundred dollars takes him to October first. IRA W. JAYNE, R. F. D. 2, Fenton, Michigan

The Wildwood Farm

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

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

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

Registered Jersey bull calves of pleasing type, backed by high production. Priced very low, quality considered. C. S. BASSETT, Kalamazoo, Mich.

Jerseys For Sale, Register of Merit stock of both sex. Smith and Parker, Howell, Michigan.

Lillie Farmstead Jerseys 2 R. of M. bull calves, one year old this fall. C. O. LILLIE, Coopersville, Mich.

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

BIDWELL SHORTHORNS

You Can Buy

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

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

St. Joseph Valley Shorthorn Ass'n has for sale males and females of all ages and best breeding. AARON HAGENBUCH, Sec-treas. Three Rivers, Mich

We Now Have

a number of choice bred scotch females of any age for sale also three bulls from 6 to 18 months old. Visit our herd before buying. Sold 5 calves for \$5400. CARR BROS., & CO., Bad Axe, Mich.

Richland Shorthorns

Imp. Lorne, Imp. Newton champion and Sterling Supreme in Service. We offer for quick sale: Five Scotch Bulls, best of breeding. Three whites at \$1000 each. One roan at \$500, one red at \$400. No females for sale. Public sale Chicago Oct. 28th. C. H. PRESCOTT & SONS, Tawas, City, Mich.

Fairfield Shorthorns. For Sale: cows and heifers bred to Imp. Scottish Emblem 680312. Open heifers all ages. Also a few choice Scotch bulls of serviceable age. Come and see them. H. B. PETERS & SON, Carland, Mich., P. O. R. R. Elsie, Mich.

Shorthorns Scotch and Scotch Topped bulls and heifers priced right. Sultan Champion heads herd, one scotch two yr. old herd bull by Red Cumberland priced right. H. J. FLOWER & SON, Milo, Mich.

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

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

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

Milking Shorthorns of best Bates breeding, bulls 6 to 8 mo. old for sale. E. H. KURTZ, Mason, Mich.

Shorthorns of Merit Both males and females for sale. ARTHUR DODDS, Lapeer, Michigan

Shorthorn Bulls Eight to ten months old of Scotch and Scotch Topped breeding. Lawrence P. Otto, Charlotte, Mich.

SHORTHORNS—Imp. Mysie Prince in service bred by J. Durno, sire bred by Wm. Duthie. Stock for sale. J. A. BARNUM, Union City, Mich.

For Sale 19 Shorthorn registered good breeding will sell cheap to close out. Apply The JENNINGS FARMS, Bailey, Mich.

Milking Shorthorn 3 mos. heifer calf \$125 bred heifers and serviceable bulls at farmers' prices. Central Mich. Shorthorn Assn. Oscar Skinner Sec. Gowen, Mich.

Red Polled cattle for sale bulls from 4 to 18 mos. also cows with calves by side and heifer's. G. A. CALHOON, Bronson, Mich.

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

DISPERSION SALE

30 HEAD OF HOLSTEIN-FRIESIAN

on the farm of C. A. Wilson 1 mile east and 1 mile south of M. A. C.

WEDNESDAY, OCT. 6th 1920 at 12.00

There will be 8 cows in milk, some to freshen immediately after the sale and some a little later. Our offerings consist of 3 great granddaughters of Sarcastic Lad, the St. Louis World's Fair Champion, a granddaughter of Pontiac Butter Boy and several granddaughters of King Segis. We have several serviceable bulls of good breeding and individuality. Creston Alexis Segis Pontiac a 31.83 lb. son of Creston Pontiac Segis, who has made two records above 30 lbs. one as a 3 yr. old. Many cows are in calf to him and some of the young heifers and bulls are sired by him, a 27 lb. bull, 2 others sired by 30 lb. bulls ready for service. Sale will be held regardless of weather, under cover. Remember the date and send for catalog to

C. A. WILSON,
Lansing, Mich.

R. F. D. No. 7

(Herds Under State and Fed. Supervision)

C. A. DANIELS,
Okemos, Mich.

R. F. D. No. 1



JERSEYS

The Milkpail with the Golden Lining

YES, a Jersey milkpail has a lining of golden butterfat that means profit in any market. More returns from your feed investment. Learn about these new gold mines today. Our Information Bureau will give you Jersey facts about Dairy Profits, which you will find invaluable, whether you're interested in one cow or a hundred. Free. "The Profit Breed."

THE AMERICAN JERSEY CATTLE CLUB, 324-RW. 23d St., New York
An Institution for the Benefit of Every Jersey Owner

Leonard's Champion Poland China Herd

Showed ten head at the Michigan State Fair and won second on under a year boar, second and fourth on under 6 months pig. First aged sow, second senior yearling. First and fourth under a year. First, second, third on sow pigs. First on breeders herd, first on exhibitors herd, first on get of sire, first produce of dam. Grand Champion sow, senior champion sow and junior champion sow. All of these winners, except three, were sired by Leonard's Big Bob and his blood will be represented strongly in the sale. Sale date October 28. Write for catalog and information. All hogs on the farm cholera immune. E. R. LEONARD, ST. LOUIS, MICH.

O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan

Young sows due to farrow in September. Spring boars ready for shipment. Choice individuals of BIG TYPE breeding. I ship C. O. D. pay express and register in buyer's name.

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

Reg. Red Polled Bull calves for sale, from 3 mos. to 1 year old, sired by Famous Charnier grand son of Charnier 1919 International Grand Champion. WESTBROOK BROS., Ionia, Mich.

Steers For Sale Several bunches of good stock-ers and feeders weighing from 650 to 1050 lbs. Each bunch even in size and color write at once stating your wants. W. W. DYER, Ottumwa, Iowa

HOGS

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

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



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

Phillips Bros, Riga, Mich.

DUROC JERSEY SWINE

for sale 2 yr. old herd boars, yearling boars and boar pigs, also bred sows and gilts. Write for pedigrees and prices. Come and see them. THOS. UNDERHILL & SON, Salem, Mich.

Duroc sows and gilts bred to Walt's King 29499, who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat and price list. NEWTON BARNHART, St. Johns, Mich.

OAKWOOD FARM DUROCS

We can furnish you with anything from a weanling pig to a boar of herd heading caliber at reasonable prices. Your inspection and correspondence is solicited. RUSH BROS., Romeo Mich.

