

MICHIGAN FARMER

AND LIVE STOCK JOURNAL.
PUBLISHED WEEKLY. ESTABLISHED 1843.

VOL. CLIV. No. 5
Whole Number 4082

DETROIT, MICH., SATURDAY, JANUARY, 31 1920

\$1.00 A YEAR.
\$3.00 FOR 5 YEARS

Keeping Up Production on Light Soils

Supplying Food to Plants on Sandy Lands is a More Exacting Problem Than Maintaining Fertility on Heavier Soils.

STABLE manure will always be the chief fertilizer used on the farms where live stock farming is being followed. No manure should be wasted. Liquid manure is just as valuable as the solids and water-tight, concrete floors should be installed in barns as well as where manure is stored (if stored) to prevent losses. Horse manure should be piled with cow manure to prevent its heating and consequent loss of fertility. A ton of manure is worth, conservatively speaking, five dollars. Every ton wasted means a definite decrease in crop yields on the farm.

Apply Manure Properly.

Manure should always be applied to some growing crop on sandy soils. These soils are very often open and porous, especially where there is a coarse, sandy subsoil. Manure will leach through readily unless held by the root systems of growing crops; therefore, it is advisable to apply manure to such crops as fall rye to be seeded to clover, or spring grain seeded to clover. Manure may also be applied to new clover seeding during the fall of the year, or on pastures or on sod land. Do not plow sod land for at least two months after applying the manure.

Manure in actual farm practice is frequently applied on the corn and potato ground because they are the cash crops on the farm. It is much better to apply manure to the clover or grain crop with clover to insure a successful stand of clover, which in turn means a much better crop of corn or potatoes. This is especially important if the sup-

ply of manure on the farm is very limited. Commercial fertilizers can be utilized with very good results on corn and potatoes grown on clover sod, and produce just as good or in some cases better, results than manure, but fertilizers without sod or humus on poor sandy soils do not always produce very appreciable and profitable increases. Commercial fertilizers should and must be used on light soils to supplement the limited supply of manure.

Light and frequent applications of manure are better than heavy applications. It is better to feed the growing crop than to feed the soil. Heavy applications of manure mean considerable loss by leaching. A manure spreader should be used whenever possible. It saves labor, time in handling, and fertility by being able to apply lighter applications. Top-dressing is also preferable to plowing under manure on light soils. Place plant food where the roots can use it readily.

The most abundant root system is in the top six inches of soil. Plowing manure under six inches deep places it where growing plants cannot secure it readily.

"Does manure applied on the surface of the ground leach out through the

air," is a question commonly asked by many in farmers' meetings.

"No, it does not, so do not be afraid to top-dress," is our usual reply.

Green Manuring.

The most successful farmers today plow under a green manuring crop, such as soy beans or alfalfa occasionally. That they are well repaid for using a good crop in this way is shown by the following data. Different legume crops were grown on a newly-cleared sandy soil at Ellis Junction, and a poor wornout tract of land at Sparta, Wisconsin. The entire legume crop was plowed under. The following table gives the results secured:

Preceding Crop.	Yield of Corn.	
	Bushels. Per Acre. At Ellis Jct.	Bushels. Per Acre. At Sparta.
Clover	62	42
Alfalfa	53	..
Soybeans	40	26
Cowpeas	33	20
No legume	30	6

The above data is an average of five years' work. It shows that clover is especially valuable for green manuring purposes. No man can afford to farm his land without growing legumes and occasionally plowing under a legume crop. Legumes, when plowed under, add humus, increase the water-holding

capacity of the soil, bind the soil particles together, add nitrogen and furnish other readily available plant food for the fast-growing crop, such as corn. Results secured at the Sparta Station indicate that two tons of clover (dry basis) plowed under are equal to ten tons of manure in producing crops during the following year.

Compact your soil thoroughly after plowing under a legume crop. Many corn and potato crop failures follow plowing under legumes, due to a too loose soil which brings about a droughty condition during midsummer. At nearly every farmers' meeting I have attended someone states, "that he had turned under a green crop and had a succeeding crop failure." These men usually admit that they never used a disc or roller on the field; just used a light harrow and planted the crop. Such slipshod methods will never produce good crops on light soils. Use a disc harrow and a culti-packer, especially after plowing under a green crop.

Rye can be turned under with good results, providing the straw has not become too coarse or woody. It does not rank with the legumes in producing better crops. Buckwheat is another crop that cannot be recommended on light soil for a green crop. In some instances plowing under buckwheat has resulted in considerable injury to succeeding crops, even when handled properly. Soybeans and clover always produce better yields, are dependable and should be grown frequently for green manuring purposes.

(Continued on page 160).



Good Crops are Grown on Some of our Lighter Soils when Wisely Fertilized and Properly Managed.

The Michigan Farmer

Published Weekly Established 1843 Copyright 1920

The Lawrence Publishing Co.

Editors and Proprietors
432 Lafayette Boulevard Detroit, Michigan
TELEPHONE MAIN 4525.

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

M. J. LAWRENCE..... President
F. H. NANCE..... Vice-President
P. T. LAWRENCE..... Treas.
J. F. CUNNINGHAM..... Secy.

L. 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

51 cents per line agate type measurement, or \$7.00 per inch (14 agate lines per inch) per insertion. No advt. 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 CLIV. NUMBER FIVE

DETROIT, JANUARY 31, 1920

CURRENT COMMENT

Side Lights on the Fuel Situation.

IN an open letter to the public, Mr. W. K. Prudden, former federal fuel administrator for Michigan, discusses the fuel situation, past and present, in a decidedly frank and refreshing manner. He makes it entirely clear that from his observation both coal and coke profiteers prospered under the price regulations which were in effect during the period of control, due in part to the manipulations of interested parties in positions of authority and in part to coal "contracts" which enabled operators to receive a price far in excess of the government price, under the exception made in favor of contracts made by coal operators prior to August 23, 1917, but which he does not class as bona fide contracts properly coming under that exemption. Mr. Prudden's allegations, which are specific, and supported in some degree by documentary evidence, are made the basis of the suggestion that if the investigations which are now being made by the grand jury at Indianapolis, and the senate committee at Washington, are able to bring to light all the facts it will be found that the coal operators are responsible, in part at least, for the calling and long continuance of the recent coal strike. He also makes his analysis the basis of a plea for early and drastic action to prevent the year 1920 from being "the banner year for coal profiteering." The two things which Mr. Prudden believes the government should immediately do are to abrogate, or provide adequate supervision of, the alleged bona fide "coal contracts," which he charges have been an aid to wholesale profiteering, and to rescind the Fuel Administration order of December 8, 1919, which put back into operation the Blauvelt order relative to the method of establishing prices on by-product coke, which provided for the addition to base prices of the freight rate from the nearest competing "bee hive" district, which methods he charges enabled operators to make exorbitant profits.

Unquestionably, as federal fuel administrator for Michigan, Mr. Prudden had a better opportunity to correctly assess the coal situation during the period of regulation than did any other citizen of the state, and the courage with which he backs his convictions in issuing a signed statement making definite charges of profiteering, as well as offering an analysis of the fuel situation as he sees it, is most commendable. It is an interesting sidelight on the fuel situation, which continues to

be critical in Michigan, notwithstanding the settlement of the strike and the supposed return to normal production. It is to be hoped that the official investigations now in progress may further illuminate a very much clouded situation to the end that a feasible plan of price regulation which will be fair to operators, miners and the public alike may be speedily evolved.

Sugar Beet Contracts

A MOST commendable, but belated effort is being made by the farmers in several counties of Michigan to secure a more favorable contract for their next season's crop. This effort is commendable because, under present conditions the producers of foodstuffs are laboring under a handicap which justifies the use of every reasonable and proper means to secure an equitable price for their products. It is a belated effort, because its leaders apparently did not awaken to the opportunity to serve the beet growers in this emergency until the contracts had been signed for the major portion of the 1920 acreage. Whether the present price of ten dollars a ton based on nine-cent sugar, with an additional dollar per ton for each cent per pound of the average wholesale price of sugar above nine cents per pound, is an equitable price is a very proper matter for inquiry and investigation by the farmers of beet growing sections, who have not yet contracted to grow them at that price. But the repudiation of contracts entered into in good faith is no more commendable on the part of farmers than on the part of labor organizations, or on the part of beet growers than it would be on the part of the sugar manufacturers.

We hold no brief for the sugar manufacturers in this controversy. Rather we believe that the presumption of right is with the producers of the raw material, but the facts are capable of being fairly arrived at by proper study and investigation. This is a proper and desirable function of organized as well as individual beet growers, which should be vigorously pursued. Even if

a large percentage of the farmers in beet growing sections have determined that the present price is compensatory to them, as is evidenced by the general signing of contracts for the 1920 crops which is reported in many localities, every effort should be made to fairly determine equitable distribution of the rewards of labor and capital invested in the growing of the beets and the manufacture of the sugar. Then it will be possible to fairly and intelligently negotiate a new contract with the manufacturers without needlessly jeopardizing production in what has come to be an essential industry, as would a general repudiation of contracts already made. The leaders in a movement looking toward such action are assuming a grave responsibility in the curtailment of production of this essential foodstuff in a time of present and prospective shortage, which is comparable to the responsibility for the curtailment in the production of steel and coal by similar means.

Exterminating Wild Life.

IN his need for land upon which to grow crops for food and clothing, man has of necessity crowded out and recklessly destroyed native animals. In many cases their destruction has been justified, but many of the smaller species who have remained to make their habitat have been tolerated to a certain extent, and at the same time hunting them has furnished a lot of fine sport for farm boys. Now, however, that their skins are worth so much money every device which man has been able to invent is turned against them, and if the unequal and unchristian contest goes on it will only be a few years before our country will be denuded of many useful, harmless and beautiful forms of life that man should protect and cherish.

All over America the pitiless pursuit of these little brothers of the field and forest threatens their early extinction. The present soaring prices for all kinds of furs is resulting in putting a heavy price upon the head of every little animal whom nature has given a

glossy, warm, attractive coat. The craze of femininity and the boundless extravagance of the present day is leaving no haven of refuge for the smaller species of animal life.

The larger forms of animal life in America are vanishing very fast. The northwest has lost heavily in deer and elk within the last few years, and the terrific slaughter of game near the Yellowstone National Park this winter has been a blot upon our history. And now remaining wild life of our more thickly populated country is threatened with extermination.

Will the people of America ever wake up to the importance of maintaining a more even balance of nature, or will the extermination of these little animals mean that we shall be compelled to devise artificial means of holding lesser pestiferous forms of life in check. Too few of us appreciate the possible effect of this wholesale unbalancing of nature, but it is to be hoped that our smaller animals may not suffer the same fate of our valuable birds.

News of the Week

Wednesday, January 21.

GREAT Britain is reported to be sending troops to stop the advance of the Bolsheviks in the Caucasus region.—Georges Clemenceau, until recently premier of France, resigns as president of the supreme council of the Allied governments.—Northern and central Italy is now under martial law.—Efforts to raise some of the treasure from the ill-fated Lusitania will be attempted this summer.—Footwear is due for another increase, according to announcement of the National Association of Manufacturers.—Japan will withdraw her troops from Siberia.

Thursday, January 22.

BRAZIL proposes wireless connections and larger and faster boats to facilitate business with the United States.—Chili advises the extension of Latin-American banking facilities to the United States and the extension of American banking institutions to South American countries.—The army reorganization bill is endorsed by Secretary Baker.—Strikes tie up one hundred tug boats in New York harbor.—New low points are reached in foreign exchange markets.—American oil companies resume the drilling of new oil wells in Mexico under licenses authorized by the Mexican congress.—Wire service between western Europe and Hungary has been established.

Friday, January 23.

CHICAGO school teachers are asking for a sixty per cent increase in wages.—The French government accepts Mayer Kaufheren as Germany's Charge d'Affairs at Paris.—The Canadian government places an embargo on all freight east and west across the Niagara frontier.—It is reported that Rumanians are about to occupy the defenses of Odessa and organize against the advance of the reds.—General Semenov assumes control of the government of Siberia.

Saturday, January 24.

THE allied governments recognize the de facto independence of Armenia.—The German government unqualifiedly approves of Mr. Hoover's food plan for alleviating the suffering of Central Europe.—Commercial failures for the United States this week number 112, as compared with 150 for the week previous.—The house of representatives pass the navy pay bill which increases the pay of all enlisted navy men about thirty per cent.—Great Britain will keep her supplies of oil in the Caucasus district from the soviets.—Holland flatly refuses to deliver the former German kaiser to the allied governments.—The exports of the United States for 1919 were valued at \$4,017,000,000 in excess of the value of her imports.

Sunday, January 25.

THE lowest temperatures recorded in recent years are reported from sections of central Michigan where in a few cases the mercury dropped to twenty-four degrees below zero.—Strikes reduced the output of steel for 1919 by thirteen per cent, as compared with that of 1918.—Internal revenue statements show that Michigan has one hundred and fifty millionaires.—Spain protests to Germany against the selection of Dr. Rosen as minister to Madrid.—Bolshevik forces are gaining

(Continued on page 182).

Farmers' Week at M. A. C.



Kenyon L. Butterfield, President Massachusetts Agricultural College.



G. C. Creelman, President Ontario Agricultural College.

FARMERS' Week, at the Michigan Agricultural College, February 2-6, offers a program of unusual interest to every person interested in the up-building of a profitable and permanent system of agriculture in this "Land of Diversified Farms." The agricultural interests of the state are widely diversified, and arrangements have been made and competent speakers engaged to treat every phase of agricultural production and marketing in a practical and business-like manner.

A complete program of the various meetings will be found on page 181 of this issue. A careful study of this page will enable our readers to plan their stay in East Lansing so that there may be as little confusion as possible in attending the meetings of most interest to them. Those who cannot attend the meetings will find a comprehensive report of same in succeeding issues of the Michigan Farmer.



The Farmers' Voice at Washington

There are three combinations of farm organizations that maintain headquarters in Washington, the National Grange, National Board of Farm Organizations, and the Farmers' National Council. Each one is a clearinghouse for the collection and dissemination of information in which the farmers are supposed to be interested. Each claims to represent large bodies of farmers, and to be in a position to reflect the sentiment of the farmers upon great public questions, as well as upon those matters that relate more especially to the farmer's welfare. Each headquarters has its representatives in charge, able, experienced men who are evidently doing their utmost to promote legislation which they profess to believe the farmers want. There is no question as to their qualifications for representatives from the standpoint of education, training and ability to make their influence felt in congress and at the many hearings before the various com-

Is Your Representative Carrying the Message to Garcia?--By Elmer E. Reynolds.

mittees in the senate and house. They I shall try to answer their queries in have facilities for keeping in close a fair and impartial way. touch with farm thought and senti- The National Grange is the pioneer ment through frequent referendums, farm organization. It has had more or constant communication with farmers less influence in Washington ever since it was established a half century ago. Some of the times it has been aggressive and powerful; at other periods its influence has been negligible, and overshadowed by other, for the time being, more powerful organizations. But the Grange has lived while the Alliance, the Wheel and several other influential organizations of farmers have died of too much partisan politics and are now only a memory. The Grange has the credit for promoting most of the acts of congress that have benefited the farmers. The older members of the financial rings that were prominent years ago even now have an at-

tack of nightmare whenever they see any reference to the Granger legislation of those early days. Some of this legislation was crude and wouldn't work in actual practice; but it set the farmers to thinking and gave them a better understanding of their needs and their power when organized. The Inter-State Commerce Commission, Rural Free Delivery and the Parcel Post are all children of the Grange.

The Grange has a membership of upwards of seven hundred thousand, mostly farm folks, but not all, and centered largely in New England, New York, Ohio, Michigan and other eastern states, although it has organizations in thirty-three states. It is undoubtedly the most truly representative farm organization east of the Mississippi and north of the Ohio river, and with the facilities provided by its headquarters in Washington it is better equipped for effective work along legislative lines than ever before.

(Continued on page 162).

Relation of Production to Marketing

Our Extension Specialist, Prof. C. W. Waid Points Out How Cooperative Marketing Stimulates Quality Production

It has been a common belief among potato growers during the last few years that too much attention has been given to the production of potatoes and not enough to the marketing of the crop. There are several good reasons why potato growers should come to such a conclusion. In the first place, for a great many years the agricultural college and experiment station authorities paid little attention to anything but the production part of potato growing. Marketing was considered by them a thing which should be left entirely to the growers and dealers.

Some of the authorities were very much inclined to consider the production entirely from the standpoint of increased yield without any particular reference to cost. It was quite a common thing for public speakers to urge farmers to increase their production for the purpose of supplying cheap food for consumers. Those who presented the subject in this manner were not in close touch with the farmer's interests and did not know that the carrying out of such a policy would in the long run result in the reverse of their desires.

Again, the potato crop is so greatly influenced by weather conditions that there is no consistent relationship between acreage planted and the total production secured. Being a perishable crop it must be marketed within a very limited time and the knowledge that there is a large supply or a limited supply has a corresponding effect on prices. The psychological effect of a heavy or light crop influences price much beyond or below the actual value of the product.

The influence of these various factors on the income secured from the potato crop is shown very strikingly in the figures compiled in table form by the Bureau of Crop Estimates. This table gives the records from 1866 to 1918 inclusive. There is included in the table the total acreage, yield per

acre, total production, price paid on December 1 each year, and the total value of the crop for the state of Michigan. One of the most striking features of this table is the fact that when the production exceeds the normal consumption, not only the price declines but the total farm value is correspondingly reduced. A few figures taken from this table emphasize this point:

Year.	Acreage.	Yield.	Production.	Price Dec. 1.	Farm Value
1875	85,000	125	10,625,000	27	\$ 2,371,622
1876	86,363	55	4,750,000	66	3,134,739
1880	97,300	112	10,897,600	41	4,468,016
1881	131,589	58	7,632,162	50	6,105,730
1891	209,081	96	20,071,776	24	4,817,226
1892	185,173	62	11,666,726	53	6,183,365
1903	268,230	78	20,921,940	49	10,251,751
1904	262,865	121	31,805,665	29	9,223,933
1913	350,865	96	33,600,000	53	17,808,000
1914	364,000	121	44,044,000	30	13,213,000

During the last few years potato growers have realized so fully the fact that they were not getting what they thought they should for their potato crop, particularly during seasons of heavy production, that they have been

insistent upon securing help along the line of the marketing of the crops. So far as Michigan is concerned, the climax came during the season of 1917 and 1918. Space will not permit even a brief summary of conditions as they existed at that time. However, as a result of the feeling which was so pronounced and commonly expressed, active work along the line of encourag-

ing cooperative marketing was taken up in this state as never before. The results of the work of the Michigan Potato Growers' Exchange have been detailed in this publication.