12 Choice Duroc gilts bred to farrow July and August. Daughters of Michigan Cherry Col. bred to Jacks Cherry Oriob King Number 169259. Son of the \$10,000.00 champion Jacks Orion King 2nd. All large type, heavy bone gilts. 250 to 300 lbs. THE JENNINGS FARMS, R. 1, Bailey, Mich.

Duroc Boars and Gilts

for sale at \$25 to \$50 each, crated and registered in buyer's name. Satisfaction guaranteed. These are some of the best pigs in the state. Visitors welcome. MICHIGANA FARM LTD., Pavilion, Mich.

Duroc Jersey hogs, Cholera Immune. Orion Cherry King and Col. breeding. O. O. E. Boar 1 yr. old O. O. K. Boar 3 yrs. old wt. 300 lbs. Fifty September pigs, sired by Michigan Panama Special 2nd. Also some fall gilts. HARRY MARTIN AND SON, Spring-Brook Stock Farm, Paw Paw, Mich.

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

Duroc Jerseys of the right type, good blood lines and in good condition at a price you can afford to pay. Guaranteed to suit you. W. E. Bartley, Alma, Mich.

Duroc Jersey's. Herd headers in boars. Why! Because they are bred right, fed right, grown right and from Grand Champion stock. Write or better come and see. F. J. Drott, R. L. Monroe, Mich.

DUROCS spring boars. A few gilts bred for Sept. farrow at bargain prices. W. C. TAYLOR, Milan, Mich.

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

Duroc Jerseys Do you want a young boar sired by Mich. Pathfinder? I have them. E. D. HEYDENBERG, Wayland, Mich.

Big Type Chester Whites. Choice, stretchy spring boars, also tried sows and fall gilts bred for Sept. litters. These hogs are big and will fatten at any age. Grand champion blood lines of the breed, Wildwood Prince Jr., Rajah, and Champion X. Cholera immune. Satisfaction guaranteed. N. L. HILL JR., Ackinaw, Tazewell Co. Ill

Raise Chester Whites
Like This
the original big producers

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

The World's Champion

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

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

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

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

CHESTERS two good fall gilts bred to a boar of Wildwood Prince Jr. breeding for Sept. farrow spring pigs. F. W. ALEXANDER, Vassar, Mich.

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

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

O. I. C.'s Booking orders for spring pigs, we register free and ship C. O. D. A. J. BARKER & SON, Belmont, Mich.

Look for Miller Meadows L. T. P. C.'s at Marshall Cathoon Co. Fair, Sept. 21-25. OLYVE WEAVER, Ceresco, Mich.

FOR SALE Registered Big type Poland China gilts bred for Sept. farrow, weighing 225 lbs. for \$50, spring pigs all sold, guarantee satisfaction. DORUS HOVER, Akron, Mich.

Bred Sow Sale at Fairgrounds
August 5th. Carey U. Edmonds, Hastings, Mich.

Poland China Special

Boar pigs sired by Monster Big Bob and from our best sows, priced right for immediate shipment. Big-boned, strong-backed, smooth fellows from popular blood lines. Write for information or visit the farm. BOONE-HILL CO., Blanchard, Mich.

L. S. P. C.

Everything sold previously ad. 25 spring pigs placed on the bargain counter for mo. of Sept. pairs or trios not akin. H. O. SWARTZ, Shoolcraft, Mich.

Big Type Poland Chinas

Our herd is representative of the best in Big Types. Choice boars for sale now. Wesley Hile, R. 6, Ionia, Mich.

L. T. P. C. We have a large number of spring and summer pigs ready to ship sired by such boars as "Hart's Black Prince," "Leonard's Big Bob," the "Model Chasman," and "Prospect Yank" a great son of the \$40,000 Yankee. Write for prices or come and look them over if you are in the market. HART, FULCHER & OLIN, address F. T. Hart, St. Louis, Mich.

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

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

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

B boars, Ang. pigs both sex. Bred for free in buyer's name. L. L. Chamberlain, Marcellus, Mich.

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

Lindhurst Poland Chinas

Stock for sale at all times. Public Sale Oct. 23. WM. H. LIND, Alto, Mich.

POLAND CHINAS

W. J. HAGELSHAW, Augusta, Mich.

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

Leonard's P. C. See exhibit at Mich. State Fair. List your name on mailing list for public sale Oct. 28. Double immune. E. R. Leonard, St. Louis, Mich. R.R. 3.

Large Type Poland Chinas. Everything immune by double testing. Meet me at Detroit, or Jackson Fairs. A. A. Feldkamp, R. 2, Manchester, Mich.

O. I. C. Gilts bred for July and Aug. farrow. Also spring farrowed pigs. G. P. ANDREWS, Dansville, Mich.

O. I. C. Gilts bred for Sept. farrow and spring pigs. F. O. BURGESS, R. 3, Mason, Mich.

O. I. C.'s Some fine spring pigs and yearling gilts. Will ship O. O. D. register, and guarantee right in every way. JOHN C. WILK, Alma, Mich.

O. I. C.'s. One last fall boar wgt. 425, two last fall gilts, bred lots of spring pigs and this fall pigs either sex, good growth, stock 1/2 mile west of Depot, Ott's. Phone 124. Otto B. Schulze, Nashville, Mich.

BARGAINS on Big type spring and summer Poland China Pigs also yearling Shorthorn bulls, bull and heifer calves. Robert Neve, Pierson, Mich.

HAMPSHIRE

1914 - - - - - 1920

Choice Spring boars, popular breeding. Booking orders for fall pigs. All stock Cholera Immuned and guaranteed Breeders. Satisfaction guaranteed.

STEUBEN'S HAMPSHIRE FARM

R. 3, Angola, Ind.

Edgewood Hampshires

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

Hampshires get your boar pigs, now a few bred gilts left new blood lines of quality. JOHN W. SYNDER, R. 4, St. Johns, Mich.

YORKSHIRES BRED GILTS

WATERMAN & WATERMAN
Packard Rd. Ann Arbor, Mich.

SHEEP.

Delaine Rams B. & O. type, having size, quality, best of breeding, priced to sell, write. S. H. SANDERS, R. 2, Ashtabula, O.

WHITTUM FARM SHROPSHIRE

A fine lot of imported and home bred yearling ewes and rams for sale. A fine chance to start a new flock or improve the old one call at the farm or write for just what you want. C. H. WHITTUM, Eaton Rapids, Mich.

Hillcrest Shropshires

A nice lot of Ewes and Rams of all ages our flock is headed by McKerrrow 3164 a son of Senator Bibby write or call on R. J. & C. A. WILLIAMS, Middleville, Mich.

FOR SALE 35 Registered Shropshire yearling rams and ram lambs. Also some choice Duroc Jersey boars and gilts. CLIFFORD MIDDLETON, Clayton, Mich.

SHROPSHIRE Yearling and Lamb rams sired by Imp. Berry No. 163 for sale. Also a few ewes. ARTHUR DODDS, Lapeer, Michigan

Shropshires Am offering one choice two year ram and a few good yearlings. O. J. THOMPSON, Rockford, Mich.

Shropshires sire imported Minton Ram Lambs \$20, some ewes, 2 yearling rams. DAN BOOHER, R. 4, Evart, Mich.

Shropshires yearling Rams that have size and type for sale. ARMSTRONG BROS., R. 3, Fowlerville, Mich.

State's Greatest Stock Show

(Continued from page 391.)

Keystone, 1st; Depew Head, 2nd and 3rd; Coupar, 4th.

Boar under 6 mos.—Depew Head, 1st and 3rd; Keystone, 2nd and 4th.

Sow 2 years or over—Depew Head, 1st; Keystone, 2nd and 3rd; Coupar, 4th.

Sow 18 mos. and under 2 years—Depew Head, 1st and 4th; Coupar, 2nd; Keystone, 3rd.

Sow 12 mos. and under 18 mos.—Keystone, 1st and 2nd; Depew Head, 3rd; Coupar, 4th.

Sow 6 mos. and under 12 mos.—Keystone, 1st; Depew Head, 2nd and 4th; Coupar, 3rd.

Sow under 6 mos.—Depew Head, 1st; Keystone, 2nd and 3rd; Coupar, 4th.

Senior champion boar—Keystone, 1st; Depew Head, 2nd.

Senior champion sow—Keystone.

Junior champion boar—Keystone.

Junior champion sow—Keystone.

Grand champion boar—Keystone.

Grand champion sow—Depew Head.

Exhibitor's herd—Depew Head, 1st; Keystone, 2nd; Coupar, 3rd.

Breeder's young herd—Keystone, 1st and 3rd; Depew Head, 2nd; Coupar, 4th.

Four get of same boar—Keystone, 1st; Depew Head, 2nd and 4th; Coupar, 3rd.

Four under 6 mos. produce of same sow—Coupar, 1st and 4th; Depew Head, 2nd; Keystone, 3rd.

Premier champion for exhibitor—Depew Head.

Premier championship for breeder—Depew Head.

O. I. C.

Among the O. I. C. exhibitors were Harry T. Crandell, Newman's Stock Farm, Andrew Adams, Weber Bros., Hooper & McGrath. It was one of the best exhibitions in recent years, and goes to emphasize the fact that Michigan is fast coming to be recognized as a state where they breed good swine. The winners were as follows:

Boar 2 years or over—Weber Bros., Royal Oak, Mich., 1st; Hooper & McGrath, Cass City, Mich., 2nd; Harry Crandell, Cass City, Mich., 3rd.

Boar 18 mos. and under 2 years—Crandell, 1st; Weber Bros., 2nd; Hooper & McGrath, 3rd; Adams, 4th.

Boar 12 mos. and under 18 mos.—Crandell, 1st and 2nd; Albert Newman, Marlette, Mich., 3rd; Hooper & McGrath, 4th.

Boar 6 mos. and under 12 mos.—Crandell, 1st; Newman, 2nd; A. J. Adams, Litchfield, Mich., 3rd; Weber Bros., 4th.

Boar under 6 mos.—Adams, 1st and 4th; Crandell, 2nd; Newman, 3rd.

Sow 2 years or over—Newman, 1st; Crandell, 2nd; Weber Bros., 3rd; Adams, 4th.

Sow 18 mos. and under 2 years—Newman, 1st; Hooper & McGrath, 2nd; Adams, 3rd; Crandell, 4th.

Sow 12 mos. and under 18 mos.—Newman, 1st and 3rd; Adams, 2nd; Hooper & McGrath, 4th.

Sow 6 mos. and under 12 mos.—Adams, 1st; Newman, 2nd; Crandell, 3rd and 4th.

Sow under 6 mos.—Adams, 1st; Crandell, 2nd and 4th; Newman, 3rd.

Senior champion boar—Weber Bros.

Senior champion sow—Newman.

Junior champion boar—Crandell.

Junior champion sow—Adams.

Grand champion boar—Weber Bros.

Grand champion sow—Newman.

Exhibitor's herd—Crandell, 1st; Newman, 2nd; Hooper & McGrath, 3rd; Adams, 4th.

Breeder's young herd—Crandell, 1st; Hooper & McGrath, 2nd; Adams, 3rd; Weber Bros., 4th.

Four get of same boar—Hooper & McGrath, 1st and 2nd; Adams, 3rd; Weber Bros., 4th.

Four under 6 mos. produce of same sow—Adams, 1st; Newman, 2nd; Crandell, 3rd; Weber Bros., 4th.

Mich. O. I. C. Swine Breeders' Association Special Prizes.

Boar 2 years or over—Weber Bros., 1st; Hooper & McGrath, 2nd; Crandell, 3rd.

Boar 18 mos. and under 2 years—Crandell, 1st; Weber Bros., 2nd; Hooper & McGrath, 3rd; Adams, 4th.

Boar 12 mos. and under 18 mos.—Crandell, 1st and 2nd; Newman, 3rd; Hooper & McGrath, 4th.

Boar 6 mos. and under 12 mos.—Crandell, 1st; Newman, 2nd; Adams, 3rd; Weber Bros., 4th.

Boar under 6 mos.—Adams, 1st; Crandell, 2nd; Newman, 3rd; Adams, 4th.

Sow 2 years or over—Newman, 1st; Crandell, 2nd; Weber Bros., 3rd; Adams, 4th.

Sow 18 mos. and under 2 years—Newman, 1st; Hooper & McGrath, 2nd; Adams, 3rd; Crandell, 4th.

Sow 12 mos. and under 18 mos.—Newman, 1st and 3rd; Adams, 2nd; Hooper & McGrath, 4th.