With a Higher Appreciation of the Influence of Quality on Price, Members of Cooperative Organizations Plan on Growing Better Potatoes.

pecial attention to at this time is the changed attitude of many potato growers relative to the production end of the industry since they became interested in cooperative marketing. When the growers began to handle their own products they soon realized as never before the importance of quality in the product offered for sale. The turning down of a few cars, especially on a declining market brought to their attention very forcibly the value of a standard, dependable article. The growers also are disposed to make greater efforts along the line of reduced cost of production per unit. They realized that they have under their control to a considerable extent the cost of production. In this connection some growers have come to realize that a low yield of potatoes frequently means production at a loss. It is their desire to secure as high a yield per acre as possible and at the same time to produce that yield at as low a cost as possible, realizing that such a combination means a low cost per hundred pounds or per bushel. In order to avoid danger of over-production and corresponding low prices and small returns many growers are reducing their acreage and trying to increase the production and lower the cost on the acreage and quantity grown.

Growers are as a class, paying more attention to standardization of varieties or rather elimination of undesirable varieties, to the quality of seed used, to the selection and preparation of the soil for potatoes, to the cultivation of the crop and to the protection against insects and diseases, than ever before. They are doing this because they realize that these factors have a direct bearing on the cost of production, the quality of the product and on the marketing of the product. There is nothing which will have a greater influence on the grower's attitude toward the production of the potato crop than the cooperative marketing of the product.

Michigan Farm Bureau Grows Rapidly

TRULY this Michigan State Farm Bureau is a precocious child. Born just a year ago into the most meagre sort of swaddling clothes, and even its parents skeptical of its good health, today it is a husky, aggressive youngster, a prodigal son as it were, whose advice and help is being eagerly sought by progressive agriculture of many other states.

Just twelve months ago, some of the leading farmers of the various counties of this state were invited to assemble at East Lansing, at the Michigan Agricultural College, and review the work and activities of the county farm bureaus established by the college with federal and state funds over the state, and also to consider organization of a state association to unify and correlate the interests of these various county associations. There were fifty-seven counties represented at this meeting.

Several nice speeches were heard, a constitution adopted with annual county membership dues fixed at fifty dollars, and an executive committee consisting of Roland Morrill, president, Berrien county; R. G. Potts, vice-president, Macomb county; F. H. Vandenhooft, vice-president, Marquette county; Fred Van Nordsall, treasurer, St. Joseph county; H. J. Rogers, Benzie county; Fred Cornair, Saginaw; J. P. Munson, Kent; A. E. Illenden, Lenawee; Alfred Hendrickson, Oceana; James Nicol, Allegan; Austin Cowles, Clinton; Mrs. John Ketcham, Barry; Miss Flora Buell, Washtenaw; Arlie Hopkins, Manistee; Earl Tragmar, Ingham, was elected. C. A. Bingham was named secretary.

The Michigan State Farm Bureau was then in existence. But what was it to do? What means and methods did it have to act with? The first question was not difficult to hazard a guess at, but the second proved a poser, and inability to find the answer to it, blocked the answer to the first.

It was not long before it was discovered that essential expenditures, without leaving anything for vital agricultural promotion work, would require at least \$5,000 for the year; that pledges from forty-two counties meant a possible gross membership income of \$2,100, and that only fifteen counties had paid in the \$50 fee, leaving the infant organization in debt.

Bingham, the secretary, learning of the scope of the activities of the Illinois Agricultural Association and the sturdy plan for financing there on the basis of a \$5.00 annual membership fee from the individual farmers, investigated and on August 5 called together delegates from the various counties who had shown any active interest in the State Farm Bureau at Grand Rapids.

J. C. Sailor, the membership campaign manager of the Illinois Association, was there and told the remarkable story of the sensational development of the Illinois Association from a "paper" status to a live, progressive and efficient working institution. Bingham then said he had the plans all ready for Michigan to blossom out similarly and was only waiting word "to go ahead" with them.

Those plans called for a state-wide membership campaign which was to reach every farmer in the state. The memberships were to be on a basis of \$5.00 annually to the State Farm Bureau and \$5.00 annually to the County Farm Bureaus, and to be for three-year terms.

There was some question. Would the farmers agree to such an elaborate scale of financing? Wasn't \$10 an awful amount to ask of a farmer? And Bingham countered with, "I believe the farmers are not as cheap as they have

tenaw, Tuscola, Shiawassee, and Otta-

wa, and now the state organization has slightly better than 20,000 members. Most of the state undoubtedly will be campaigned in the remainder of the year and it would not be rash to say that better than 100,000 members for the Michigan State Farm Bureau will be the result.

And now other states, who learned of Michigan's development while attending the national organization meeting in Chicago last November, in which Michigan participated, want to know how Michigan grew up so fast. They want Michigan's aid in their development. Ohio, Kentucky, Missouri are the most insistent and some aid has been extended them. Even far away California wants advice of Michigan now.

Annual Meeting Occurs Next Week. Holding of the Michigan State Farm Bureau's annual meeting at East Lansing, February 5-6, this year, apparently is going to swell the usual "Farmers' Week" attendance at the Michigan Agricultural College to a record figure this year.

Hundreds of farmers of the 20,000 odd members of the youthful state organization have arranged to travel to Lansing to see what this new organization is all about and to assist in making it a powerful instrument for the non-partisan development of agriculture in this state. All of the fifteen counties into which the Farm Bureau's membership campaign has extended will have large delegations present. But this is no frolic that is scheduled for these farmers. They have a serious business program—one that may mean much for the future of agriculture in this state—ahead of them. And they are realizing this. It will be a sober-minded gathering of business farmers, conscious of the problems that are confronting the business of farming, who will convene in the agricultural building at the college, Thursday, February 5, at ten o'clock in the first business session of this second annual meeting of the Michigan State Farm Bureau.

About thirty-five counties are expected to be represented by voting dele-

gates. Those who already have qualified delegates are Muskegon, Oakland, Berrien, Manistee, Genesee, Kent, Gladwin, Lenawee, Lapeer, Bay, Wexford, Saginaw, Missaukee, Washtenaw, Marquette, Oceana, Ottawa, Macomb, Van Buren, Barry, Montcalm, Allegan, St. Clair, Tuscola, Shiawassee, Presque Isle, Wayne and St. Joseph. Others that are expected to do so before the date of the meeting included Eaton, Calhoun, Monroe, Clinton, Mecosta, Mason, Benzie, Leelanau, Kingston and Grand Traverse. The credentials committee, as appointed by President Morrill, of Benton Harbor, is composed of James Nicol, of Allegan county, chairman; A. E. Illenden, of Lenawee county, and R. G. Potts, of Macomb county.

All of Thursday will be devoted to organization business and a busy day, indeed, it will prove if the delegates stick to the schedule laid out for them and complete it. Late in the afternoon, election of officers likely will be the order. Some changes in the list are likely, especially in the executive committee. However, there is strong talk around the state of returning Morrill to the presidency, R. G. Potts to the vice-presidency, and Fred Van Nordsall of St. Joseph County, to the treasurer-ship. All of these men have been earnest workers in the development of the organization in the last year. The secretary is an appointed officer, and although the present incumbent, C. A. Bingham, of Birmingham, who individually perhaps has contributed more to the upbuilding of the organization than anyone else, is being regarded throughout the middle west as promising timber for the national secretaryship, it is believed doubtful if the Michigan farmers will be willing to release him to the American Farm Bureau Federation.

One of the most important actions, out of the routine of an annual meeting, that is scheduled is ratification or rejection of the national federation's constitution. As some twenty State Farm Bureau Associations already have ratified the document, there seems little room for supposition that Michigan will not play cards the same way, though, inasmuch as Michigan will be one of the main props financially of the national federation for the next few years, it is not unlikely that the ratification will be made with the same reservations adopted by Illinois and Iowa, when they ratified. Those reservations were to the effect that the national headquarters must be at Chicago, the market center of the country, and that the secretary, the first year, must be a middle westerner.

There will be no evening session Thursday, thus enabling the delegates to hear Governor Frank O. Lowden, of Illinois. Friday there will be more speaking for the farm bureau delegates to hear. In the morning Miss Jennie Buell and Miss Edna Smith will discuss rural home economics, W. G. Eckhardt, of Illinois, will talk on "A Business Organization of Farmers," and others will be heard. Friday afternoon J. R. Howard, of Ames, Iowa, president of the American Farm Bureau Federation, will be on the platform. His subject will be "The National Organization of Farmers." Mr. Howard is not a platform performer, he's a farmer, and when he consents to appear on a speaking program it is always because he has something to say. Congressman A. F. Lever, sometimes called "Father of the Federal Farm Loan System," also will talk. His subject will be "Farm Financing."

If it is impossible to complete the business program of the organization on Thursday, there will be continuance of these sessions on Saturday.

Alfafa Seed For Michigan

By J. W. Nicolson

I HAVE just returned from a trip through the middle west where I visited sections in Wisconsin, Minnesota, Iowa and North Dakota. I visited A. B. Lyman, of Excelsior, Minnesota, and also looked over the seed as certified by the North Dakota Alfalfa Growers' Association, five thousand pounds of which has been ordered for Michigan.

I obtained a lot of first-hand information on the way alfalfa seed is handled in the various regions it is produced, in the Dakotas, Montana, Idaho, etc., and I think this seed we are getting from the North Dakota Association is the best buy on the market at the present time for those who want absolutely genuine Grimm alfalfa seed.

All through the west alfalfa crosses more or less readily and in most of the sections both Common and Grimm are grown fairly close to each other. The result is there is some crossing and then there is some mechanical mixture through the use of the same threshing machine. In the section of North Dakota from which our seed comes these conditions do not prevail. Only Grimm

alfalfa is grown in this section and this seed has the additional advantage of being grown in a climate that eliminates all weaker strains. If any common alfalfa has been mixed with the original seed used, or if any common

alfalfa is sown in this locality, the winners are so severe that the Grimm is all that is left after a short time. Winter wheat and apple trees will not survive where this seed was produced. On the other hand, the other people who offered Grimm alfalfa for sale in most cases had it produced in Montana, Idaho, and such states, where common alfalfa will survive, where winter wheat is grown, where there is some chance for mixture by crossing and where the weaker plants are not necessarily quickly eliminated.

As far as I can find, the North Dakota Association is the only one at the present time that can absolutely guarantee purity, origin and quality of the seed of the type we are getting from them.

Many commercial firms and individual growers are selling their Grimm and Cossack seed at sixty-five to seventy-five cents per pound, and while it may be good there is a chance that it may not be pure. And in many cases there is a big chance that it is very badly mixed.

If we are going to have success with these pure seeds of highly recommended varieties, we have learned from experience with Rosen Rye, that it is very essential to get genuine pure seed.

Again, there are many hard seed in (Continued on page 158).

Campaigning for Better Rural Schools

The Good Folks of Hillsdale County Soon to Pass Judgment on the Establishment of Consolidated Schools. By J. A. Kaiser

THE question of consolidated schools is one that has agitated farmers' organizations of all kinds, in Michigan, for many years. Members of local granges and members of the State Grange have clashed sharply, in the past, over the proposition. For years and years the consolidated school has been a favorite topic for discussion at Pomona Grange meetings. No question has awakened more animated discussion, and over no question have opposing sides been more sharply drawn.

But, although centralized schools have been long talked about by the farmers of Michigan, so far, the movement has proceeded little farther than the talking stage. And this, too, when the neighboring states of Ohio and Indiana have made long strides in rural school improvement. Not long since, an Ohio man said to the writer: "Ohio can put it over Michigan when it comes to good roads and fine rural schools." The children of this man are enjoying and have always enjoyed since old enough to attend, the superior advantages of the consolidated school system. Into Michigan, of late years, have come a host of Ohio and Indiana people—farmers and permanent home-makers. Many of these folks know what the consolidated school is like, and many of them are staunch supporters of the system. In the final showdown, these people are going to hasten the day of consolidated school for Michigan.

A campaign for consolidated schools is now being waged in Hillsdale county. R. C. Young, the progressive and able school commissioner, is at the head of the movement. Meetings have already been held in several townships and during the winter and spring, the campaign will be carried into every township in the county.

In setting forth the situation as it now exists in the section under consideration, Litchfield township will serve, with some variations, of course, as an illustration applicable to all. In Litchfield township, the increase in the number of foreign students attending the village school from the farms, has made necessary the construction of more school buildings. The advocates of consolidated schools are making the most of this, in their campaign. They contend, and wisely, too, that now is the time to make the change. If new accommodations must be provided, let them conform to the new system that must surely come, in the course of human progress. At a recent meeting attended by fully one hundred and fifty voters, the matter was discussed. Of course, bitter opponents of the innovation are not wanting—some of them able expounders of the doctrine of letting good enough alone. But it is the opinion of many, that in a final count, the supporters of the consolidated school system could win out in the township. The necessity of providing more school buildings will without doubt, hasten a decision.

In most other townships, a similar condition prevails. The increase in the number of foreign students from the farms, is crowding the meager accommodations of the town schools. Something must soon be done to relieve the situation. Naturally, the advocates of consolidation say now is the opportune time to make the change.

In Scipio township, where several meetings have already been held, a somewhat different condition exists. Here, there is no town of any moment.

Many of the district schools are small, and the school tax is high. Consolidation would mean, say its champions, greater efficiency, and in the long run, less expense.

In the campaign now being waged there seems to be two principal reasons for opposition. The first is, of course, economic. It is the first cost which staggers the timid ones. The grasping and selfish ones look not only at this first cost, but they fear an increase in taxation as a result of the change. Many, even of the most strenuous opponents, admit, however, that after the change has once been made and the school has been established, the proposition will be of advantage from the economic standpoint.

The other reason for opposition is largely sentimental. It is the old cry against the destruction of the "Little Red School House," although in this case, the school house happens to be almost any color except red. Puerile as this objection seems to many, it must be admitted that it has a strong hold in the hearts and minds of folks who are neither ignorant nor unprogressive. With most of us, the scenes and associations of childhood and youth cling with tenacity to the heart strings, and influence more than we are willing to own, our decisions on important questions.

But selfishness and sentiment alike must give way at last, before the onward march of humanity. Like better roads, the consolidated school is bound to come to Michigan. First of all, it spells greater efficiency. Better equipment, better teachers, a wider field of opportunity for the boys and girls from the farms—these are some of the things for which consolidation stands. Advancement in one field means advancement in all. The automobile has made road construction imperative. Better roads and the automobile are hastening the day of consolidated schools. A half dozen miles from a school house is not so far now, as a mile once was, and that not so long ago. Rural free delivery, the rural telephone, and the automobile have revolutionized rural life. Next in order, comes the consolidated school. Like all progressive movements which have for their object the betterment of the race, the consolidated school will come at last. It has come to many other states, and will come to Michigan. Men may fight the movement for a season, but conditions demand it, and it will surely come. The district school houses that dot the land, have served their purpose, and they have served it well. With the march of time and events, these school houses that nestle in the valleys and on the hill-tops of Michigan, must become but a memory. The fact that great men and women got the rudiments of an education within their walls, can not preserve them from going the way of all material things. The consolidated school has proved its superiority and the system has been thoroughly tested. Let the boys and girls from our Michigan farms enjoy the benefits of the most progressive educational system possible. That is the way to make men and women capable of solving the problems of the future.



Good farmers and good corn. Yield of silage 34.4 tons per acre on A. A. C. Fertilizer.

How Some Farmers Miss the Profit

Higher wages for farm labor and higher cost of seed, equipment and supplies make it necessary to secure a higher return on the money invested in producing crops.

But here is one source of profit that some farmers miss. In choosing fertilizer, remember that the form of the plant food is just as important as the analysis, for the materials used should vary according to the needs of the crop, the character of the soil and the climate. Two fertilizers alike in analysis but made of different materials often produce widely different results. Secure the best results and get the greatest profit by using

A-A-C Fertilizers

They are made of materials that have given the best results in actual crop tests,—conducted on many farms in many states, under different soil and climatic conditions. A gain of thirty to forty bushels of potatoes per acre by using fertilizer best suited to the crop is not unusual. Equally good gains have been found with other crops. Our Agricultural Service Bureau is in charge of Dr. H. J. Wheeler, formerly Director of the Rhode Island Agricultural Experiment Station. It has helped many farmers to determine the best fertilizer for their needs. It is ready to help you. Write today for information—the service is free.



"How to Make Money with Fertilizers"

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

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

The American Agricultural Chemical Co.

ATLANTA
BOSTON
BALTIMORE
BUFFALO

CHARLESTON
CINCINNATI
CLEVELAND
COLUMBIA

DETROIT
JACKSONVILLE
LOS ANGELES
MONTGOMERY

NEW YORK
PHILADELPHIA
SAVANNAH
ST. LOUIS, ETC.

Please Address Office



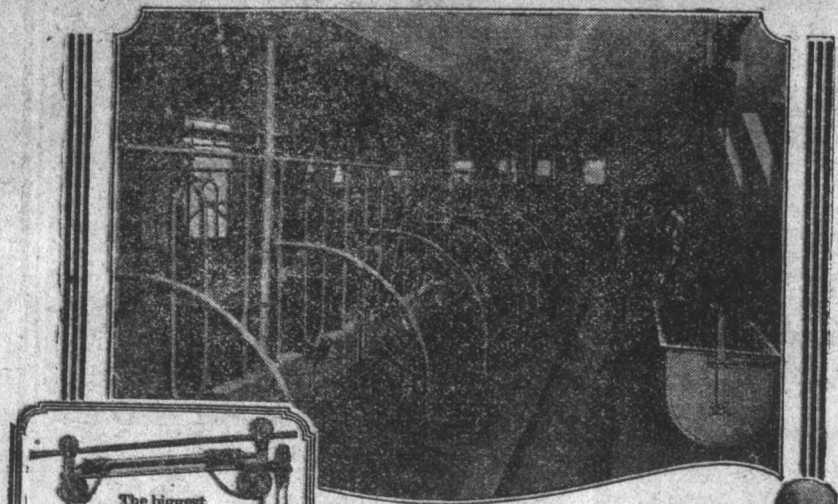
Located Nearest to You

Fertilizer is highly concentrated. It is many times richer than manure. It must be applied properly. When planting by hand, the fertilizer should be well covered by the soil or thoroughly mixed with it, before the seed is dropped. If applied by machine select one that mixes the fertilizer with the soil thoroughly. Some corn

planters have a special attachment for mixing the fertilizer with the soil. If you have one, be sure to attach it. If fertilizer is applied broadcast, sow it evenly. Fertilizer should not be applied to grass or grain that is moist. Apply around, and not on, other plants.

LOUDEN

Equipment Saves Half the Barn Work



One Man Does Work of Several

Human labor is over half the cost of dairying. Over 90% of this labor is done in the barn. It is a proven fact that you can cut this labor in half with Louden Steel Stalls and Stanchions, Feed and Litter Carriers, Automatic Quick Detachable Water Bowls, etc.—besides showing a yearly cash increase in the productivity of your cows, which more than pays for Louden Equipment.

Facts Told By Users

"I wish to congratulate you on your endeavor to help the farmer overcome the farm labor shortage by using your barn equipment. I can say your stalls and litter carriers save more time and are one of the best improvements I ever made on my farm."—John Beehner, Elkton, S. D.

"I can keep my cows in shape to produce certified milk cheaper with Louden equipment than I could the old way for the cheapest grade milk. Louden Equipment is the best spent money I put into my barn."—Blair B. Hileman, Prop., Pleasant Valley Stock Farm, Altoona, Pa.