Sow 6 mos. and under 12 mos.—Adams, 1st; Newman, 2nd; Crandell, 3rd and 4th.

Sow under 6 mos.—Adams, 1st; Crandell, 2nd and 4th; Newman, 3rd.

SHEEP

Shropshires.

Ram 2 years old or over—P. D. Lockwood, Bellefontaine, O., 1st; Kope-Kon Farms, Coldwater, Mich., 2nd; H. E. Powell, Ionia, Mich., 3rd; F. E. Woodward, Forest, O., 4th.

Ram 1 year old—Kope-Kon Farms, 1st; Powell, 2nd; Clifford Middleton, Clayton, Mich., 3rd; Woodward, 4th.

Ram lamb—Kope-Kon, 1st and 2nd; W. S. Hutchings, Lincoln Park, N. Y., 3rd; Woodward, 4th.

Ewe 2 years old or over—Lockwood, 1st and 2nd; Kope-Kon Farms, 3rd; Pearl Wurts, Attica, Ohio, 4th.

Ewe 1 year old—Lockwood, 1st; Kope-Kon Farms, 2nd; Hutchings, 3rd; Wurts, 4th.

Ewe lamb—Wurts, 1st; Lockwood, 2nd; Hutchings, 3rd; Powell, 4th.

Champion ram—Lockwood, 1st; Kope-Kon Farms, 2nd.

Champion ewe—Lockwood, 1st and 2nd.

Flock—Lockwood, 1st; Kope-Kon, 2nd; Powell, 3rd; Wurts, 4th.

Breeder's young flock—Kope-Kon, 1st; Wurts, 2nd; Powell, 3rd; Hutchings, 4th.

Lamb flock—Wurts, 1st; Lockwood, 2nd; Hutchings, 3rd; Kope-Kon, 4th.

Get of sire—Wurts, 1st; Lockwood, 2nd; Hutchings, 3rd; Kope-Kon, 4th.

Hampshires.

Ram 2 years old or over—Walnut Hall Farm, Donerail, Ky., 1st and 2nd; Kope-Kon Farms, Coldwater, Mich., 3rd; Monroe Stock Farm, Lucas, O., 4th.

Ram 1 year old—Walnut Hall, 1st and 2nd; Monroe Stock Farm, 3rd; Kope-Kon, 4th.

Ram lamb—Walnut Hall, 1st and 2nd; Monroe, 3rd and 4th.

Ewe 2 years or over—Walnut Hall, 1st and 3rd; C. L. Mitchell & Son, 2nd; Monroe Stock Farm, 4th.

Ewe 1 year old—Walnut Hall, 1st and 2nd; Monroe Stock Farm, 3rd and 4th.

Ewe lamb—Walnut Hall Farm, 1st and 2nd; Monroe Stock Farm, 3rd and 4th.

Champion ram—Walnut Hall Farm, 1st and 2nd.

Champion ewe—Walnut Hall Farm, 1st and 2nd.

Flock—Walnut Hall Farm, 1st; Monroe Stock Farm, 2nd; Mitchell, 3rd.

Breeder's young flock—Walnut Hall Farm, 1st; Monroe Stock Farm, 2nd.

Lamb flock—Walnut Hall Farm, 1st; Monroe Stock Farm, 2nd.

Get of sire—Monroe Stock Farm, 1st.

Warranted to Give Satisfaction

Gombault's
Caustic Balsam

Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diphtheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

Bean Thresher for sale, like new. Half price. Round trip fare paid buyer. H. ARNDT, Sunman, Indiana.

Poland China Sale Circuit

Wesley Hile	Oct. 26	Ionia
Boone-Hill Co.	Oct. 27	Blanchard
Leonard & Fisher	Oct. 28	St. Louis
Chas. Wetzel & Sons	Oct. 29	Ithaca
W. Brewbaker & Sons	Oct. 30	Elsie

These firms, members of Central Michigan Poland China Breeders' Assn., will present to the public an offering of Poland China swine, such as has never before been offered in the state. The sales will be held at above named places and will give the farmer an opportunity to fit his exact needs with breeding swine that will produce more pork for the same amount of feed consumed. This is an opportunity of a lifetime, for these firms will sell to the highest bidders sows and boars of the highest individual merit from the best blood lines of the breed. Col. Harry A. Eckhart of Illinois and Col. Ed. Bowers of Indiana will do the selling. These men are artists as livestock salesmen, and it will do the breeders and farmers of our good old state an untold amount of good to be at the sales. It will help to get them acquainted with the breed from an educational standpoint. Michigan is recognized today, as never before, as a state that produces as good hogs as any state in the Union. It is now up to the breeders and farmers to produce hogs of more and better quality. Quality always brings the top price on the open market as well as in the sales ring.

Write for catalogs to the above firms or the secretary of the association. Poland China breeders are urged to join the association. Write to secretary.

CENTRAL MICHIGAN POLAND CHINA
BREEDERS' ASSOCIATION

E. R. LEONARD, St. Louis, Pres. C. A. BOONE, Blanchard, Sec'y.
W. M. KELLY, For The Michigan Farmer

AUCTION SALE
OF PURE BRED HORSES

W. B. Otto. On account of continued ill health will Disperse his Famous Stud of

21 Belgian and Percheron Mares

Imported and American Bred

4 Belgian Stallions

including the Outstanding Imported Herd Header

LE COQ DU PLATOIT No. 7202 (VOL. XX)
P. 850

This stock will be on exhibit at the EATON COUNTY FAIR, CHARLOTTE, MICHIGAN, Sept. 28 to Oct 1, and will be sold there at

PUBLIC AUCTION

Monday, Oct. 4, At 1:00 P. M.

Write For Catalogue

W. B. OTTO,

Charlotte, Michigan

Eaton County

I Want to Send You My New **GATE BOOK**

FREE! of "Can't-Sag" Gates

Just send me your name and address. I will mail you my big new Gate Book Free—postpaid. Quotes prices lower than it costs you to build homemade all-wood gates. Can't-Sag Gates are the only farm gates that are

GOOD Enough to Use ANYWHERE
CHEAP Enough to Use EVERYWHERE

Always hang straight and true. Never sag, drag or warp or twist out of shape. No nails used. No wood joints. Every board double bolted between eight angle steel uprights. Self-locking hinges—won't injure stock—easily repaired—outlast several all-wood, steel, wire or gas pipe gates. Cost less than any other gates you can build or buy. More than a million now in use. Write for free Catalog today.