Plain, Strong, Practical, Inexpensive, Fits Any Barn

You can always recognize Louden Equipment by its simple, sturdy, smooth, curve construction, which makes it trouble free, durable, safe and sanitary. An equipment which will fit your present barn, which you can install at moderate cost, and which will show a big daily profit is shown in our

224-Page Illustrated Catalog

It tells all about Louden Steel Stalls and Stanchions, Litter and Feed Carriers, Animal Pens of all kinds, Manger Divisions, Water Bowls for cows, Swill Carriers for hogs, barn and Garage Door Hangers, Hay Unloading Equipment, Power Hoists, Ventilators, Cupolas, "Everything for the Barn." Sent postpaid—no charge—no obligation. Write for it today.

If you expect to build or remodel your barn let us help you. We can save you trouble and money. Write us what kind of barn you have in mind, number and kind of stock you wish to house, and we will send you our big book of barn plans, together with blue prints and suggestions to fit your particular needs. No charge—no obligation.

THE LOUDEN MACHINERY COMPANY

(Established 1867)

1918 Court Street

Fairfield, Iowa

THE LOUDEN MACHINERY CO.

1918 Court St., Fairfield, Iowa.

Please send, postpaid, without charge or obligation, the books checked below.

.....Louden Barn Plans

.....Louden Illustrated Catalog

I expect to build (remodel) a barn about

(date).....for.....cows.....horses.

Am interested in:.....Stalls.....Stanchions.....Carriers.....Water Bowls.....

.....Animal Pens.

Name.....

Post Office.....State.....

SALE ARMY GOODS

All goods new—no reclaimed or renovated—guaranteed perfect.

Wool Blankets, 66x84 - \$7.00

Wool Underwear, per garment 2.50

Heavy Wool Hose, per pair .70

Ext. Heavy Shaker Knit Wl. Sox 1.00

SKATING CAPS (O. D. and Navy Blue)

A fine warm cap for severe weather, 100% pure wool. Regular \$1.75 values. To close out this lot, special price 95c.

Buckhorn Army Style Shoes, sizes 6 to 11, \$3.90

Write for complete price list—M. Hundreds of bargains

ARMY & NAVY SUPPLY CO.

532 Seventh Avenue New York City

MAPLE SYRUP MAKERS

Champion

Evaporator

saves labor, makes finest quality syrup and sugar, and gets better returns from your sugar bush.

Write for catalog and terms today.

Order Sugar Makers Supplies Now.

Freight moves slowly.

CHAMPION EVAPORATOR CO., Hudson, O.

FEEDS

Dairy, Horse, Hog and Poultry feeds. Bran, Middlings, Cotton seed Meal, Cull Beans.

We want to send you our price list.

YOUNG - RANDOLPH SEED COMPANY,

Owosso, Michigan

Situation Wanted By married man, 28, born and raised on farm. H. S. Education. 3 years stenographer to two governors; 2 as accountant; 2 working and managing farm; dairy experience; successful with hogs. Enterprising farm can obtain valuable assistant or manager. Light rent good farm with everything furnished for one third. References: Jos. H. Krull, R. I. Constantine, Mich.

Garden Seeds, Sure to grow, and true to name. Prize Packet with every order. Catalog free. Allen's Seed House, Geneva, Ohio.

Cherry, Pear, Plum and Apple Trees, 20 cents each berry and Raspberry plants. Send for 1920 catalog. ALLEN'S NURSERIES, GENEVA, OHIO

\$40 per month and expenses paid good men for taking orders. Steady work. PROTECTIVE NURSERIES, GENEVA, N. Y.

Nine out of ten commercial FERTILIZERS are simply mechanical MIXTURES of properly selected chemical INGREDIENTS.

We do not pretend to dictate to you what you ought to use, but if you care to have us do so, we will give the benefit of our best advice, and we will be glad to fill your orders in mixed or straight carloads for

RAW GROUND PHOSPHATE ROCK

ACID PHOSPHATE, BARIUM PHOSPHATE,

TANKAGE, AMMONIUM SULPHATE,

FISH SCRAP,

AMMONIATED RAW PHOSPHATE,

CYANAMID, BONE MEAL, and all

POTASH SALTS

"WE FILL YOUR ORDER AT THE DAY'S MARKET"

Marden, Orth & Hastings Corporation

FERTILIZER, CHEMICAL DEPARTMENT

136 Liberty St., New York City

Shipments made from nearest stock

BOSTON CHICAGO PHILADELPHIA

CLEVELAND CINCINNATI ST. LOUIS

LOUISVILLE SEATTLE SAN FRANCISCO

MOUNT PLEASANT

Eureka Potato Planter

Increases Yield—Lowers Labor Cost

Pays for itself many times over. One man and team

opens furrow, drops seed any distance or depth, drops

fertilizer (if desired), covers up, marks next row. Au-

tomatic. More accurate, dependable and quicker than

hand planting. Furrow opens and seed drops in plain

sight. Does not injure seed. Has long life, needs few

repairs. Sizes for 1 or 2 rows. Protects you against

uncertain labor and seasons. Investigate Now.

In Stock Near You

Eureka Mower Co.

Box 823

Utica, N. Y.



Washtenaw Farmers Dine

IN spite of a drifting snow storm which will obviate ninety-nine out of more than three hundred and fifty one hundred strikes, and give both capital and labor exact justice.

farmers from all parts of the county attended the third annual Washtenaw County Farmers' Banquet, in the beautiful banquet room of the New Michigan Union Building, on Saturday, January 17. The University School of Music furnished special music and a leader for community singing on the part of the diners.

W. G. Eckhardt, county agent for De Kalb county, Illinois, and for seven years a member of the faculty of the University of Illinois, and the first county agent in that state, gave an interesting address on organization work among the farmers of his state by which they were able to dispose of their products with more profit to themselves and to the people of Illinois.

Mr. Eckhardt spoke at length of the organizing work of the farmers of his state, by which they were able to dispose of their product with more economy and with more profit to themselves and to the people of the state.

"We must build a firm foundation in agriculture from the ground up," he said. "We must begin with our county organization, grow into state bodies and finally into a national organization of farm producers."

"In DeKalb county the farmers erected a mill for their use in preparing their product for the market. We found that it ended much of the waste that had been going on during the many years before farmers organized, to better themselves and the community at large. The mill, erected at a central point in the county, was not only a benefit to the farmer, but also to the community at large. Farmers of this county form one-third of the consumers; is it unreasonable that they should demand and get a square deal? They certainly expect to give a square deal in return. Farmers are organizing into county boards to get rid of the middlemen who extract more than a legitimate profit; they are organizing to benefit the community, and not only themselves. They do not want to fight, but they do want to play the game on the square."

Mr. Eckhardt stated that the farmers in his state, who were organized in this manner, did not make it a point to patronize the mills and clearing houses owned and controlled by the state, saying that they believed that under their own scheme, they could more readily place responsibility where it belonged.

"No man identified with the farmers' organization can enter politics. When he becomes a candidate for public office, his identity with the farm organization ceases; thus politics and outside influences are kept out of our work. The farmer must have the interest of the whole community at heart, but the farmer is working with the idea in mind that he will extract only a legitimate profit, in proportion to the hazard he runs with his crops and equipment. Until the carrying charge, controlled outside, increases, it is our idea that we must not ask for increases in price."

Milo D. Campbell, of Coldwater, discussed the labor situation, Americanism, and the present tax system. "I will get it only about one cent per hope," said Mr. Campbell, "the wage scale will never go back to the level of pre-war days. Those who worshipped under the old-time religion, chiefly tried to avoid the tortures of hell; the new-time religion teaches us to enjoy the just pleasures of living."

"This," he said, "is a rough way of illustrating the position of both the farmer and the laborer. I am not opposed to organized labor, in fact, I believe in it heartily. I am not opposed to many of the strikes that labor is compelled to call. But I do believe that laws can, and must be framed, express to your depot."

"I want to emphasize Americanism, as distinguished from force, violence, and the poison of sedition that is now abroad in this country. Commenting on the value of the university in educating the men and women of the state to the proper belief in America and her basic institutions, Mr. Campbell said, "I have never yet heard of seditious talk or doctrines coming from our University of Michigan, even though the country has been filled with ultra-socialism, single tax and other doctrines that have saturated it with poison. If we have professors in the University of Michigan, or in any other state, whose teachings are allied to the soviet, 'it is high time that a house-cleaning should take place.'"

Chas. A. Bingham, secretary of the Michigan State Farm Bureau, gave a brief address, explaining the progress of the farm bureau campaign in the state.

ALFALFA SEED FOR MICHIGAN.

(Continued from page 156).

alfalfa and most of the seed on the market has not been scarified. This process often improves germination twenty to forty per cent.

Mr. Lyman, of Minnesota, and the North Dakota Seed Growers' Association are the only ones that I know of who are scarifying their seed, and Mr. Lyman is not removing the hulls after scarification, while the North Dakota people clean the seed thoroughly, then scarify and then reclean. This seed is also of excellent quality, a statement which can not be said of a great deal of the seed produced in the northwest this year, for the rains in some sections discolored the seed and the drouth in others caused the production of a lot of small shrunken seed, which many of the growers are not removing.

Taking all these things into consideration, I think this seed, even at the price of eighty-six cents per pound, which it is likely to cost us net, when we consider the percentage of viable seed, is the cheapest Grimm alfalfa seed on the market. For, with a good yield of other seed you may pay less per pound but the pound will not in most cases have as much good, clean, strong germinating seed.

The freight on this seed from Fargo to East Lansing is ninety-nine cents per one hundred pounds; the express is \$2.77 per hundred pounds.

They can make shipment of two thousand pounds at once and the rest inside of about two weeks. First I thought it might be safe to ship this by freight, but I am really afraid to do it now. For, on seed as expensive as this, by the time it is shipped by freight to East Lansing and then re-shipped by express with the chance that it will get indefinitely delayed, compared to shipping it direct to the purchaser by express, I think the vote would be in favor of direct shipment. For those ordering over one hundred pounds, as all have so far, I believe I will get it only about one cent per pound cheaper, if they have it come by freight to East Lansing and reship it by express.

The Michigan Crop Improvement Association is charging nothing for handling this seed and by going out to North Dakota I got them to give us a price of eighty-five cents per pound laid down here by freight, instead of eighty-five cents f. o. b. Fargo. I am now going to try and see if I can not get it sent by express for eighty-five cents net, and I believe I at least, can get it for eighty-six cents delivered by that laws can, and must be framed, express to your depot.



Breeding for the Future

COMPARATIVELY few dairy farmers have yet come out of the age of wanting to do everything cheaply and for the present only. They are not building for the future, the same as the successful merchant or manufacturer who is trying to build up a fine business and stay by it. If they get well started, along comes some man and tempts them with a good price to sell out and move to town. The wife and family have little ambition in the way of a fine farm and a fine farm home. Because of these things it is hard to lift dairy farming up to the plane it ought to occupy. In all European countries the ownership of land and fine stock is considered a guarantee of respectability and standing in society. Such a spirit prevailing in this country would put pride, ambition and solid, strong purpose in the mind of the farmer and his family.

This spirit ought to prevail on every dairy farm in the country. It does prevail with a certain number of men, particularly those who are improving the fertility of their land, adding permanent buildings and improvements to the property; and establishing herds of purebred cattle or using purebred sires to grade-up their grade herds to high annual production. In every little dairying community there are some men who are using improved methods, and the spirit of the community toward these men is not always what it should be. You and I, as American farmers, want to get over the idea of pulling down and finding fault with the other man who is doing different from what we are and who is succeeding better. We ought to take him by the hand, bid him God-speed, and help him along. When we have two such men in a community, pretty soon we will have four, and pretty soon we will have more. There is a spirit in such a community that is an uplift to every man who keeps cows and takes an interest in improved methods. In this way we will soon come to have a class of dairy farmers who not only make a decent profit, but who value things at their true worth and make of the farm and the farm home "a thing of beauty and joy forever."

Heavy Investment Not Necessary.

To develop a successful dairy business does not require a heavy initial investment of cash, but it does require that a man must view the different factors which contribute to the success of the business at their true worth. He must not look at them cheaply. He must plan for five or ten years ahead in the way of improving the fertility of the land, building substantial buildings and fences, developing more efficient dairy cows, and introducing modern conveniences about the farm and in the home.

A few years ago the question of good cows overshadowed that of providing an adequate supply of home-grown feedstuffs. Experience soon proved, however, that good cows could not pay large returns unless they had a cheap and abundant supply of food during the year. Informed dairy farmers now contend that all the large factors must be combined if milk is to be produced (Continued on page 178).

Let Common Sense Decide Your Silo Choice

Test a Piece of "Rot-Proof" Champion Oil Filled Stave Yourself

RIGHT in your own mind--that's the place to settle this silo question--once and for all.

You're looking for a silo *built to endure*--one which will defy wind, weather and Father Time himself--and which can be one depended upon to *make* silage right and *keep* it right!

The simple test described below will prove to you why the Champion Oil-filled Stave Silo is *the silo for you!*

Send for a piece of Champion Oil-filled stave. Turn it up tight in a vise. Notice the oil--not too much, but enough so that you can squeeze oil out of it. There is an average of more than a gallon of oil to the cubic foot of stave.

HOT creosote oil forced into every perishable part of the stave under 200 pounds pressure per square inch at 150 degrees Fahrenheit--this is what makes Champion Oil-filled Staves *imperishable*. They won't rot, swell or warp after *any* length of service. You can't paint them--and they won't absorb moisture.

The heat-and-pressure method of impregnating Champion Staves with creosote-oil makes possible a *practically indestructible* silo which is absolutely perfect for its purpose.

Note These Other Exclusive Construction Features

Champion silos are planted in a solid concrete foundation four feet deep. This is not possible when untreated staves are used. For their tendency to absorb moisture causes them to swell and either crack the concrete or buckle the staves.

The famous Champion interlocking anchoring system--8 to 14 heavy steel cables (depending on the size of the silo) imbedded in the concrete foundation and running crosswise to the top, where they are attached to a channel steel hoop inside the

staves, *makes one solid unit of the entire silo*, thereby preventing all creeping, twisting, vibrating or blowing over.

The absolutely reliable Champion steel door frames-- $2\frac{1}{2} \times 1\frac{1}{2}$ inch angle steel implanted in the concrete and running up to the roof--would not be possible with untreated staves for the same reason that untreated staves cannot be set in solid concrete. But in Champion staves there is no swelling--no warping. Thus, channel steel frames are absolutely practicable--and they provide a perfect fit for the genuine redwood doors.

Send For These Facts--- They Tell Their Own Story

Send for a free sample of Champion Stave--and for the big new Champion book of *silo facts*--just off the press--which contains pages of valuable information on silage and silo construction.

Order Your Silo Now--If you want to be sure of getting it for next fall. On account of the great shortage of materials and the existing freight conditions, it is impossible for us to guarantee satisfactory deliveries except on orders received early.

AGENTS WANTED: We are looking for representatives--both dealers and salesmen--who realize the vital importance of right silo construction and who prefer to sell the best silo made.

Write for information at once.

The E. W. Ross Co.
Springfield Ohio

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

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

Name _____

Address _____



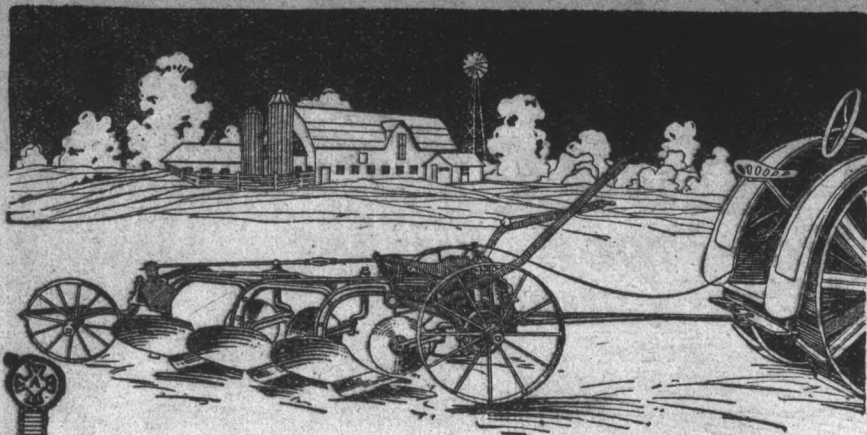
Winter Problems solved by the Hive with an Inner Overcoat. Wintered 100% perfect, no loss of bee winters of 1916-17-18. The Inner Overcoat did it. Send for free 48 page catalog of bee keepers supplies. **WANTED A. J. G. WOODMAN CO., Dept. M. F., Grand Rapids, Michigan**

MARRIED MAN WANTED

Wish to hire married man to work on this farm with small or no children. Must be competent and reliable, without bad habits: good opportunity for a man who is willing and able to give honest efficient service. Address

HERBERT W. MUMFORD
Brookwater Farm, Ann Arbor, Mich.

Please Mention The Michigan Farmer When Writing to Advertisers



Four Essentials in a Tractor Plow

First—A safe margin of strength in all parts subject to strain, because you can't afford delays when every hour is worth a two-dollar bill.

Second—Simplicity and strength in the power lift device, because delicate or complicated mechanism here is likely to go wrong under the stress of hard plowing.

Third—Convenience of handling, because of loss of time in running a tractor outfit runs into money rapidly.

Fourth—Plenty of clearance between plow bottoms and between front bottom and furrow wheel, to avoid clogging when plowing deeply in trashy or straw-covered fields.

B. F. Avery Tractor Plows

excel in all these respects. Axles, beams, beam braces and coulter stems are of extra size. Power lift device consists of a strong, simple clutch mounted on the furrow axle and directly connected with furrow lever—no chains or sprockets. The wheel box forms the moving part of the clutch, reducing the number of wearing parts.

Only one lever to adjust to change depth of plowing and this can be done without stopping the tractor.

Call on the B. F. Avery dealer and examine this plow.

FOUNDED
1825

B. F. AVERY AND SONS INCORPORATED
LOUISVILLE, KENTUCKY 1877

HUDSON TANK HEATER

(Formerly Called Nelson)

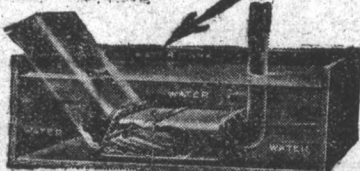
Just put a few cobs into the fuel box when you do your chores and have drinking water at 70° for your stock all winter. No ice to chop. No chilled stomachs. No bother or fire danger with a Hudson Tank Heater. Stock gain faster—keep healthier. Milk checks increase \$2 to \$3 monthly per cow. Heater soon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

Burns Straw, Cobs, Wood or Coal

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

HUDSON MFG. COMPANY
DEPT. 54 MINNEAPOLIS, MINN.

Keeps water
at
70°



GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

SCOTT'S TIMOTHY

This is one of the few field seeds that is reasonable in price this year. Ask for samples and our Seed Book telling "How to Know Good Seed". All other varieties of superior quality. O. M. SCOTT & SONS CO., 274 Main St., Marysville, Ohio.

Mention The Michigan Farmer When Writing Advertisers

WITTE

ENGINES 2 TO 30 H.P.

Simplest in Construction
Easiest to Operate

Lowest priced High-Tension Ignition Engine ever sold at Factory-to-User Prices. High Tension is the only successful ignition for kerosene. All WITTE Engines are regularly equipped with H. T. battery, or Standard BOSCH Magneto on order. Write for latest prices. Quick delivery.

WITTE ENGINE WORKS
Kansas City, Mo. Pittsburgh, Pa.
2190 Oakland Ave. 2190 Empire Bldg.

BARN PAINT \$1.22 PER GALLON

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

Keeping Up Production

(Continued from first page.)

Supplement Manure and Green Manure

Even under the best system of farm management on sandy soils where all crops are fed to live stock and the manure handled and applied properly, considerable plant food is lost through leaching from the soil and through selling grain, live stock, milk, etc., from the farm. If crop yields are to be maintained or increased in size commercial fertilizers must be used to replace losses. Manure partially makes up for these losses, but only to a very limited extent.

Nature has placed approximately fifteen hundred pounds of nitrogen, eight hundred pounds of phosphorus and 25,000 pounds of potash in the average sandy soil. Every crop grown and sold takes some portion of these essential plant foods from the soil. Every rain which washes through the soil dissolves plant food and carries some away. Sandy soils cropped for a long period of years have been analyzed and found to contain less than one-half of the above elements. A good producing soil usually has over twice as much nitrogen and phosphorus as that given for the average sandy soil. By studying the above comparisons we can readily see that the small amount of manure on the average farm will never supply this deficiency.

The introduction of fertilizer into the middle states has been slow, mainly because of the newness and natural fertility of the soil as well as the system of farming followed. Gypsum was first used with indifferent results. Farmers did not at that time realize that gypsum or land plaster has the same effect on the soil as a hypodermic injection of drugs has on a sick person. Gypsum stimulates and produces greater crops for a short period, but its continued use may prove detrimental.

Commercial fertilizers are not soil stimulants. Plants demand or need fertilizers just as we need food. The average sandy soil must be supplied with this food to grow crops properly. Feeding plants with fertilizers by adding them to the soil is, however, a complex problem, and the man who fertilizes is not always sure that he will see a large increase in yield every time he treats his soil. So many factors—such as weather, drainage, etc., must be considered, or have a decided effect on making a crop that fertilizers alone sometimes do not produce better crops.

Fertilizers sometimes do fail to produce better crops. The reasons given below explain some of these failures:

1. Weather is too dry. Fertilizers do not dissolve and become available to plants; or plants do not secure enough moisture to grow properly.

2. Improper drainage on low, wet, sandy lands near marshes. No water may appear on the surface, but is too near the surface, making a cold, wet soil.

3. Using the wrong fertilizer. Light or sandy soils usually require a complete fertilizer. Study the fertilizer recommendations given later in this article.

4. The application of fertilizer is too small or is not applied properly. They may be spread broadcast and disced in or applied on the row with a

fertilizer attachment to a corn or potato planter. Broadcast applications may be put on with a manure spreader, fertilizer drill or spread by hand.

5. The soil is too sour or acid, preventing fertilizers from being utilized by the plant. Apply limestone as directed.

6. No organic matter or humus in the soil. Fertilizers on sandy soils give best results when they supplement manure or a green manuring crop.

7. Too heavy an application of fer-

tilizer near the plant sometimes causes injury. Rates of application indicated in the suggestions below give the amounts to use according to the best farm practice on sandy soils today. Fertilizer Recommendations for Sandy Soil.

In these recommendations the figures given stand in their respective order for the percentages of ammonia, phosphoric acid and potash contained in the fertilizer. For example, a 3-10-4 fertilizer means one with three per cent of ammonia, ten per cent of phosphoric acid and four per cent of potash. It is also assumed that limestone has been added where the soil is acid.

Corn.—Where neither manure nor legumes have been used on sandy land use a 3-10-4 fertilizer at the rate of 150 pounds, if the fertilizer is put in the rows of corn, and 250 pounds where it is broadcasted. When a legume crop like clover or soybeans has been turned down then the farmer should add about 100 pounds of a 2-10-4 fertilizer if applied in rows and about 200 pounds if broadcasted. With ten tons of manure spread on each acre of land use an 0-16-0 fertilizer at the rate of 100 pounds per acre on rows and 200 pounds broadcasted with the manure.

Potatoes, Beets, Etc.—With these crops one can vary the amounts of nitrogen and potash by using a 3-8-4 or a 1-8-6 mixture on land that has not had an application of manure. Apply this fertilizer on the row at the rate of from 500 to 1000 pounds per acre. If manure has been applied at the rate of ten tons per acre then add a 0-12-4 or a 1-8-3 fertilizer at the rate of 500 pounds on the rows.

Oats and Rye.—Without a manure or legume application put on from 200 to 300 pounds of a 2-10-4 fertilizer and where a legume has been plowed under use the same amount of a 2-12-2 or a 2-10-2 fertilizer mixture. With a ten-ton application of manure broadcast 300 pounds of a 0-16-0 grade.

Clover, Alfalfa and Soybeans.—Broadcast from 200 to 300 pounds of a 2-10-4 fertilizer where no manure has been applied and from 500 to 1000 pounds of rock phosphate where ten tons of manure has been spread.

The above table gives only general recommendations. Individual conditions on different farms may demand different treatment. The progressive farmer will fertilize every crop he grows on light soils.

Results with Fertilizers.

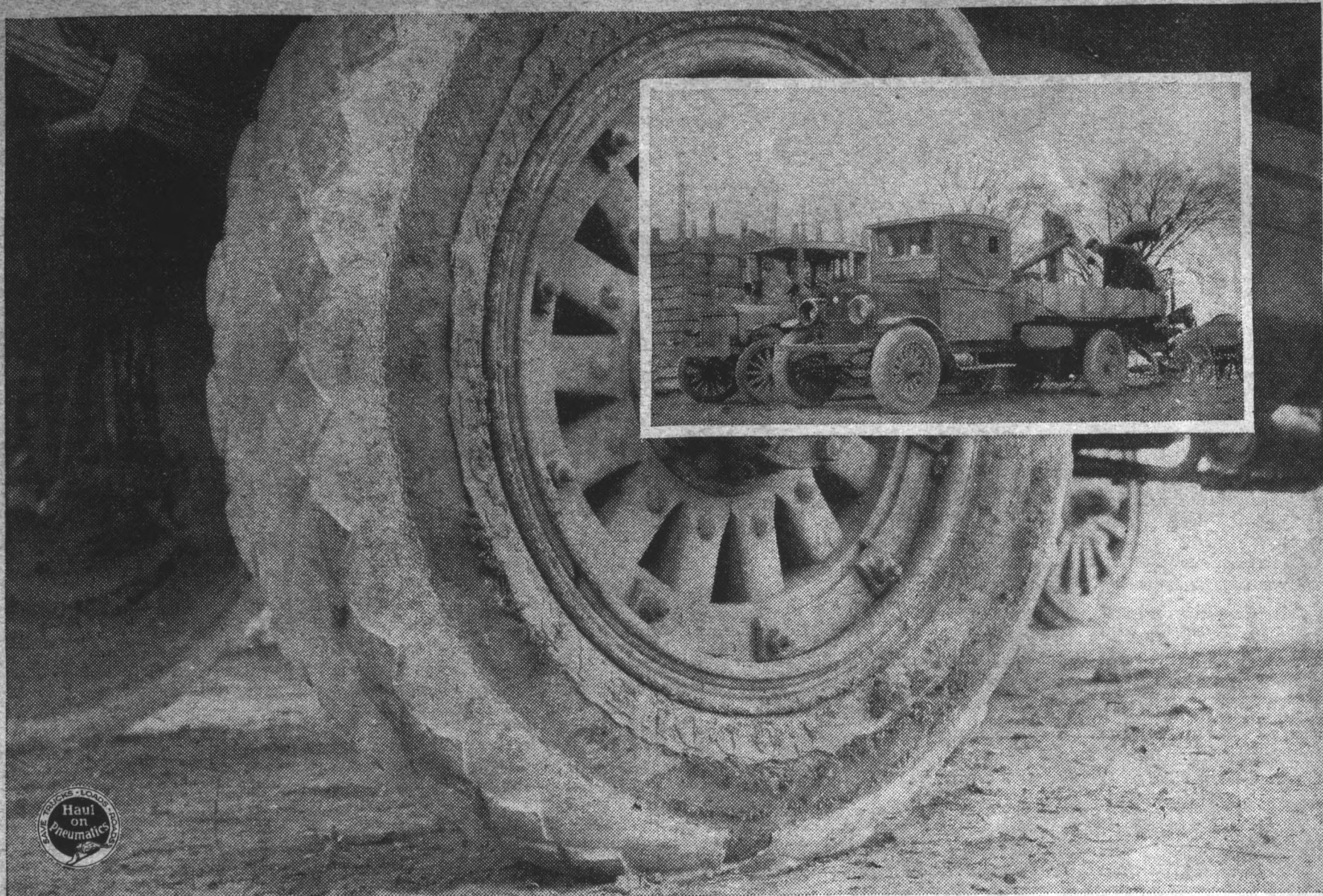
Eight farmers in Marinette county, Wisconsin, used a 3-8-3 fertilizer on potatoes during 1917 at 50 pounds per acre applied on the rows. The average increase per acre was thirty-eight bushels. The fertilizer cost \$15. The potatoes sold for \$1.00 per bushel for a total value of \$38 produced by \$15 invested in fertilizer. These men averaged 153 per cent on their investment.

Potato growers in Oneida county, Wisconsin, have used several carloads of 3-8-4 fertilizer during 1919 and report increases in yield ranging from twenty-five to 150 bushels per acre. This fertilizer was applied in amounts varying from 500 to 1,000 pounds per acre. They consider fertilizing very profitable.

Potato growers in the east, especially in the state of Maine, hardly ever use less than 1,000 pounds of fertilizer per acre and consider its use very profitable.

On very poor sandy soil at the Sparta Station, (Wisconsin), the average yield of corn covering a five-year period was increased from six to forty-four bushels per acre by the use of acid phosphate, potash and limestone with clover as a green manuring crop.

H. W. ULLSPERGER,
Wisconsin Sandy Soil Expert.



Copyright 1920, by The Goodyear Tire & Rubber Co., Akron, O.

"SINCE I changed over from solid tires to Goodyear Cord Tires, my motor trucking to Omaha, 31½ miles, has improved tremendously. I now deliver livestock in less than half the time, and with shrinkage greatly reduced. At 15,000 miles, my Goodyear Cord Tires look well able to travel much farther." — Roy Stokes, Rural Motor Express, Loveland, Iowa

HERE is a case, like many others, where the traction and cushioning of pneumatics help farmers to get better prices by making safer and more dependable deliveries.

It is consistently reported that pneumatics enable shippers to reduce the shrinkage of livestock in transit and to unload at stockyards on time despite weather conditions.

The scarcity of help is not such a handicap to these farmers, because they have thrown off the other handicap of slow hauling, either by teams or on solid truck tires.

They haul more loads per day on pneumatics without additional hands, and also get more

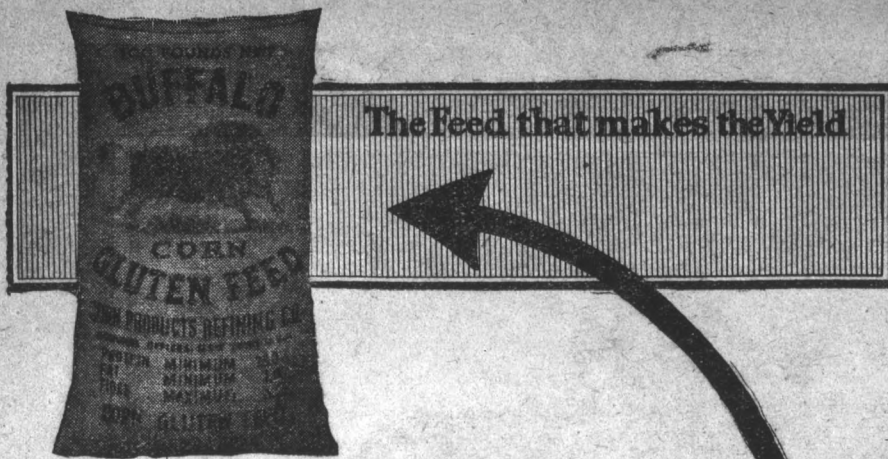
work from their power-driven machinery, because a truck on pneumatic tires is the quickest feeder for this machinery.

The development of Goodyear Cord construction, extending over many years, has made the pneumatic principle most effective because it has given to the Goodyear Cord Tire a remarkable toughness.

Additional information, showing how farmers save drudgery and increase income with pneumatic-tired trucks, can be obtained from the nearest Goodyear Truck Tire Service Station, or by writing to The Goodyear Tire & Rubber Company, at Akron, Ohio.

GOODYEAR

CORD TIRES



Cut Down Your Cost

A NUMBER of the most successful dairymen testified before the Federal Milk Commission, which has been fixing the price of milk from the producer to the consumer, that they had cut down their costs of production by feeding **Corn Gluten Feed** and wheat bran freely in grain rations, *they mixed themselves.*

The Commission must have been convinced by what these representative good dairymen had to say about different feeds and the economy of a man's mixing up of his own rations.

For, in arriving at the price it thought the dairyman ought to get for his milk, the Commission based its calculations on *home-mixed rations in which Corn Gluten Feed was a principal basic ingredient.*

Made by
Corn Products Refining Co.
New York Chicago

Write to
H. CHRYSTAL, Selling Representative,
606 Ford Bldg., Detroit, Mich.

If you have not yet fed Buffalo Corn Gluten Feed, if you want to know more about how to feed it, and your dealer doesn't happen to have it, write us—giving his name.

Kalamazoo

Firm As A Rock

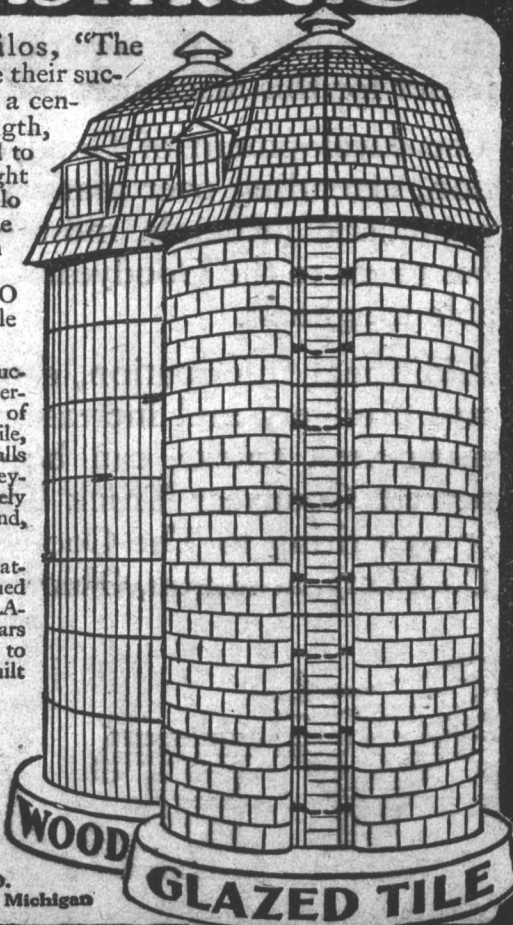
KALAMAZOO Silos, "The World's Standard," owe their success of over a quarter of a century to their great strength, firmness and durability, and to their substantial, air-tight walls. Built by the best Silo engineers and backed by the largest Silo manufacturers in America. You run no risk in buying a KALAMAZOO whether it be of Glazed Tile or Wood Stave.

Glazed Tile, the indestructible Silo, "permanent as the pyramids," built of KALAMAZOO special glazed tile, positively moisture proof. Walls with three dead air spaces and keyed joints making them absolutely air tight and proof against wind, frost and decay.

Wood Stave, the first patented ever issued on Silos was awarded the KALAMAZOO wood stave over 29 years ago. Such Silos have stood to this day, because they are built the KALAMAZOO way.

Send Us Your Name and receive our big Silo Catalog by return mail. It explains KALAMAZOO superiority in a way easy to understand. You will be more competent to judge what to buy after you have read the KALAMAZOO book. Ask about KALAMAZOO Ensilage Cutters. Write TODAY.

KALAMAZOO TANK & SILO CO.
Dept. 223-S Kalamazoo, Michigan



The Farmers' Voice at Washington

(Continued from page 155).

Professor Thomas C. Atkeson, the present Washington representative of the National Grange, is probably the most influential farm lobbyist that the country has produced. He has discussed farm problems with every president since the days of Grover Cleveland and many senators and congressmen are his personal friends, and confer with him when they want the farmer's viewpoint on public questions. Professor Atkeson was a member of the Board of Regents which established the West Virginia College of Agriculture and became its first dean. He has been master of the West Virginia State Grange for nearly thirty years, but more than all in the estimation of the folks back home, Professor Atkeson is a practical farmer, who in company with a son, conducts a large farm in the Kanawha Valley. Being a farmer himself and spending much of his life time in contact with real farmers, he has the farmer's point of view, an essential qualification as a farmers' representative.

Professor Atkeson has an able assistant in A. M. Loomis, a former western New York farm paper editor, who was secretary of the Chautauqua and Lake Erie Fruit Growers' Association for twelve years, and was instrumental in organizing the Chautauqua Farm Bureau, the second organization of its kind to be formed in the state.

The National Board of Farm Organizations maintains offices in a fine old residence near the White House. Mr. Charles A. Lyman, its secretary, who is in charge of its Washington activities, was reared on a farm and until called to his present position was a dairy farmer in Wisconsin. He studied agriculture in the British Isles and is a graduate of the University of Wisconsin. He has had a large experience as a farm organization representative. With him at present is R. F. Bower, legislative agent of the National Farmers' Union. Mr. Bower is a farmer, operating a fifteen-hundred-acre farm at Charlottesville, Virginia. Both of these men have the confidence, not only of the farm leaders but also of the farmers in the states from which they have come.

The National Board of Farm Organizations is a federation of fourteen farm societies. Among its managing directors are Charles S. Barrett, of Georgia, president of the Farmers' National Union; Milo D. Campbell, of Michigan, president of the National Milk Producers' Association; N. P. Hull, of Michigan, president, and William T. Creasy, of Pennsylvania, secretary of the National Dairy Union; R. D. Cooper, of New York, president and J. D. Miller, of Pennsylvania, vice-president of the Dairymen's League; J. A. McSparran, master of Pennsylvania State Grange; Henry C. Wallace, of Iowa, secretary of the Corn Belt Meat Producers' Association; Gifford Pinchot, president of Pennsylvania Rural Progress Association, and other well known farm organization leaders.

This organization was formed in 1917 by a number of prominent farm leaders who saw the need of unity of action among the various groups of farmers for the purpose of securing for agriculture the recognition from the government that it rightly deserves. Its objects are outlined in the following platform:

"To unite the farm organizations of the United States for all purposes upon which they may agree, leaving each free to take or not to take, as an individual organization, any action or position upon any question wherein it does not agree with the others.