ALVIN V. ROWE, President

ROWE MFG. CO., 1001 Adams St., Galesburg, Ill.

"More than a million Can't-Sag Gates now in use."

ALVIN V. ROWE, President.

LATEST MARKET REPORTS

GRAIN QUOTATIONS

September 22, 1920.

Wheat.

Detroit.—Cash No. 1 red \$2.51; December \$2.33; March \$2.30; No. 1 white and No. 1 mixed \$2.49.

Chicago.—No. 1 red \$2.53@2.55; December \$2.32; March \$2.26½.

Corn.

Detroit.—Cash No. 2 mixed \$1.29; No. 2 yellow \$1.34.

Chicago.—No. 2 mixed \$1.22½@1.23¼; No. 2 yellow \$1.23¼@1.24½.

Oats.

Detroit.—Cash No. 2 white 53c; No. 3 white 61½c; No. 4 white 58½c.

Chicago.—No. 2 white 58¼@58½c; No. 3 white 57@58½c.

Beans.

Detroit.—Immediate and prompt are lower at \$6.65 per cwt.

Chicago.—Steady. Hand-picked beans choice to fancy at \$6.50@7.

New York.—Easy. Choice pea \$7; do medium \$7.50.

Rye.

Detroit.—Cash No. 2 \$1.88.

Seeds.

Detroit.—Prime red clover spot \$15; October \$15.50; December \$15.50; alsike \$16.25; timothy \$4.

Toledo.—Prime cash \$14.80; October \$15.65; December \$15.55; alsike \$16.50; timothy \$3.95.

WHEAT

Foreign demand for wheat has been much less active and Liverpool reports that the United Kingdom has enough wheat on hand to last to February 1, 1921. In view of the amount of exports already made and of the sales for future shipment, it will not take large purchases to absorb the remainder of the surplus in this country. Flour buyers have been holding back waiting for lower prices and banks have been unwilling to finance big purchases to supply long distance needs. The demand from mills will help to support the price level in case the foreign demand subsides. That mills want wheat is indicated by the fact that over 1,000,000 bushels of Canadian Northern Spring have been purchased by Minneapolis and eastern plants, owing to inability to buy enough choice grain in this country. The holding tendency on the part of the producer is the main factor in holding down receipts which have become relatively small from the winter wheat sections. Red winter is scarce and prices in the southwest advanced to around 10 to 12 cents premium over Chicago. Indications point

CORN

New crop deliveries of corn have declined to the lowest figures since November, 1917, due largely to the excellent weather of late for maturing the crop and to a slow demand for the cash grain. The price of cash corn has dropped over 50 cents from the recent high point. That there will be much soft grain this season regardless of weather conditions from now on is generally admitted, but at the present time this feature in the situation is being ignored, and it will probably continue to be until after the first killing frost, the average date of which in the states of largest production is still two to three weeks away. The average amount of merchantable corn the past ten years has been 2,211,000,000 bushels. With a 3,131,000,000 crop forecasted the amount of frosted corn might be considerable and yet leave more than an average amount of merchantable corn. The demand for cash corns of late has been very slow. Industries are grinding at either reduced capacity or have shut down, and the burden of carrying the cash grain has been placed on the speculator. The price has dropped to a point where little better than \$1.10 could be obtained at loading points in Illinois and some grain had to be sold for less. The financing of

OATS

The oat market has been dull with all deliveries at the lowest price on the crop. Domestic and foreign demand is slow and visible stocks at terminal markets have increased from 3,600,000 bushels on August 21 to 16,200,000 bushels. The Canadian crop is officially estimated at 558,000,000 bushels, which with around 1,500,000,000 bushels in the United States gives a total of over 2-

000,000,000 bushels for North America and is the largest on record. Foreign demand for oats is negligible; rye and barley are slow.

SEEDS

As stated in last week's report, the Bureau of Crop Estimates forecasts a yield of 31.8 per cent more clover seed than a year ago. The Bureau of Markets estimates a 20 per cent increase in medium red clover seed and an increase of 10 to 20 per cent in alsike clover seed over 1919. Both acreage and yield per acre are above last year. Rains in July helped the crop through what is usually a critical time. The carry-over of alsike seed in dealers' hands is believed to be small, but the carry-over of medium red clover is estimated at about 12,000,000 pounds, as against 1,838,000 pounds a year ago. Prices for country-run seed are about \$19@26 compared with \$32@43. This decline has discounted a big part of the increase in yield and carryover.

FEEDS

With abundant pastures able to carry live stock in all sections late into the fall, big buyers well supplied by purchases made before the freight rate increase, bankers opposed to purchases for storage, with live stock producers reducing their operations and disposed to reduce expenses of operation as far as possible, and with feed grains and hays seeking lower levels, the mill feed and oil meal markets have had to carry a big burden. Recent rains have damaged the cottonseed prospect and mill feed output is only about one-third to one-half of nor-

mal, but the other factors have been the bottom of the market has not been reached. Quotations per ton in

HAY

Pastures and ranges were never in better condition in recent years than they have been this fall. The demand for hay is slack. The supply of feed grains is near a record in size and funds for the purchase of hay for storage are hard to obtain. The better grades of hay, particularly alfalfa, are strong, considering the bearish conditions in the market. An unusual amount of moldy and heated hay is arriving and such grades are selling at low prices considering freight costs.

WOOL

Wool dealers and manufacturers are anxious to have the price basis established but are waiting for the other fellow to do it. Most of the farm-grown wools are strongly held and that fact is saving the situation to no small extent. The Missouri pool managers sold a portion of their holdings at 39 cents for one-half blood clothing. Other pools refuse to sell at that figure. Quotations are still nominal.

POTATOES

The market opened weak and showed no particular recovery at any time during the week. Receipts were about normal, but heavy shipments foretell heavy arrivals and the trade is bearish all along the line. Prices began a decline on Wednesday, which continued through the week, closing on Saturday at \$2@2.25 per cwt. for both northern whites and early Ohio's, while Jersey Cobblers sold for \$2.40@2.50 in carlots. The consensus of opinion is that

BUTTER

Closing prices on 92 score butter according to the U. S. Bureau of Markets report for Saturday were 59½c at Boston and Philadelphia, 60c for New York and 56c for Chicago. If these prices are to hold Chicago will have to advance or all shipments will go east. Government storage report issued this week, shows 115,480,000 lbs. reduced last month to about 16,000,000 lbs. this month. Export sales to England may be made later as that country is short. Such transactions will hinge on prices here and the exchange situation. No Danish butter arrived during the week and quite a little of the storage Danish has been cut up for print trade.