"To afford a ready means of giving voice and weight to the views of the farmers in national affairs.

"To promote the interests of the farm families of America, to conserve and increase the influence of those who feed and clothe the people, and to further a national recognition of the power and position of the farmer in national life.

"To increase the value of the service of the farmer to the nation, and of the nation to the farmer."

The reader will no doubt agree with me that this is an excellent program. It would seem that all farm organizations ought to unite their interests and influence in one central representative body. The theory of unity is beautiful to look upon. But in actual practice it has succeeded perhaps a little better than the age-old proposition to bring all the christian denominations together in one federation or consolidated organization. Instead of one central headquarters in Washington, representing all the organized farmers there are three, and there is considerable sentiment in farm organization circles that the American Federation of Farm Bureaus should be represented in Washington, which may mean the establishing of another farm headquarters here.

The Farmers' National Council occupies rooms in a building facing the Capitol, and its managing directors are George P. Hampton and Benjamin C. Marsh. Affiliated with the council are the American Society of Equity, the Ancient Order of Gleaners, several western Granges, and a dozen or more organizations whose names I had never heard until I called at the council's headquarters.

Mr. Hampton says he is a resident of New York state and a member of the Grange. In 1906 and 1907, according to his statement, he represented the National Grange in Washington, and later led a revolt in the Grange ranks, which it is evident landed the revolvers outside the breastworks. He is an able man, a well trained lobbyist and a born propagandist. His views upon public questions are somewhat radical, but he prefers to be called a progressive. He is opposed to nearly everything that the two other headquarters favor and he is vigorously advocating things that the other organizations are persistently opposing. And as the director of a regiment of farm organizations and so-called farm organizations he claims to represent the farmers. So we have the spectacle of two organizations claiming to represent the farmers, where directors are appearing before legislative committees, buttonholing congress and pulling all the wires at their command to carry their point; yet diametrically opposing each other on about every question that comes before the house and senate for action.

In my next letter I shall refer to some of the things these different farm representatives have done and are now doing, and leave it to the farmers themselves to judge as to who are their real representatives in Washington.

Some of the poorest sandy soil can be renovated at a reasonable cost and be made to produce profitable crops. The data secured so far in the use of fertilizers on light soils clearly indicates that when they are used properly, with the right soil and weather conditions, profitable increases in the yields of all crops will be obtained. Every farmer should use some fertilizer every year.



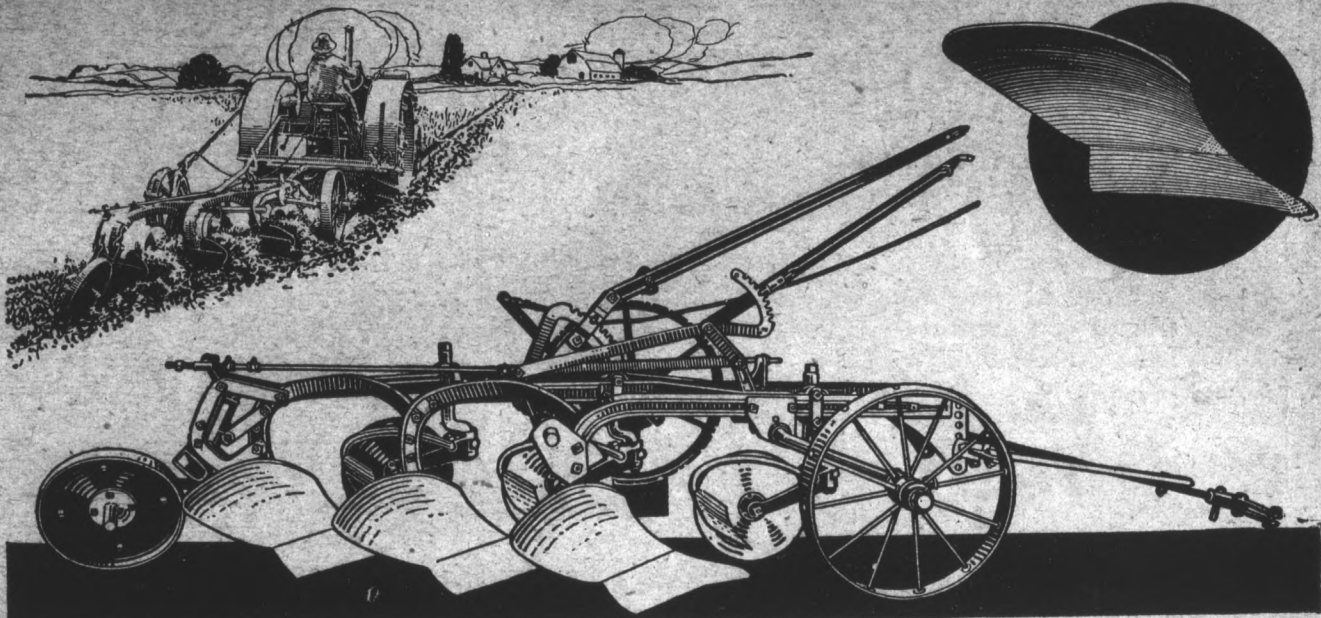
HOGS MARKETING FREELY.

THE strongest factor in the Chicago hog market recently has been the extremely large demand from eastern packers, choice hogs of rather light weight being taken mostly. Most of the time the receipts of hogs are on a liberal scale, most owners being disposed to let them go as soon as ready, and only severe reductions in values will bring about small marketings. Most of the hogs marketed show up extremely well in quality, with no large number of heavy weights. Recent Chicago receipts have averaged two hundred and twenty-five pounds, being two pounds lighter than a week earlier and nine pounds heavier than a year ago. Of late hogs have sold at much better prices than during the latter part of last year, while far lower than at the best time of 1919. The bulk of the hogs offered sell within a range of thirty cents, with light butchers the highest sellers, followed closely by light bacon hogs of 165 to 190 pounds. In recent weeks hogs have sold from \$14 to \$15 per 100 pounds, comparing with \$16.50 to \$17.65 one year ago, \$10.20 to \$10.95 three years ago, \$6.65 to \$7.30 four years ago and \$4.30 to \$5.05 fifteen years ago. Not many pigs are shipped from feeding districts, as there are comparatively few sick pigs in most parts of the corn belt, and healthy youngsters of good weight are selling well. A bad feature of the hog market is the frequent overloading of the stockyards with supplies, as happened on a recent day when about 73,000 hogs were on sale, including 9,300 head which were left over from the previous day, causing a decline of fully thirty cents per 100 pounds and an accumulation of about 17,000 unsold hogs at the close of the day. The large domestic and foreign demands for hog products constitute a powerful element of strength for both hogs and their products, and the foreign outlet is sure to expand indefinitely later on as credits are arranged so as to permit of needed foreign purchases of lard and cured hog meats. During a recent week exports of provisions from North America included 9,243,000 pounds of lard and 50,039,000 pounds of cured hog meats, these comparing with 7,795,000 pounds of lard and 36,235,000 pounds of hog meats exported a week earlier and with 2,730,000 pounds of lard and 32,370,000 pounds of hog meats for the corresponding week last year.—F.

PURE FABRIC LAW.

MANUFACTURERS of wool cloths would be compelled to make known the content of virgin wool and other materials in all goods manufactured, under penalty of fine and imprisonment, under the provisions of a "pure fabric law," proposed by Representative French, of Idaho. The measure is designed to prevent "deceit and profiteering" which results from the trade practice of not designating the contents of cloths.

A fine of not more than \$500 or one year's imprisonment, or both, for the first offense, and of \$1,000 fine or one year's imprisonment, or both, for each subsequent offense, is provided. The bill is based upon the assumption that when the public buys what it is told is an "all wool" suit, it believes it is getting virgin wool.



It's in the Bottoms

BOTTOMS are to a plow what the blade is to a knife or the barrel is to a gun. They govern the quality. They determine the investment value when you buy. Before you buy a tractor plow, take time to examine the bottoms on

JOHN DEERE
TRACTOR PLOWS

Into everyone of these bottoms goes the best of material and workmanship. They scour, make thorough seed beds and are long lived. There are shapes and styles to suit every requirement.

Compare them point by point with any other bottoms you have seen. Note the shape that assures good scouring, pulverizing and light draft, the special reinforcement at points where wear is greatest, the close-fitting of parts, and how the extra strong frog gives perfect support to the moldboard, share and landside.

Note the simple, durable, convenient device that makes the shares quick detachable and keeps them close fitting. You can remove a share by loosening one nut. Tighten the same nut and the share is on tight. It stays tight.

You'll like the way John Deere Tractor Plows are made throughout.



The beams are guaranteed not to bend or break—there is no time limit on this guarantee. The heavy beam braces are long lapped and securely joined to beams with heavy bolts and lock washers. The simple strong and positive power lift raises bottoms high and level.

The lifting mechanism moves only when the plow is being raised or lowered—practically no wear. There is great clearance in throat of beam—no clogging in trashy soil. The hitch is widely adjustable up and down or to the side—these plows can be used with any standard tractor.

Don't fail to go to your John Deere dealer's store to see John Deere Tractor Plows. You can get the size to suit your tractor—two bottom, three bottom or four bottom.

SEND FOR THIS BOOK—Write today for a free booklet describing John Deere Tractor Plows. Address John Deere, Moline Ill. Ask for booklet FS-426.

JOHN DEERE
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

The Most Dependable ALBION Pumping Power

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

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

SMOOTH RUNNING. Long bearings, adjustable boxes, three-length Pitman stroke and grooved oil containing turntable, insure silent, smooth action.

PERFECTLY BALANCED. The ALBION governs by weight, without springs, giving a perfectly balanced mill, either in gear or out.

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

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

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

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

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

No! She's
Not a Mooley

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

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



LEARN AUCTIONEERING

at 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.

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

Why a "B-V-T" Silo

is the Best Investment

Because it has been on the market NINE YEARS, without a SINGLE FAILURE. Made of famous Brazil Vitrified Fire Clay—ONE ton costs as much as FIVE tons of shale.

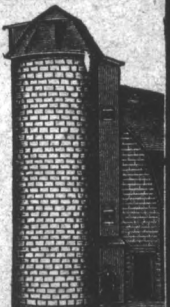
THE "B-V-T" WILL LAST FOREVER

Will not freeze or crack. Keeps silage in perfect condition. You never have to rebuild a "B-V-T".

Send Today for Catalog, D

Brazil Hollow Brick and Tile Company

BRAZIL, INDIANA

SAVE
Man
PowerMAKES GOOD
in Hardest Tests

Send for Free Engine Booklet before ordering any engine and become informed regarding the construction, dependability and low cost of upkeep of the long stroke, large bore

STOVER
GOOD ENGINES

Gasoline, Kerosene, Distillate, Crude Oil
A type for every need. 1/2 H. P. up.
FREE BOOKLET NOW!
STOVER MFG. & ENGINE CO.
1515 Lake St., Freeport, Ill.
Stover Feed Mills, Burlington
Cutters, Pump Jacks, Stover Sam-
son Windmills, Est. 1868, Free Cat.



DOGS

10 thoroughly broken American fox hounds, good hunters and trailers, a few partly broken. Stamp for reply. Ambrose S. Taylor, West Chester, Pa.
Trained American Fox Hounds Rabbit and Skunk dogs all ages. Send stamp.
W. E. LECKY, Holmesville, Ohio

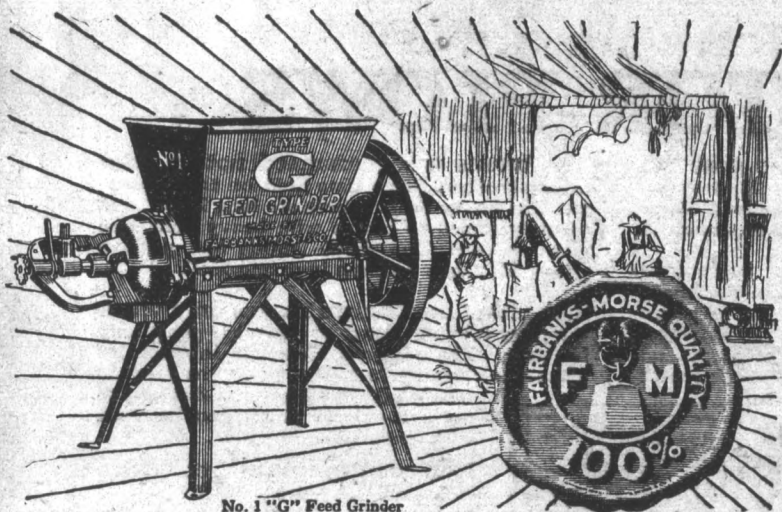
Where 90 lbs. = 100 lbs.

GROUND grain weighing 90 pounds has been found by actual test to do the work of 100 pounds of unground feed. Think what this means in added profits on your farm!

¶ A Fairbanks-Morse "G" Feed Grinder will help you to put your cattle and horses in prime condition—will put all of your stock on a balanced ration. Makes fine fattening foods—grinds corn, oats, barley for poultry feeds—produces fine meal for calves, lambs, pigs, cattle and horses.

¶ Quality built "G" Feed Grinders are money-makers. See them at your dealer; arrange to put one at work on your farm and watch the results that follow.

Fairbanks, Morse & Co.
MANUFACTURERS CHICAGO



We have the Fish

TO FARMERS who know the value of fish and want it in their fertilizer, we announce that we have laid in an ample supply of fish scrap to meet all demands. If you want the genuine, original Fish Scrap Fertilizer, insist on

ROYSTERS FERTILIZER



**The Fertilizer That Made
Fish Scrap Famous.**

F. S. ROYSTER GUANO CO.
Toledo, Ohio

New York State Fruit Growers' Meeting

THE "round-up" of the eastern fruit growers at the annual meeting of the New York State Horticultural Society in Convention Hall, Rochester January 14-16, was characterized by discussions on the insect pests, soil fertility problems and the unusual attention given to small fruits and vineyard crops. The production of grapes and berries was large last season and these fruits brought very attractive prices, which will undoubtedly lead to an increased planting of berries, and more attention to the care of the vineyards in the big grape belts. Just now it is evident that fruit growers are more interested in improving the quality of their products than in marketing, especially apple growers.

In the large exhibition building the display of apples, pears and other fruits was large and attractive. The Geneva Experiment Station had a very large exhibit of box apples. The machinery and nursery exhibits occupied a greater part of three floors.

The attendance during the three days reached the highest mark set by either of the parent societies in past years. Many growers were present from New England, Pennsylvania, Maryland and other sections. As a means of interesting the young men in fruit farming, boys under twenty-one years of age when accompanied by their fathers, were admitted free, as were all students of agriculture in high schools and colleges accompanied by their teachers.

One of the most highly interesting features of the meeting was a paper on "The Present Status of Dusting," by Professor W. H. Whetzel, plant pathologist at the State College of Agriculture. The subject of dusting has been before the fruit growers for several years. No other question is of more general interest, according to Professor Whetzel, with the exception of marketing. Every grower is debating on the question, "Shall I spray or take up dusting?" The question is not that a dry material is any more effective than a wet material of the same kind; but whether you can dust a dry material onto plants as efficiently as you can spray.

A summary of four years of experiments in New York state showed an average of forty-three per cent of scab on apples in the unsprayed orchards; in sprayed orchards eleven per cent, and on dusted trees twelve per cent. In controlling codlin moth, there was seven per cent in sprayed orchards; five in dusted orchards, and twenty-one on unsprayed trees.

Michigan dusting experiments since 1915, four years, showed a little higher per cent of scab on dusted than on unsprayed trees, but the results from dusting have improved each year, being more effective this year than ever before.

Results of experimental dusting in Nova Scotia are similar to those in New York. Taking the three years, there was an average of forty-eight per cent of scab on unsprayed, seven per cent on sprayed, and five per cent on dusted trees.

In Minnesota there was a less amount of serious scab on the dusted and more marketable fruit than in the sprayed orchards. For scab and codlin moth dusting has proved as efficient as spraying.

Professor Whetzel recently sent out a question to apple growers in New York state, as to whether they favored dusting in preference to spraying. Of seventy-three replies, forty-nine said "yes," and nine said "no." In reply to the question, does dusting control cod-

lin moth, fifty-one of the seventy-three said "yes." Replying to the question, "will you spray or dust next season," sixty-eight said "we will dust;" four favored spraying.

Professor Whetzel spent a week in Nova Scotia not long ago, visiting the apple orchards in the Annapolis Valley. He found that fifty dusters were used in the valley, and two hundred will be used this year. Not a single commercial apple grower opposed dusting.

Being a strong believer in the greater efficiency of copper as a fungicide, Professor G. F. Sanders, dominion entomologist, set about the development of a dry mixture to replace liquid Bordeaux. His tests in 1918 and in 1917 on both apples and potatoes have demonstrated the efficiency of his new copper dust. It consists of a mixture of very finely ground dehydrated copper sulphate and hydrated lime. The formulae used last season was dehydrated copper sulphate, eight pounds; arsenate of lime, four pounds; hydrated lime, eighty-eight pounds. Professor Sanders thinks the copper sulphate could be increased to ten pounds reducing the lime to eighty-six pounds per hundred. This mixture goes much farther than the 90-10 sulphur dust mixture commonly used. Experimental plots and orchards dusted four times with this copper dust mixture show good control of scab and but a slight russetting of the fruit, and with no injury to the foliage.

Dusting for brown rot control in peach orchards has given excellent results in Georgia, West Virginia, New York and two or three other states. Of thirty-four peach growers in New York state interrogated as to the effectiveness of dusting for brown rot, twenty-three reported seventy-five to one hundred per cent control; six reported fifty per cent or less; thirty-one will dust peaches next year, and three will not. Of twenty-one growers dusting cherries for leaf blight, twenty got satisfactory results, and will dust this year.

It was predicted by Professor Whetzel that the next advance made in dusting will be a mechanical one, an improvement upon the distributor. When dusters have been improved as much as sprayers have there will be no longer use for sprayers.

The cost account kept in Nova Scotia shows that dusting can be done at a lower cost than spraying. Dusting saves two-thirds of your time, and dust can be put on at the critical time, thus insuring greater efficiency and economy in the use of materials.

In his annual address, President U. P. Hedrick said that all things considered, the past year has been a poor one for New York fruit growers. Fruit crops have been below the average, and while prices have seemed high, they are low when the cost of labor, material and what money will buy are considered. The grape grower has been most fortunate, having marketed a fair crop at a price which would have been high a few years ago but is no more than reasonable at the present time. The blame for this partial failure in 1919 can hardly be attributed to the fruit grower. It is true that many orchards have been shamefully neglected in the past few years, but in most cases this has been because of the impossibility of hiring help at any price.

Markets have been unsettled owing largely to the fact that political and social machinery have been hammering farm prices and interfering with the proper storage of farm products. The prospects are less alluring for

next year, fruit growers are discouraged and prices will go higher. Prices for western fruits have been higher and steadier than for eastern fruits, because they are better distributed and better advertised. Eastern fruit growers must advertise.