EGGS AND POULTRY

Hebrew holidays early in the week lessened the demand for poultry, but receipts ran somewhat lower than during the preceding week and all supplies were cleaned up. Cold storage holdings of eggs September 1 were about five-sixths of those of a year ago. Latest prices are as follows: Chicago—Eggs—Fresh firsts 51½@52c; ordinary firsts 45@47c. Live poultry—Spring chickens 34c; hens, general run 30c; heavy hens 35c; light hens 25c; roosters 23c; ducks, old and young 28c; geese old and young 23c; fancy turkeys 45c. Buffalo—Eggs—Fresh firsts 56@58c; hennery extras 65@66c. Live poultry—Heavy hens 38@39c; light hens 31c; spring chickens 36@39c; old roosters 24c; geese 25@28c; ducks 32@34c; fancy turkeys 57c. Detroit—Eggs—Fresh firsts 54c. Live poultry—Spring chickens 32@33c; hens 33@36c; specially fat hens 38@40c; roosters 20@22c; geese 18@20c; ducks 36@38c; turkeys 40@45c.

APPLES

The market continues in practically a glutted condition and is further aggravated by so much inferior stock—culls, windfalls and unclassified. Extra fancy stock is not plentiful and meets with fair demand. Prices have declined on practically all varieties. Jonathans from Illinois are now appearing on the Chicago market and top the price list with \$8.50@9 for fancy and \$6.50@7.50 for choice and unclassified. Duchess are \$3.50@4.25 per bbl; Maiden Blush \$5@5.25; Wealthy \$5.50@6.

DETROIT CITY MARKET

Offerings of produce on the Municipal Farmers' Markets were among the lightest of the past few weeks. Early buying was very slow but the demand developed. Cucumbers and cucumber pickles were the best selling products on the market at prices ranging from \$2@6 a bushel for dill sizes and from \$9@12 a bushel for small pickles. Although the potato supply was not very heavy, sales were very slow at \$1.30@1.40 a bushel. Peaches were slow to move at \$3@3.50 for the best large stock and for \$2@2.75 for the smaller.

NEWS OF THE WEEK.

(Continued from page 366). England districts is suspended by authorities at Washington.

Sunday, September 19.

PRELIMINARY and unofficial estimates of the census bureau indicate the population of the United States is 105,768,106, or an increase of fifteen per cent since 1910.—Arabian forces are defeated by a column of French troops in a fight near Damascus.—France and Italy settle differences regarding the allotment of German and Austrian warships.—The people of Chile are celebrating their one hundred and ten years of freedom.—England is harvesting this season the smallest wheat crop since the early days of the war.

Monday, September 20.

THE peace conference at Riga is preparing preliminary peace terms on which to arrange for an armistice.—The American Farm Bureau Federation asks for farmer representation in the executive cabinet and opposes government price fixing of farm products.—The King and Queen of Belgium receive tremendous ovation as they land on Brazilian soil.—The peace treaty between Russia and Finland is signed.—

Live Stock Market Service

DETROIT

Cattle.

Cattle market very dull.

Best heavy steers	\$11.50@14.50
Best handy wt bu steers	9.50@10.25
Mixed steers and heifers	7.75@ 8.75
Handy light butchers	7.00@ 7.25
Light butchers	4.75@ 6.00
Best cows	9.00
Butcher cows	7.00@ 8.25
Common cows	4.75@ 5.00
Canners	4.50
Choice bulls	7.25@ 7.50
Bologna bulls	6.00@ 7.00
Stock bulls ..	5.00@ 5.50
Feeders	8.00@ 9.00
Stockers	6.50@ 7.50
Milkers and springers....	\$ 65@ 100

Veal Calves.

Market steady.

Best	\$18.00@19.00
Others	\$ 6.00@16.00

Hogs.

Market very dull.

Pigs	\$ 17.00
Mixed hogs	17.00@17.25

Sheep and Lambs.

Lambs 25c lower.	
Best lambs	\$ 13.50
Fair lambs	10.00@12.50
Light to common	5.00@ 8.00
Fair to good sheep.....	5.50@ 6.00
Culls and common	2.00@ 4.00

CHICAGO

Hogs.

Estimated receipts today are 11,000; holdover 11,012. Market 35@50c lower. Bulk of sales \$15.65@17.50; tops at \$17.75; heavy 250 lbs up medium, good, choice, \$16.10@17.15; medium 200 to 250 lbs medium, good and choice at \$16.65@17.50; light 150 to 200 lbs common, medium, good and choice \$16.75@17.50; light lights 130 to 150 lbs common, medium, good and choice at \$16.25@17.25; heavy packing sows 250 lbs up smooth \$15.60@16; packing sows 200 lbs up rough \$15.25@15.60; pigs 130 lbs down medium, good and choice \$15.50@16.

Cattle.

Estimated receipts today are 11,000. Market very dull; choice grades about steady; calves slow to lower; feeders steady. Beef steers medium and heavy weight 1100 lbs up choice and prime \$17@18.25; do medium and good \$12.25@16.75; do common at \$10@12; light weight 1100 lbs down, good and choice \$15@17.85; do common and medium

\$8.75@14.50; butcher cattle, heifers, common, medium, good and choice at \$6.50@14.75; cows, common, medium, good and choice \$6@12.50; bulls bologna and beef \$5.50@11.50; canners and cutters cows and heifers \$4.75@5.50; do canner steers at \$4.50@7.50; veal calves light and handyweight medium, good and choice at \$15@17.75; feeder steers, common, medium, good and choice at \$8.25@12.25; stocker steers common, medium, good and choice at \$6.25@10.50; stocker cows and heifers common, medium, good and choice at \$5@9; western range cattle, beef steers, medium, good and choice \$9.50@14.75; do cows and heifers medium, good and choice \$8@10.50.

Sheep and Lambs.

Estimated receipts today are 23,000. Market slow to unevenly lower. Lambs 84 lbs down medium, good, choice and prime \$11@13.75; do dulls and common \$8@10.75; spring lambs medium good, choice and prime \$8.50@10.50; ewes, medium, good and choice at \$5@6.25; ewes cull and common \$2.75@4.75; breeding ewes full mouths to yearlings \$5.75@9.75; yearling wethers medium, good and choice at \$12@13.60.

BUFFALO

Cattle.

Market is slow and 25@50c lower than last week's close. Dry-fed prime shipping steers are \$15.50@16; best shipping steers \$14@14.50; medium shipping steers \$12.50@13.50; best native yearlings 950 to 1000 lbs \$15@16; light native yearlings, good quality at \$12@13; best handy steers \$11.50@12.50; fair to good kind \$10.50@11; handy steers and heifers mixed \$10.50@11.50; western heifers \$9.50@10.50; state heifers \$7@8; best fat cows \$9.50@10; butchering cows \$8@9; cutters \$6@7; canners \$3.50@4.50; fancy bulls \$8.50@9; butchering bulls at \$6.50@7; common bulls \$5.50@6; best feeders 900 to 1000 lbs \$8@9; medium feeders \$7@8; stockers \$6@7; light common \$5.50@6.50; best milkers and springers \$10@12.5; mediums \$5@7.5.

Hogs.

Light hogs are steady; heavies 25c off. Heavy \$18@18.25; mediums and yorkers \$18.65@18.75; pigs \$18@18.50.

Sheep and Lambs.

Market steady. Top lambs at \$14.50; yearlings \$8@9; wethers \$7@7.50; ewes \$6.25@6.75. Calves \$7@19.

UNIFORM LIVE STOCK CLASSES AND GRADES.

READERS of our market reports may have observed that our usage of terms referring to some of the market classes and grades of live stock may differ from their own. Each market tends to develop its own phraseology to some extent as a result of which there is a great deal of confusion in the use of the same terms. A "heavy hog" at Omaha means something slightly heavier than at Chicago, while a heavy hog at Oklahoma City would be a light hog at Omaha. A "prime" steer at Fort Worth would be no better than "good" at Chicago. Similarly other terms differ more or less. Since we quoted several markets on the same page and some of our readers can ship to either one, it is highly desirable that these various terms be used in the same sense in referring to all markets and that is what we are endeavoring to do. It is a difficult and delicate undertaking. Many urge that present usage should not be interfered with, but we believe that a greater degree of standardization in live stock market classes is desirable and any temporary difficulty which may arise is more than offset by the benefit of getting rid of the present confusion. Later on we will present some descriptions of these market classes. In the meantime readers who don't understand them will confer a favor by asking questions.

The live stock classification we are using is the nearest approach to a standardized classification. Originally prepared by the Department of Animal Husbandry of the University of Illinois, it has been adopted after revision, especially in the section pertaining to hogs, by the Federal Bureau of Markets, whose reporters, many of whom have had experience upon market papers on various markets, consider it the best classification they have ever used. Our live stock market editor made a special study of the matter for the Bureau of Markets and his report was used in making the revisions, especially of the hog section. He was invited to attend a recent conference of bureau officials at which some further slight modifications of the cattle section were made. Other such revisions may be made from time to time. Suggestions from our readers in the vicinity of markets upon which local classification differs decidedly from that in use on the Chicago market will be appreciated.

SEPTEMBER BULGE IN THE HOG MARKET.

AFTER a disappointing summer in which hog values remained below expectation, the hog market took a decided turn for the better. Prices are \$1 to \$1.50 higher than a week ago, the Chicago top reaching \$18, but the markets closed weak so that the upward swing may have spent its force. Fat packing sows sold above \$16, which was the figure on the best butchers only a short time ago. Evidently the prospect of cheap corn is leading to holding back shipments, receipts at leading markets not expanding promptly in spite of the attractive price.

COMING LIVE STOCK SALES.

Horses—October 4, W. B. Otto, Charlotte, Michigan.
Shorthorns—Oct. 5, Southern Michigan Shorthorn Breeders' Association, Hillsdale, Michigan.
Red Polled Cattle—October 5, William Cottle, West Branch, Michigan.
Holsteins—October 6, C. A. Wilson, one and one-half miles south of M. A. C., Lahsing, Michigan.
Holsteins—October 7, Chaslen Farms, Northville, Michigan.
Duroc Jerseys—October 8, Macomb County Duroc Jersey Breeders' Association, Armada Fair Grounds, Armada, Michigan.
Holsteins—October 16, John B. Martin, Grand Rapids, Michigan.
Holsteins—October 22, Howell Sales Company, Fair Grounds, Howell, Michigan.
Poland China—October 26-30, Central Michigan Poland China Breeders' Association. See advertisement for dates and locations.

Eggs

We have a good demand for fancy fresh eggs and will pay you 50c per dozen, delivered Detroit, cases included for express shipments strictly new laid eggs shipped direct by farmers. Old, stale or broken eggs will be settled for at what they are worth. This price good for week ending October 2nd 1920. AMERICAN BUTTER & CHEESE COMPANY, Detroit, Mich.

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



All Snug and Tight

High wind and driving rain. Rolling thunder and blinding lightning.

—But the stock are quiet and comfortable. The farm implements are safely housed and dry, and up at the house the farmer takes it easy after a hard day.

He knows his buildings are rain and storm proof for they are covered with MULE-HIDE, the roofing with that unusual service record—

"Not a Kick in a Million Feet"

There's a reason for the ever growing demand for MULE-HIDE; a reason for the enthusiasm and satisfaction of its users, and that reason is traced right back to the honest workmanship and materials put into every foot of it.

We're proud of MULE-HIDE, and are rigidly maintaining the reputation it has built for itself.

Try it and you'll quickly understand why your neighbor will have no other.

Ask Your Dealer

THE LEHON COMPANY

MANUFACTURERS

44th to 45th Street on Oakley Ave. CHICAGO

R. K. TIRES Never Tire

The more they work the more they want work. For they're rebuilt double tread, chain stitched, and have twice as much fabric in them as ordinary tires. The bigger the job the bigger they measure up to it!

The following are the little prices of our guaranteed tires:			
Size	Non-Skid	Price	Size
30x3	-----	\$7.00	34x4
30x3 1-2	-----	8.50	34x4 1-2
32x3 1-2	-----	9.00	35x4 1-2
33x4	-----	11.50	36x4 1-2
			14.50

2 percent off for cash with order, 10 percent deposit required with all C. O. D. orders.