During the past year there has been a more determined effort than ever before in the ranks of fruit growers to work together. The main advance in cooperation has been in the central packing houses. About one hundred and twenty-five cooperative associations are now in operation in New York, a goodly number of which have to do with fruit growing and in nearly all of which fruit growers should have an interest.

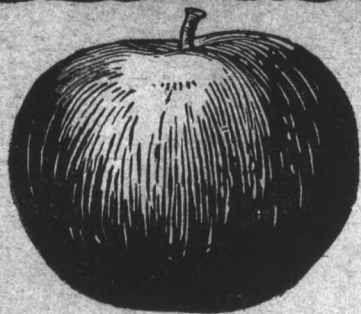
The hope of these organizations lies in collective bargaining. The legal status of collective bargaining has been questioned. The growers must use their influence in every way possible to prevent the enactment of laws prejudicial to collective bargaining and to secure laws favorable to it. Whether or not collective bargaining is justified for other industries, there are special reasons why this privilege should be granted to groups of farmers.

Referring to the politics in the Department of Farms and Markets, Professor Hedrick said that propitiation of politicians is not compatible with betterment of agriculture. Agriculture should be represented at the state capital by a strong, independent, self-reliant institution giving its whole time to the needs of agriculture. The farmers of the state ought to take the Department of Farms and Markets out of politics and make it a stable, efficient institution managed by farmers for farmers.

In considering the question, "Are the fruit grower's profits too large," the mind must not be confused by money. For true value, one must have in mind what farm products will buy. Time was when a barrel of apples would buy the farmer his shoes; it takes two barrels now. A few years ago three or four barrels would buy a suit of clothes; it takes twice as many barrels now. Two pounds of apples would buy a pound of sugar five years ago; four to one are required now. A barrel of apples would pay the day wages of two men before the war; it scarcely pays one man now.

"For a half century, capital sat at the head of the table carving the turkey, giving the laborer and the farmer the wing or the neck, sometimes only the bones. Now labor proposes to sit at the head of the table carving the bird. Labor expects to take the white meat and the short joint, giving the farmer, as a poor relation, the wing and the neck, leaving the bones for capital. The bird, however, is still in the hands of capital. Isn't it time to ask where the turkey came from? Didn't the farmer raise him? Might not the beautiful bird have been carved by the farmer? Might not the farmer have a little to say as to where the best slices are to go? Hasn't the farmer played poor relation long enough? The fruit grower's profits are not too large; to the contrary, they are insufficient, and if capital and labor possess judgment and foresight they will cease hounding the producer of foodstuffs and give him that for which he asks, a decent living and a fair profit."

"Is there a Better Method of Handling the Apple Crop in New York State?" was the subject of an address by Charles S. Wilson, commissioner of agriculture. Mr. Wilson said he wished that everyone in the audience might visit the New York market, and suggested that the fruit growers hold their summer meeting in New York City, devoting the session to marketing and making the visit to the market early in the morning an important feature of the program. He promised to provide leaders for the groups of visitors.



Let Your Orchard Pay Its Share of the Farm Profit

Your apple orchard, even if you have only twenty-five or fifty trees, can be made to pay a substantial part of your farm profits. It should be one of the best money-makers on your farm. The way to make this extra profit is as *simple* as it is *easy*, and as *certain* as it is *inexpensive*.

Protect your fruit from diseases and insects. Keep your apples free from insect damage and fungous blemishes. Grow sound, clean, attractive apples,—the kind that people like to buy and that will bring you a good price. You can get more apples and practically your own price for them,—you can make your apple orchard pay a real profit by spraying with

Pyrox

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

Fifteen more sound, smooth apples on the tree will usually pay for the PYROX it takes to spray it. But you are sure to have many times fifteen—for PYROX will protect your apples against the codling moth and other worms and bugs. It will keep them free from rot, spot and fungous diseases. It will increase the health and vigor of the tree as shown by the rich green color of the leaves, and the apples will hang on until they are ready to harvest in spite of even heavy windstorms.

PYROX is easy to use—just measure out the right amount and mix with cold water. It is a smooth, creamy paste, free from grit and lumps, and will go through the finest nozzle. It eliminates the worry and work of pre, aring separate chemicals.

Arrange for your supply of PYROX now. See your local dealer and be sure that he orders PYROX for you. Write today for your copy of the new PYROX book. Every fruit grower and trucker should have a copy.

BOWKER INSECTICIDE COMPANY

43 E Chatham St., Boston, Mass.

1006 Fidelity Bldg., Baltimore, Md.

716 Conway Bldg., Chicago, Ill.

LeRoy Plows Turn the Earth

If your Dealer
does not handle
LeRoy Plows
write
LeRoy Plow Co.
LeRoy, N.Y.



LeRoy Easy
Draft Chilled
Plows Save
Horses & Men.
See Your Dealer.

And the Farmer Supports the World

SPRAY YOUR FRUIT TREES AND VINES



Destroy the fungi and worms and thus be sure of large yields of perfect fruit.

Excelsior Spraying
Outfits and
Prepared Mixtures
are used in large orchards
and highly endorsed by suc-
cessful growers. Write for our
money-saving catalog, which also
contains a full treatise on spraying
Fruit and Vegetable crops.
WM. STAHL SPRAYER CO.,
Box 728 Quincy, Ill.

LANDOLOGY

FREE If for a home or investment you are thinking of buying good farm land, simply write me a letter and say, "Mail me LandoLOGY and all particulars free." Address
EDITOR, LANDOLOGY, Skidmore Land Co.
381 HALL AVE. MARINETTE, WIS.

EVERGREENS

For Windbreak
Hedge and Lawn
All hardy, vigorous and well rooted. We ship everywhere. Write
for Free Evergreen book. Est. 1855. World's Largest Growers.
The S. Hill Nursery Co., Inc., Box 2301, Dundee, Ill.

STRAWBERRY PLANTS THAT GROW

For thirty consecutive years this booklet has been distributed among an ever widening circle of friends and customers. It fully describes the best Fall-Bearing and June Varieties of Strawberries, including "THE EATON", a new variety we are now introducing. We think it is superior to any Strawberry ever grown, and will soon be classed among the Standard Varieties. You must try a few this Spring without fail. We also list a full assortment of Raspberries, Blackberries, and other Small Fruits. Send for your copy of Catalog, Today.

C. E. WHITTEN & SON,
Box 14, Bridgman, Mich.

SCOTT'S FIELD SEEDS

Seed to be worth planting at all must not only grow, but must grow a profitable crop. For years we have been supplying seed practically free from weed seeds and dead grains, the only kind that will show a profit. Samples and our Field Seed Book, which tells exactly "How to Know Good Seed," are free. To save losses from weeds, you need this information. Write today.

O. M. Scott & Sons Co. 74 Main St., Marysville, Ohio.

CLOVER—free from Buckthorn, Timothy and Alsike mixed. Soy Beans, all Field Seeds. Write for free samples and the freight-paid prices on our absolute Money Back guarantee. Farmers Commercial Seed Company 140 WEST VAN BUREN STREET CHICAGO, ILL.

SCOTT'S SWEET CLOVER

Ten dollars cheaper than Red and the best substitute. Fits right into the rotation. Ask for our catalogue telling "How to Know Good Seed" and sweet clover chart explaining all about this wonderful plant.

O. M. SCOTT & SONS CO., 474 Main St., Marysville, Ohio

TREES Plant for Profit

All kinds of Trees and Plants. Improve value, appearance, pleasure and profit of your farm, garden or orchard. Reduce high cost of living. Plant good stock. Fruit needed everywhere. Free Catalogue. MITCHELL NURSERY, Beverly, Ohio



Put Up Your Own Indiana Silo

THERE is no need to go without the silo you need next fall because skilled help is scarce and it's hard to get anyone to erect it for

you. Buy an Indiana and put it up yourself. Any farmer can follow the simple directions we give for putting up the Indiana. You can have your silo up and ready when you want it.

Seventy-five thousand American farmers have bought the Indiana Silo—and hundreds of them have bought again and again, until some now own as many as 15. They find that the Indiana is the best and most practical silo, more than pays for itself, every year. It makes

INDIANA SILO

better silage, allows less waste, stays in better condition and lasts longer.

Long experience, large purchasing power, and a business conducted on a large scale enable us to give a bigger value for every dollar than you can get in any other silo. Ask Indiana owners.

And our terms are so liberal the silo will almost pay for itself before the buyer has to pay for it. Write for catalogue, easy payment plan and early buyer's proposition.

We are the largest manufacturers of silos in the World. Agents wanted in every county.

The Tractor You Can Use Every Day

INDIANA ALL-ROUND TRACTOR

"The World's Tractor"

THIS one-man, single-unit tractor works not 25 or 30 days a year but as many days as you now use your horses for field work. Plows as much as two good horse teams, cultivates, pulls harrows, discs, drills, rollers, mowers, binders, potato diggers and orchard tools.

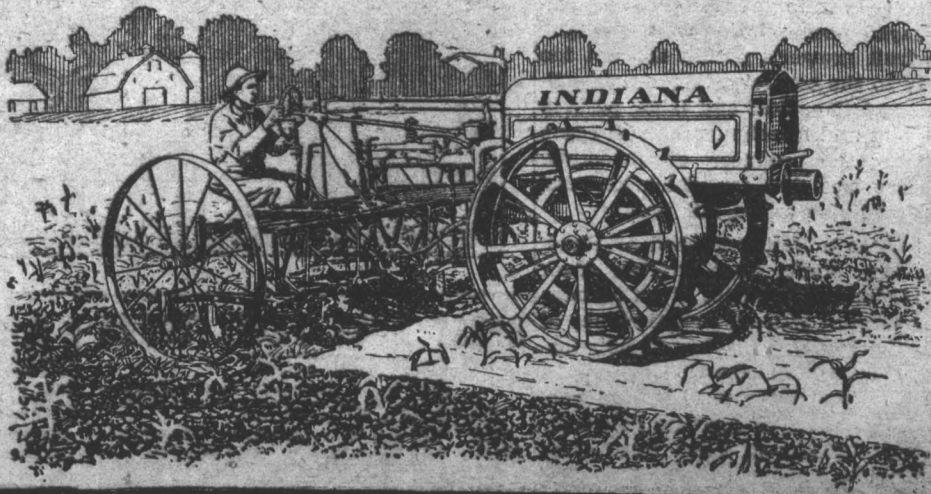
There is no riding implement that it does not hitch to. Numerous users have eliminated horses entirely in farm work. Excepting for the plow it uses the horse tools you already have without expensive hitches. One man does the work, riding on the implement. The Indiana tractor weighs no more than a farm team. There is no excess weight to drag around and no waste of fuel. The Indiana does a year's work of four horses at a gasoline and oil cost, that is less than half the cost of feeding and keeping the teams for a year.

Farmers who have big four-wheeled tractors are now buying the Indiana to work their row crops and prepare the seed bed when the ground is too wet for a heavy tractor to work on it.

Write us now for book of pictures made from photographs showing the Indiana Tractor actually doing all the work that horses and mules do on a farm. Biggest dealer proposition ever offered on a tractor.

THE INDIANA SILO & TRACTOR COMPANY
LARGEST SILO MANUFACTURERS IN THE WORLD

47 Union Building..... Anderson, Indiana
47 Indiana Building..... Des Moines, Iowa
47 Silo Building..... North Kansas City, Mo.
47 Live Stock Exchange Building..... Fort Worth, Texas



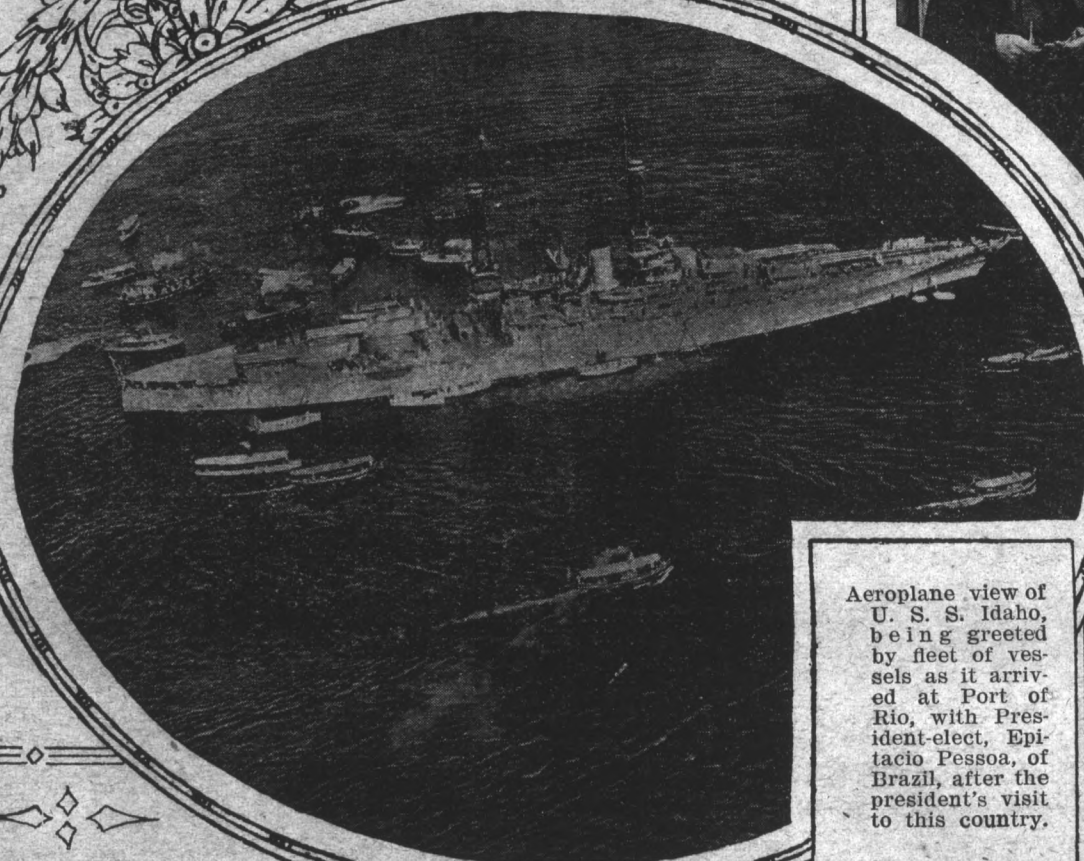
WORLD EVENTS IN PICTURES



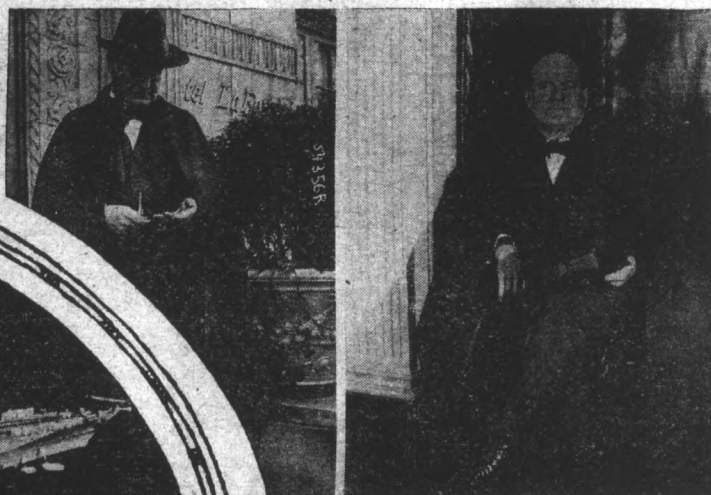
Mrs. Herbert E. Cole, of San Francisco, riding her Lion Pet, "Tawney Pershing," which she raised from a cub.



Some of the notables who attended the luncheon given by the "Carry on Association," at the Bankers' Club, New York.



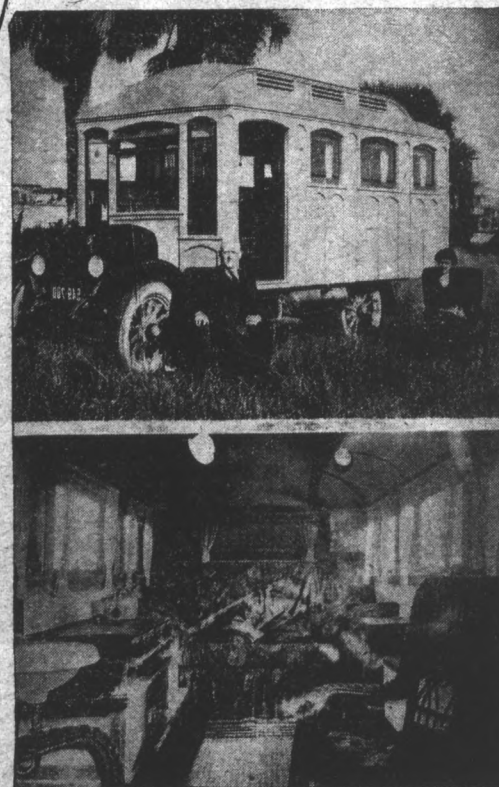
Aeroplane view of U. S. S. Idaho, being greeted by fleet of vessels as it arrived at Port of Rio, with President-elect, Epitacio Pessoa, of Brazil, after the president's visit to this country.



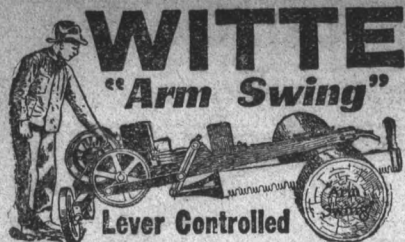
"The Great Commoner." William Jennings Bryan, as he appeared recently at Washington, D. C., where he attended the Jackson Day Dinner.



Miss Lucy Page Gaston (left), candidate for the Republican Presidential Nomination, at her desk in her Chicago, Ill., headquarters, with her secretary, Miss Katharine Harvey. Lucy Page Gaston was born in Delaware, Ohio, and for many years has been prominent in reform movements.



Upper photo shows Mr. and Mrs. R. H. Corwin, Lockport, N. Y., sitting outside their house auto, in which they made the trip from Lockport, N. Y., to Palm Beach, Fla. Lower photo shows the interior of the auto.



WITTE "Arm Swing" Lever Controlled DRAG SAW

A Practical, Safe, Easy-To-Use,
Low-Priced, One-Man Outfit for

Farmers, Shingle Mills, Loggers,
Timber Men, Stave Makers, Wood Cutters,
Contractors, Box Makers, Ice Packers,
and a handy money-making outfit for the man
who has timber land to clear. Easy to operate
on any size or kind of log. Shipped any-
where, complete, with saw, ready for work.

Direct From Factory

You buy direct from WITTE—you get quick shipment. You get a complete power plant for log sawing or ice sawing. Engine is 4-cycle WITTE, water cooled. High-speed gear-drive. Arm Swing Lever operates saw 130 strokes per minute. No chains or belts—Friction clutch, operated by hand lever, instantly starts and stops saw while engine is running. Starts saw at slow speed or full speed. Clutch works automatically if saw pinches. Reversible wheels. Can be hauled or pushed anywhere. Rig should pay for itself in 10 days. Big 3 color folder tells all about the "Arm Swing" and other exclusive WITTE improvements. Before you decide on any saw outfit or engine,—"WRITE TO WITTE." Get WITTE prices and save money.

WITTE ENGINE WORKS

KANSAS CITY, MO.
219A Oakland Ave.

PITTSBURGH, PA.
219A Empire Bldg.

"I've
Taken a
Fall Out
of High
Prices"

Says



"The Old Stove Master"
I'm right at it again, Friend,
hammering down the cost
of stoves and furnaces with
my wholesale direct-to-you from
my factory prices.

Write—Get My Book
See what you can save.
Satisfied customers ev-
erywhere. Quick ship-
ment. Cash or easy pay-
ment. Unconditional
Guarantee—also get my
offer on Phonographs,
Cream Separators, Paints,
Roofing, etc.
Ask for Catalog No. 113

"The Old Stove Master"
KALAMAZOO STOVE CO.
Mfrs. Kalamazoo, Mich.

A Kalamazoo
Trade Mark
Registered
Direct to You

BROWN'S BARGAIN FENCE BOOK

JUST OUT—My New "direct from factory" Bargain Book on Fence and Gates. Prices way below competition. Values bigger than ever. Get it today.

I Pay ALL Freight

Brown Fence lasts longest because built strongest, stiffest. All wires same size, heavily galvanized. 150 styles. Also Gates, Lawn Fence and Barb Wire at bargain prices.

Sample and book free, postpaid.
Brown Fence & Wire Co., Dept. 249 Cleveland, O.

KITSELMAN FENCE

Get It From the Factory Direct

PRICES 'WAY DOWN

We've knocked the bottom out of high cost of fence building. We Pay the Freight and save you money. Here's a man that

Saved 38 per cent

Mr. R. D. Dillard, Milton, Okla., writes: "I found all the Fence as good or better than I expected. I saved \$22.65 on my \$75.00 order."

You will never know how much you can save thru our **ODIRECT FROM FACTORY TO FARM** selling plan until you get our free catalog. Write today
KITSELMAN BROS. Dept. 278 Muncie, Ind.

Bog Spavin

Cure the lameness without scarring the horse.

Fleming's Spavin Liquid

\$2.00 a bottle (war tax paid)—special remedy for all soft blennishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. Easy to use, only a little required and money back if it fails. Write for FLEMING'S FREE VEST-POCKET VETERINARY ADVISER.

FLEMING BROS., Chemists
250 Union Stock Yards, Chicago, Illinois



A Cradle of True Americanism

By Edgar White

IN the center of the hill country in Northwest Macon County, Missouri, is a consolidated high school that reflects the spirit of real Americanism in a manner that prophesies good for the country. There are doubtless thou-

sands of duplicates of Grand View school in this broad land, attended by sturdy young Americans, who some day will be the national bulwark against destructive and evil-minded forces. But in Missouri, Grand View stands somewhat to the front of accomplishment in the state because of obstacles overcome and success reached amid the most discouraging circumstances for such a school.

Grand View School is in as rough a country as you could find outside of the Ozarks. Yet girl students arise long before daylight, milk the cows, feed the hogs and chickens, help mother with breakfast and to clean the dishes, and set off for school at an hour when most people are just studying whether to get up or not. Some of these girls travel three, four and five miles to school, because Grand View is the only rural high school in the county, and it serves a wide section. Some of the pupils come from adjoining counties. The students walk, ride horseback, and a few come in buggies. No matter the method, or the weather, they are all promptly at their desks by nine a. m. The record shows that no school in the county has a higher standard of attendance.

If the roads ran along land lines, as in most townships, the problem of the student getting to school would be exceedingly difficult, but they don't. Foreseeing the imperative need of good roads at once, the farmers of Drake township built them along the ridges, which formed an almost perfect natural roadway, high and well-drained. In places where some work was necessary in the way of culverts and grading, they promptly turned out and had everything in readiness when the school year opened in September. The greater part of this work was done under the direction of Medley Hill, a public-spirited farmer, who has no children of his own, but who went over the township and conducted such a campaign that he developed more school and good roads enthusiasts than in any other township in the county. He had always been a good roads man, even before the move was so popular as it is now, and he quickly saw the establishment of a consolidated high school in the center of the township would be a clinching argument for good roads and he used it so effectively that County School Superintendent O. L. Cross, who was at Grand View recently, says there are more and better earth roads in Drake township than in any of the other twenty-four townships in the county.

Now, as to this back-country high school, twelve miles from any railroad,

WE praise all the flowers in fancy,
Sip the nectar of fruit 'ere they're peeled,
Ignoring the common old "tater,"
When, in fact, he's the King of the Field.
Let us show the old boy we esteem him,
Sort of dig him up out of the mud;
Let's show him he shares our affections
And crown him with glory—"King Spud."

Its establishment became a necessity to the friends of higher education because most families found it impractical to send their children away from home to complete their high school courses. Many of the students had finished their grades in the district

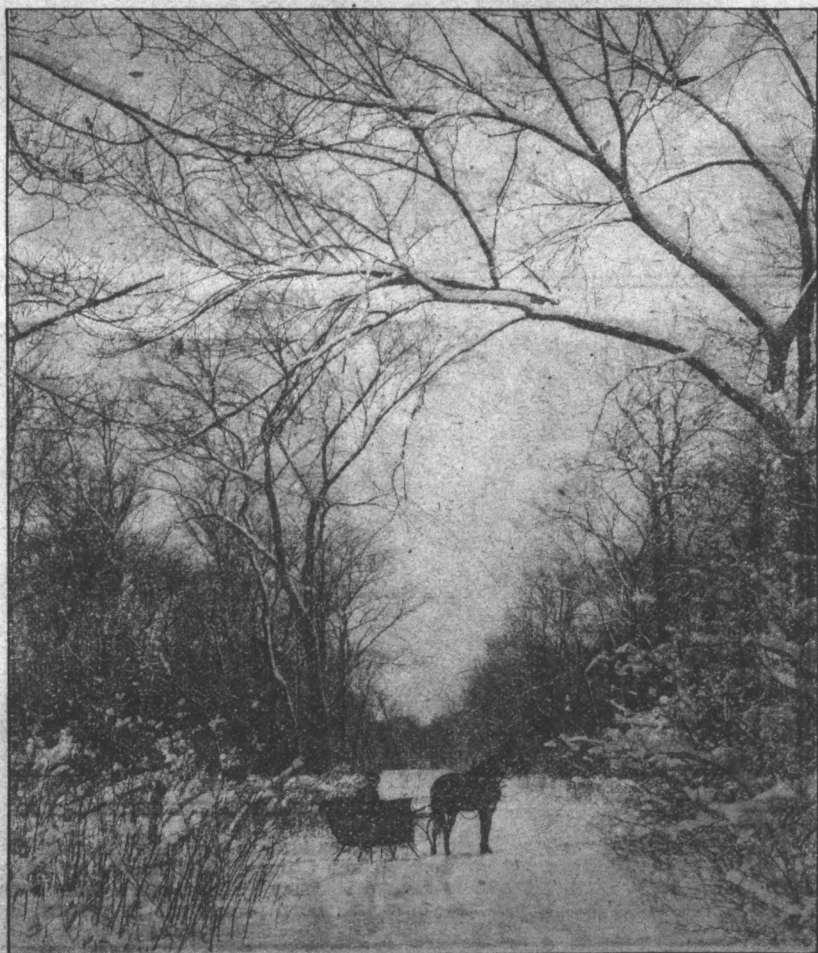
she does this by explaining the meaning of our history. She tells them America came into existence as a land for the oppressed; that freedom and liberty and a thorough respect for the law made this the greatest nation of the earth.

"I wish all our teachers would take those subjects as seriously as Miss Wright does.

"Her students—boys and girls—are a strong, husky lot. The girls can ride horses over fences, skate, swim, climb trees and are the best long distance walkers you ever saw. And while so proficient in these outdoor exercises, sixteen of them are accomplished musicians. I've heard 'em play. They have a \$400 piano, bought last September, and it's a good one. They paid for it themselves—those girls. Gave pie socials and the like. Discharged the debt three months before it was due.

"The record of attendance of Grand View is perfect, an important thing in maintaining discipline. That means many of the students have to get up long before daylight on winter mornings to do their chores. When these boys grow up and labor agitators come 'round and talk about five-hour days and less work they'll laugh in their faces. Those boys of Grand View know what work is—work in the school and work on the farm—and they keep at it while the light burns. That's why they are so strong, clear-eyed and healthy, and they will make the finest type of American citizens.

"And right here let me say that our country will never kneel at the feet of the Russian Reds, the I. W. W.'s, or whatever names the malcontents go by as long as we have these sort of schools. They are the cradles of true Americanism, and in their stalwart young hands lies the safety of the nation."



Plenty of Reasons for Choosing the PARAMOUNT

RIGHT from the start, the Paramount was successful because it had plenty of reasons for its existence. It came into the field a perfected machine with exclusive features—the product of a large organization with unusual facilities, a machine whose construction appealed to the reason of careful-thinking, level-headed buyers.

So here is not merely another phonograph, but a machine that has met with hearty response from a wide following of music lovers because of its rare tonal quality. A phonograph that provides a real treat to the most critical ear—and a thing of beauty to look at because of its exquisite cabinet work.

Superior in Construction

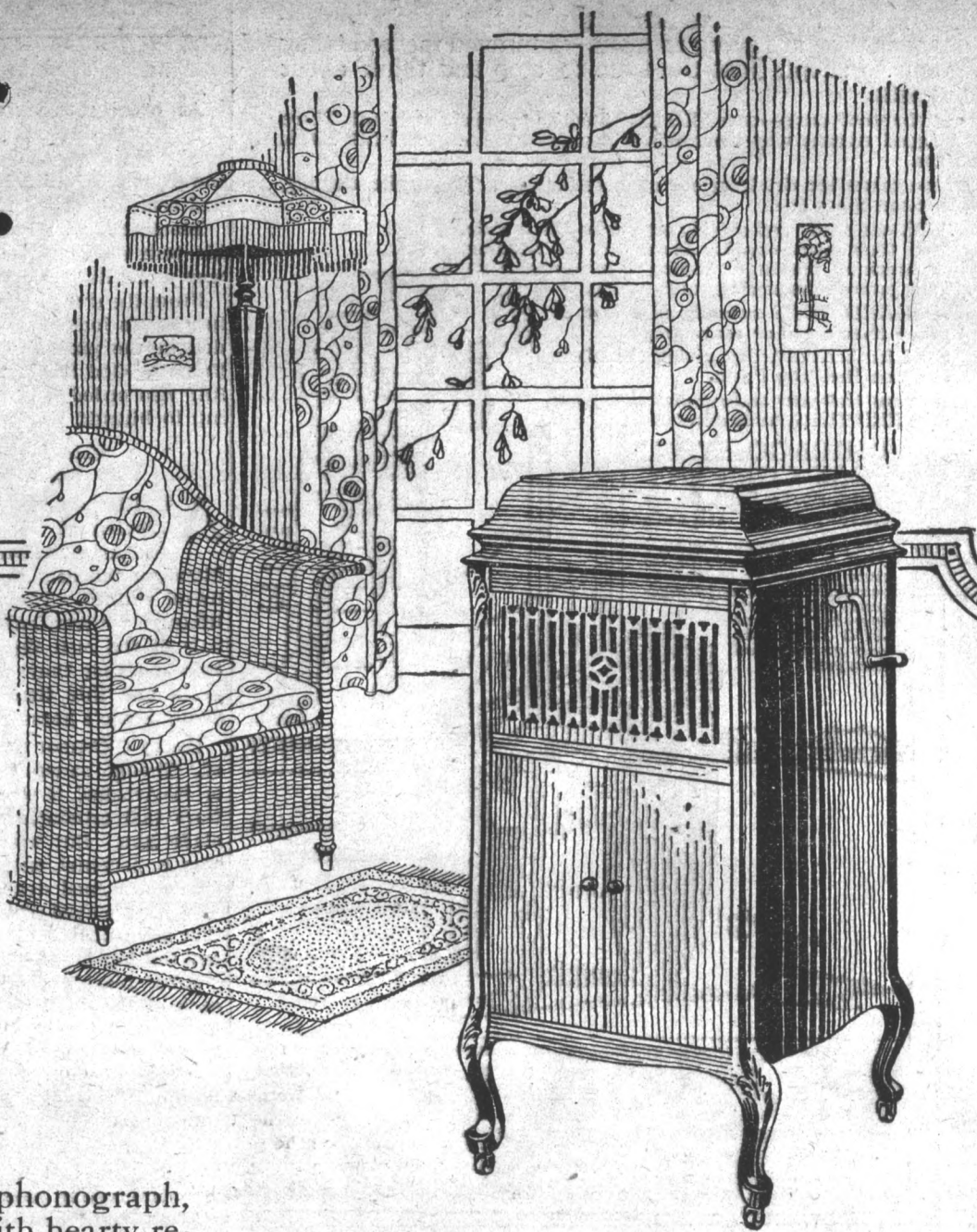
Go to your nearest Paramount dealer, examine the cabinet as you would the finest piece of art furniture, inspect the mechanism as carefully as you would a piece of expensive machinery. Then hear the Paramount played. That's the only way to find out fully about Paramount superiority.

Many Exclusive Features

Note the special Paramount tone arm which transmits perfectly the full, rounded tone to the improved Paramount all-wood tone chamber. With this specially shaped, wood



E. R. Godfrey & Sons Co.
DISTRIBUTORS
MILWAUKEE, WIS.



tone chamber there are no metallic, raspy sounds—none of those irregularities that grate on the finer sensibilities of the musically trained ear. The Paramount Motor is the latest type—quiet running when you get your Paramount and forever after. Spring is tempered so it won't break. Motor is equipped with speed regulator and brake.

The World's Musical Library Yours to Choose From

The world's greatest artists and compositions are yours to enjoy if you own a Paramount. There's no limit to your choice of records—all that are made, regardless of name, are yours to select from. The Paramount plays them all as they should be played—reproduces faithfully, always.

Delivery Made Now

Paramounts were a popular Christmas gift. But the great Paramount organization was able to meet the unusual demand and has ample facilities for maintaining the high Paramount standard of service. See your Paramount dealer for a demonstration. It will surprise you. And your Paramount dealer can make delivery whenever you say. If you don't know who your Paramount dealer is, write us.

Think About Fence Posts Now!

THIS is the time when farmers plan the year's work—changes they are going to make—improved methods they are going to adopt. Just the time to stop and think about fence posts.

It used to be wood posts—now RED TOP Steel Posts are the standard. There must be good reasons why thousands of farmers have adopted RED TOPS. There are.

They have taken the drudgery out of fence building. They make a strong, durable, clean fence line.

RED TOPS are easily and quickly set—drive like a stake. They hold their place—anchor like a rock. No bending, buckling, breaking, burning or rotting; a minimum of upkeep. They protect the stock from lightning.

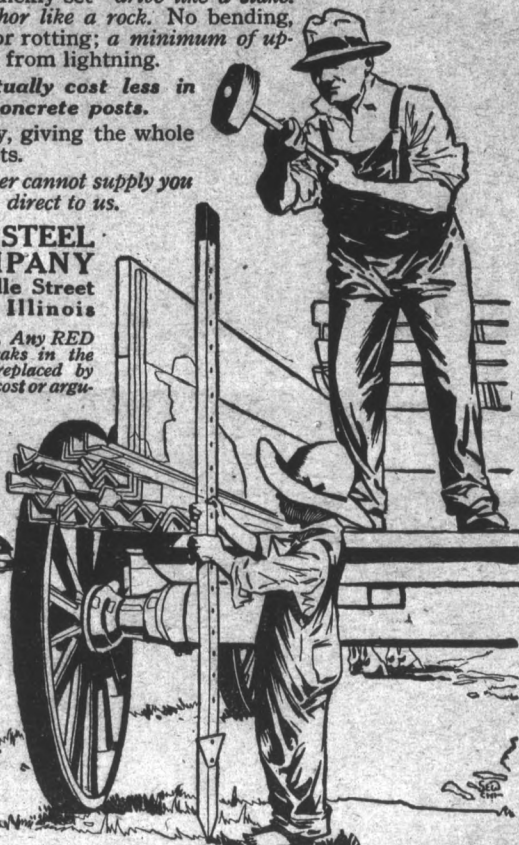
And RED TOPS actually cost less in place than wood or concrete posts.

Send for booklet today, giving the whole story on Red Top Posts.

If at any time your dealer cannot supply you with RED TOPS, write direct to us.

**CHICAGO STEEL
POST COMPANY**
208-L So. La Salle Street
Chicago Illinois

You take no chance. Any RED TOP post that breaks in the fence line will be replaced by your dealer without cost or argument. It is worth remembering that RED TOP is the only guaranteed fence post.



Red Top
GUARANTEED
Steel Fence Posts

The entire food values
of wheat and malted
barley are found in

Grape-Nuts

A food in every sense:
*nourishing, delicious,
economical.*

Easy to digest because
of twenty hours baking.

Ready-to-serve.

\$19.95 Sent on Trial
Upward *American* Cream
SEPARATOR

Thousands in Use

giving splendid satisfaction justifies investigating our wonderful offer: a brand new, well made, easy running, easily cleaned, perfect skimming separator only \$19.95. Skims warm or cold milk closely. Makes thick or thin cream. Different from picture, which illustrates our low priced, Bowl is a sanitary marvel and embodies all our latest improvements. Our Absolute Guarantee Protects You. Besides wonderfully low prices and generous trial terms, our offer includes our—

Easy Monthly Payment Plan

Whether dairy is large or small, do not fail to get our great offer. Our richly illustrated catalog, sent free on request, is a most complete, elaborate and interesting book on cream separators. Western orders filled from Western points. Write today for catalog and see our big money saving proposition.

American Separator Co., Box 1061 Bainbridge, N. Y.



When You Write to Advertisers Please Mention This Paper.

Crooked Trails and Straight

By Wm. MacLeod Raine

At exactly two o'clock Dominguez I've thought of something I'll have to set the Cullisons on the homeward do right away."

road. He fairly dripped apologies for the trouble to which he and his friends had been compelled to put them.

Blackwell, who had arrived to take his turn as guard, stood in the doorway and sulkily watched them go.

From the river bed below the departing guests looked up at the cabin hidden in the pines. The daughter was thanking God in her heart that the affair was ended. The father was vowing to himself that it had just begun.

CHAPTER XII.

An Arrest.

AFTER half a week in the saddle Lieutenant Bucky O'Connor of the Arizona Rangers, and Curly Flandrau reached Saguache tired and travel stained. They had combed the Rincons without having met hide or hair of the men they wanted. Early next morning they would leave town again and this time would make for Soapy Stone's horse ranch.

Bucky O'Connor was not disheartened. Though he was the best man hunter in Arizona, it was all in the day's work that criminals should sometimes elude him. But with Curly the issue was a personal one. He owed Luck Cullison a good deal and his imagination had played over the picture of that moment when he could go to Kate and tell her he had freed her father.