R. K. Tire Company

837 No. Broad St., Dept. C, Phila., Pa.

Send for descriptive booklet and price list. Good Territory Open for Live Agents.

Mr. POULTRY FARMER:

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

GEO. R. ELDRIDGE CO.

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

EGGS, Etc.—Small consignments from producers in your territory bring very attractive prices NOW. Prompt returns always. Refer to Dan or Bradstreet ship us your next case. ZENITH BUTTER & EGG CO., 170 Duane St., New York, N. Y.

SHEEP

Wool-Mutton Shropshire Rams. Good strong individuals, royally bred, priced right. A. H. FOSTER, Allegan, Mich.

HAMPSHIRE

Registered Rams all ages. Bred for size, type, quality. Sire at head of flock, I. S. C. No. 25463. Half brother to the Grand Champion ewe at International 1915 Bred by Iowa State College. Also a few good ewes. W. W. CASLER, Ovid, Mich.

Reg. Oxfords. Yearling rams and ram lambs. Breeding ewes and ewe lambs. Good individuals, prices right. HUGH HODGINS, Yale, Mich.

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

Cotswolds yearling rams, ram lambs, Cotswolds ewes all ages sired by Cana. Cotswolds dian rams. A. M. BORTEL, Britton, Mich.

Reg. Oxford Rams ready to ship at \$30. 20 dollars each. Address \$35 and \$40, reg. and delivered. J. Robert Hicks, St. Johns, Mich.

For Sale Oxford rams and ewes sired by McKerrrows 3500, Assn. No. 8347. Write your wants, Geo. T. Abbott, Palms, Mich. Phone 73-3 Deckerville

To close an estate I offer for sale twenty Lincoln Rams. Lambs yearlings and two year old at reasonable prices they are a fine bunch. ROBT. J. KNIGHT, Case City, Mich.

For Sale 4 Full Blooded Ramboulett rams Address ALLEN ANGELL, Hubbard Lake Michigan

HORSES

For Sale or Trade

We are closing out our registered Percherons, and offer for sale or trade for anything I can use one registered stud colt three year old also a yearling from ton sire and 1900 lb. dams. J. C. BUTLER, Portland, Mich.

Macomb County's

First Consignment Sale of Pure Bred Duroc Jerseys

To Be Held At

Armada Fair Grounds

the last day of the Fair

OCT. 8, 1920

To consist of 30 head of open gilts, spring boars and a few sows with suckling pigs.

Macomb County Duroc Jersey Breeders Ass'n.

Col. J. E. Ruppert, Auctioneer

For Catalog Address

Robt. J. Chase, Armada, Mich.

BAY MARE

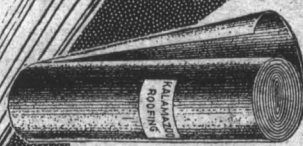
For Sale, sound and right in every way, weight about 950 lbs. Must be sold at once come and see her or write L. J. Hamlin, 498 Huribut Ave., Detroit, Mich.

Percheron Stallions and mares at reasonable prices; inspection invited. F. L. KING & SON, Charlotte, Mich.

Kalamazoo Direct
Kalamazoo
 customers
 invite you
 to share in
 these big
 savings



House paint, barn paint, implement paint, enamels, varnishes, etc.—all colors. See our catalog.



Ready roofing (all kinds) at money-saving prices in the new Kalamazoo catalog.



Learn what you can save on a Kalamazoo Sewing Machine.



Get the World's Greatest Cream Separator at the Kalamazoo price



Kalamazoo washer, hand power, electric, gasoline engine and water power—all at money-saving prices.



Kalamazoo Phonograph, clear tone—beautiful case and wonderfully low price.



Kalamazoo Sanitary Indoor Toilet — protects home health.



Kalamazoo Crown Heater



Save fuel with a Kalamazoo Oil Heater



Learn what you can save on a Beautiful Kalamazoo Range.



Kalamazoo Pipeless Furnace

Beat the H.C.L. with "Direct-to-You" Prices

"You saved us money on stoves and furnaces, why can't you save money for us on other things we need," said Kalamazoo customers. Our answer was to get busy and supply what our customers needed. We were forced to add these other products to our line, and we are selling them "Direct-to-You"—at money-saving prices. They are in our catalog—waiting for your name and address.

Here's Where You Can Save Money

Why let profiteers profiteer on you? Beat the high cost of living with "Direct-to-You" prices.

Get this big catalog. See what you can save on the articles you will need this winter. Do you need a new linoleum for the kitchen floor, paint for the house or barn, woven wire fencing, a washing machine, a beautiful sweet-toned phonograph?—look in the Kalamazoo Catalog and get it at the wholesale price.

Stoves and Furnaces Too—Don't Forget Them

Don't forget that Kalamazoo is and always will be headquarters for stoves and furnaces. Kalamazoo Stoves and Furnaces lead the world—no doubt about it—for top-notch quality at money saving prices. Ask any Kalamazoo owner.

Let Us Send Our Book

Kalamazoo Stove Co.
 Kalamazoo, Mich.

Gentlemen—Please send me your new big catalog.

These are but a few of the many offers you will find in our catalog No. 113

- | | |
|------------------------|-----------------------|
| [] Stoves and Ranges | [] Fence |
| [] Furnaces | [] Bicycles |
| [] Gas and Oil Stoves | [] Feed Grinders |
| [] Phonographs | [] Indoor Closets |
| [] Refrigerators | [] Aluminum Ware |
| [] Cream Separators | [] Paint and Roofing |
| [] Fireless Cookers | [] Congoleum, |
| [] Washing Machines | [] Carpet Sweepers |
| [] Sewing Machines | |

Don't wait, don't wonder, don't guess—get this Kalamazoo Catalog, see Kalamazoo prices and find out what you can save. Kalamazoo customers want you with them. Let us give you the names of a few of them near you. But write first for this big catalog. Get the whole story of how we are smashing prices for Kalamazoo customers everywhere.

This is your year to save money. It's our year to smash prices. Mail the coupon and get the story.

Ask for Catalog No. 113

KALAMAZOO STOVE CO., Mfrs.
 Kalamazoo, Michigan

A Kalamazoo
 Direct to You

Name _____

Address _____