After reaching town the first thing each of them did was to take a bath, the second to get shaved. From the barber shop they went to the best restaurant in Saguache. Curly was still busy with his pie a la mode when Burridge Thomas, United States Land Commissioner for that district, took the seat opposite and told to O'Connor a most interesting piece of news.

They heard him to an end without interruption. Then Curly spoke one word. "Fendrick."

"Yes, sir, Cass Fendrick. Came in about one o'clock and handed me the relinquishment just as I've been telling you."

"Then filed on the claim himself, you said."

"Yes, took it up himself."

"Are you sure the signature to the relinquishment was genuine?"

"I'd take oath to it. As soon as he had gone I got out the original filing and compared the two. Couldn't be any possible mistake. Nobody could have forged the signature. It is Luck himself, strong and forceful and decided."

"We're not entirely surprised, Mr. Thomas," Lieutenant O'Connor told the commissioner. "In point of fact we've been looking for something of the kind."

"Then you know where Luck is?" Thomas, a sociable garrulous soul, leaned forward eagerly.

"No, we don't. But we've a notion Fendrick knows." Bucky gave the government appointee his most blandishing smile. "Of course we know you won't talk about this, Mr. Thomas. Can we depend on your deputies?"

"I'll speak to them."

"We're much obliged to you. This clears up a point that was in doubt to us. By the way, what was the date when the relinquishment was signed?"

"Today."

"And who was the notary that witnessed it?"

"Dominguez. He's a partner of Fendrick in the sheep business."

"Quite a family affair, isn't it. Well, I'll let you know how things come out, Mr. Thomas. You'll be interested to know. Have a cigar."

Bucky arose. "See you later, Curly. Sorry I have to hurry, Mr. Thomas, but

Bucky followed El Molino street to the old plaza and cut across it to the Hotel Wayland. After a sharp scrutiny of the lobby and a nod of recognition to an acquaintance he sauntered to the desk and looked over the register. There, among the arrivals of the day, was the entry he had hoped to find.

Cass Fendrick, C. F. Ranch, Arizona. The room that had been assigned to him was 212.

"Anything you want in particular, Lieutenant?" the clerk asked.

"No-o. Just looking to see who came in today."

He turned away and went up the stairs, ignoring the elevator. On the second floor he found 212. In answer to his knock a voice said "Come in." Opening the door, he stepped in, closed it behind him, and looked at the man lying in his shirt sleeves on the bed.

"Evening, Cass."

Fendrick put down his newspaper but did not rise. "Evening, Bucky."

Their eyes held to each other with the level even gaze of men who recognize a worthy antagonist.

"I've come to ask a question or two."

"Kick them out."

"First, I would like to know what you paid Luck Cullison for his Del Oro claim."

"Thinking of buying me out?" was the ironical retort of the man on the bed.

"Not quite. I've got another reason for wanting to know."

"Then you better ask Cullison. The law says that if a man sells a relinquishment he can't file on another claim. If he surrenders it for nothing he can. Now Luck may have notions of filing on another claim. You can see that we'll have to take it for granted he gave me the claim."

It was so neat an answer and at the same time so complete a one that O'Connor could not help appreciating it. He smiled and tried again.

"We'll put that question in the discard. That paper was signed by Luck today. Where was he when you got it from him?"

"Sure it was signed today? Couldn't it have been ante-dated?"

"You know better than I do. When was it signed?"

Fendrick laughed. He was watching the noted officer of rangers with narrowed wary eyes. "On advice of counsel I decline to answer."

"Sorry, Cass. That leaves me only one thing to do. You're under arrest."

"For what?" demanded the sheepman sharply.

"For abducting Luck Cullison and holding him prisoner without his consent."

Lazily Cass drawled a question. "Are you sure Cullison can't be found?"

"What do you mean?"

"Are you right sure he ain't at home attending to his business?"

"Has he come back?"

"Maybe so. I'm not Luck Cullison's keeper."

Bucky thought he understood. In return for the relinquishment Cullison had been released. Knowing Luck as he did, it was hard for him to see how pressure enough had been brought to bear to move him.

"May I use your 'phone?" he asked.

"Help yourself."

Fendrick pretended to have lost interest. He returned to his newspaper, but his ears were alert to catch what went on over the wires. It was always possible that Cullison might play him false and break the agreement. Cass did not expect this, for the owner of Circle C was a man whose word was

JAN. 31, 1920.

THE MICHIGAN FARMER

19-171

better than most men's bond. But the agreement had been forced upon him through a trick. How far he might feel this justified him in ignoring it the sheepman did not know.

O'Connor got the Circle C on long distance. It was the clear contralto of a woman that answered his "Hello!"

"Is this Miss Cullison?" he asked. Almost at once he added: "O'Connor of the rangers is speaking. I've heard your father is home again. Is that true?"

An interval followed during which the ranger officer was put into the role of a listener. His occasional "Yes—Yes—Yes" punctuated the rapid murmuring that reached Fendrick.

Presently Bucky asked a question. "On his way to town now?"

Again the rapid murmur.

"I'll attend to that, Miss Cullison. I am in Fendrick's room now. Make your mind easy."

Bucky hung up and turned to the sheepman. The latter showed him a face of derision. He had gathered one thing that disquieted him, but he did not intend to let O'Connor know it.

"Well?" he jeered. "Find friend Cullison in tolerable health?"

"I have been talking with his daughter."

"I judged as much. Miss Spitfire well?"

"Miss Cullison didn't mention her health. We were concerned about yours."

"Yes?"

"Cullison is headed for town and his daughter is afraid he is on the war-path against you."

"You don't say?"

"She wanted me to get you out of her father's way until he has cooled down."

"Very kind of her."

"She's right, too. You and Luck mustn't meet yet. Get out of here and hunt cover in the hills for a few days. You know why better than I do."

"How can I when I'm under arrest?" Fendrick mocked.

"You're not under arrest. Miss Cullison says her father has no charge to bring against you."

"Good of him."

"So you can light a shuck as soon as you want to."

"Which won't be in any hurry."

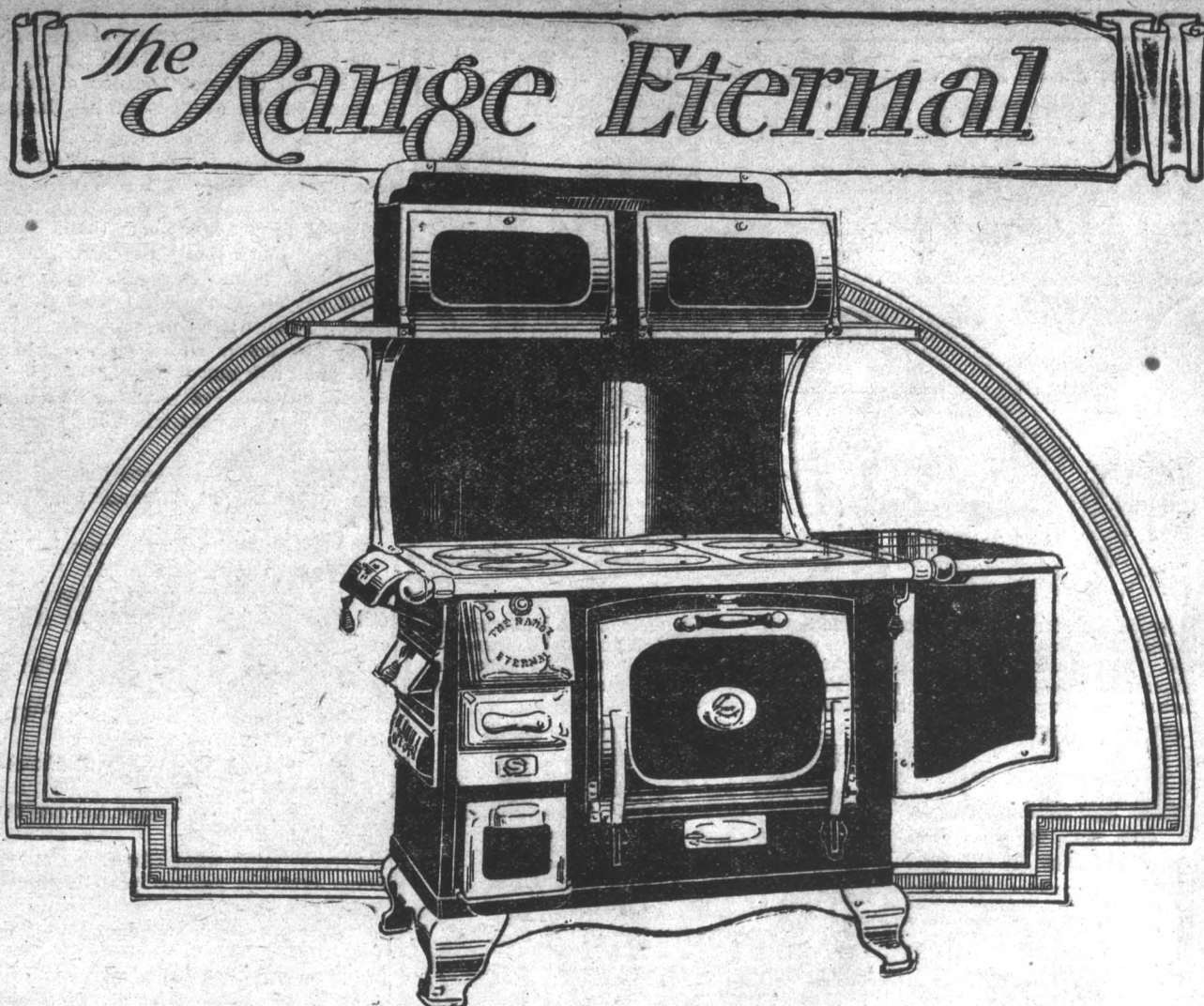
"Don't make any mistake. Luck Cullison is a dangerous man when he is roused."

The sheepman looked at the ranger with opaque stony eyes. "If Luck Cullison is looking for me he is liable to find me, and he won't have to go into the hills to hunt me either."

Bucky understood perfectly. According to the code of the frontier no man could let himself be driven from town by the knowledge that another man was looking for him with a gun. There are in the southwest now many thousands who do not live by the old standard, who are anchored to law and civilization as a protection against primitive passions. But Fendrick was not one of these. He had deliberately gone outside of the law in his feud with the cattleman. Now he would not repudiate the course he had chosen and hedge because of the danger it involved. He was an aspirant to leadership among the tough hard-bitted denizens of the sunbaked desert. That being so, he had to see his feud out to a fighting finish if need be.

"There are points about this case you have overlooked," Bucky told him. "Maybe so. But the important one that sticks out like a sore thumb is that no man living can serve notice on me to get out of town because he is coming on the shoot."

"Luck didn't serve any such notice. All his daughter knows is that he is hot under the collar. Look at things reasonably, Cass. You've caused that young lady a heap of trouble already. Are you going to unload a lot more on



A New Range

*Better—More Economical
and Everlastingly Good*

Ten of thirty-two Points

1. Eternametal Flues
2. Rust Proof Top
3. Full Range Bottom
4. Improved Reservoir Top
5. Hot Blast Fire Box
6. Boiler-plate Steel Doors
7. Smooth Surfaces—easily cleaned
8. Space Saving Strong Tea Shelves
9. Oven Bottom—Back Flue—Triple
10. Space Saving Sanitary Half Back

HERE'S good news. A new Range Eternal. It's a beauty—the most wonderful range you've ever seen. It's so new—so different—so much better than any range you ever thought of—that you'll surely want to own it when you see it. It consumes less fuel, needs less care and does better work. The Range Eternal is the ideal range for any home. See the smooth rounded corners—the swelled doors—the sanitary splasher back—and the other splendid features. You won't find them in any other range.

Eternametal Flues

make this truly the Range Eternal. They won't burn out, nor wear out, nor rust out.

Parker Process Rust Proof Top

No other range has this feature. The top won't rust. It's absolutely rust proof. The Parker Process makes it so. Go to your dealer and see the new Range Eternal. He will be glad to explain every point.

ENGMAN-MATTHEWS RANGE COMPANY

Two Generations of Malleable Range Builders

SOUTH BEND

INDIANA

THE RANGE ETERNAL EVERLASTINGLY GOOD

WHITE SWEDISH SEED OATS

..... ONE OF THE HEAVIEST YIELDING VARIETIES KNOWN

Grain large, white, plump and heavy. Straw strong, stiff and leafy. Get your seed before the rush of Spring work begins. Send for sample and prices.

L. E. CONNELL,

FAYETTE, OHIO

SANITARY CLOSET 895

SPECIAL OFFER. For this month only. Guaranteed satisfactory or your money back. Complete, ready to use, installed anywhere in your home in 15 minutes. No plumbing—no water. Chemicals do the work. **THIS AD WORTH \$1.00** Clip out this ad and send it with your order. It is good for \$1.00 toward the payment of closet. Regular price \$9.95. With ad price is \$8.95. Best offer and lowest price yet. Order direct from this ad. Save \$1.00. Wood-DeLaware & Co., Dept. E, 3845-47 West Madison Street, Chicago.

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. 713 Cincinnati, Ohio.

FREE INFORMATION

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

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

MOLASSES Richest Food Lowest Cost. Write for Special Price. CHICAGO MOLASSES COMPANY, 1131 East 72nd Street, Chicago, Ill.

DICKEY GLAZED TILE SILOS

"The Fruit Jar of the Field"

A Special Discount for Early Orders. Send for catalog No. 9.

W. S. DICKEY CLAY MFG. CO.,
MACOMB, ILL.
Kansas City, Mo. Chattanooga, Tenn.

EVERBEARING STRAWBERRY

Our free Catalog describes and illustrates a full line of choice small fruit plants. **SEND FOR IT**

J. N. ROKELY, B. 6, Bridgman, Mich.

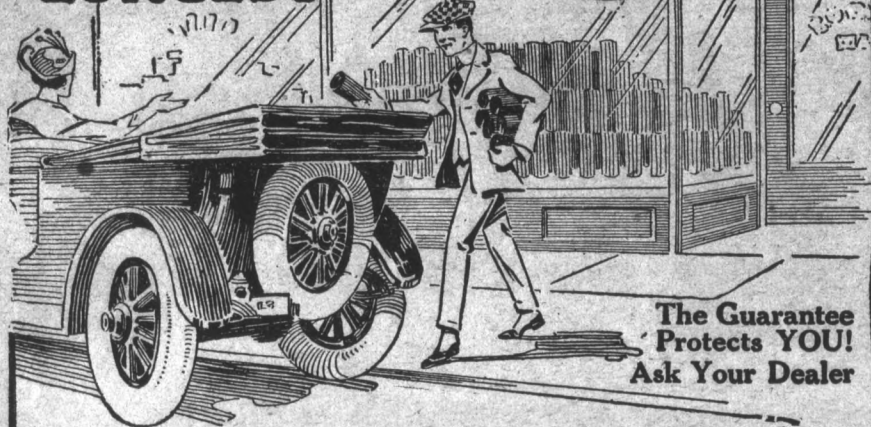
STRAWBERRY PLANTS

24 varieties, \$4.00 per 1000. History and illustrated book gives all details about most vigorous true to nature productive stock now grown. Book free. Mayer's Plant Nursery, Merrill, Michigan.

Strawberry plants, 100 early to late, \$1.00, posts paid. Catalog of plants and trees free. **L. G. TINGLE,** Box 77, PITTSVILLE, MD.

Logs and Lumber Wanted. Poplar and other kinds in car lots only. **HELENA WOODWORKING CO.,** HELENA, OHIO

SPARK STRONGEST LAST LONGEST



Avoid ignition troubles by using Red Seal Dry Batteries. These batteries are in reality convenient storehouses from which electric current can be drawn at will. They furnish fat, hot sparks that spur your tractor or farm engine into action and keep it running at par. Recommended as the most efficient, satisfactory and economical medium of ignition for all purposes. Use

RED SEAL DRY BATTERIES

Under every condition, regardless of weather, and no matter how rough the going, these famous batteries will supply you with reliable farm power at least cost. Thousands of tractor owners will use no other! Absolutely best for tractors, farm engines, autos, door bells, hand lanterns, telephones, etc. Study the label! Insist on genuine Red Seal Dry Batteries.

MANHATTAN ELECTRICAL SUPPLY CO., INC.
118 S. Wells St., Chicago New York—St. Louis—San Francisco
Factories at Jersey City, N. J., and Ravenna, Ohio

Send for This Book, FREE

Send dealer's name and we will forward you, free and postpaid, book—'How to Run the Gas Engine—Simplified,' adopted as text book by State Agricultural Colleges and High Schools. Write for this instructive book today.



BOTH for \$17.25 Freight Paid East of Rockies

You Take No Risk with an Ironclad

Why pay more? For \$17.25 you can get these 2 unbestable machines, set up complete, ready for use, delivered, freight paid east of Rockies. We will send you **Money Back if Not Satisfied**—let you use them 30 days—and if you don't find them satisfactory, send them back—we'll pay the freight charges and return your money. You are absolutely safe.

150-Egg Incubator—150-Chick Brooder Don't clean this big set of Rockies. Ironclad is not covered with cheap, thin metal and painted, like some, to cover up poor quality of material. Ironclad is shipped in the natural color—you can see exactly what you are getting. Made of genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery, hot water heater, COPPER tanks and boiler, self-regulator, Tycos thermometer, glass in door, and many other special advantages fully explained in free catalog. Write for it TODAY or order direct from this advertisement.

IRONCLAD INCUBATOR CO., Box 97, Racine, Wis.

Clean Out the Mites

Give your hens a chance to do their best. Keep the houses, runs and brooders sanitary with a **BROWN'S AUTO-SPRAY**. Use it, too, in the garden and for spraying home fruit trees and doing many other jobs.

Send today for Catalog and Spraying Calendar—free.

THE E. C. BROWN CO.
852 Maple St., Rochester, N. Y.

60 BEST PAYING VARIETIES

Hardy Northern raised Chickens, Ducks, Geese, Turkeys, Pure-bred heavy laying strains, Fowls, Eggs & Incubators all at low prices. 24 years experience. Large new Poultry Book & Guide FREE.

W. A. WEBER, Box 2, Mankato, Minn.

64 BREEDS Most Profitable chickens, ducks, geese and turkeys. Choice pure-bred, northern raised. Fowls, eggs, incubators at low prices. America's greatest poultry farm. 27th year. Valuable new 108 page book and catalog free.

R. F. NEUBERT Co., Box 614 Mankato, Minn.

Chickens Sick?—Use Germozone

Koup, colds, bowel troubles, sore head, limber neck, etc. At dealers or postpaid 75cts. with 5 book Poultry Library.

GEO. H. LEE CO., Dept. F-39, OMAHA, NEB.

POULTRY

DAY OLD CHICKS

New Spring Catalog

The Day Old Chick business is on. We advise you to write for Catalog now, and then order as early as you can.

The most complete descriptive Catalog we have yet published; its instruction will help you.

Thirteen Heavy Breeds, Three Special Egg Breeds.

You will be particularly interested in the extra heavy laying breeds: White Leghorns inspected and certified as heavy producers by the Poultry Extension Specialist of the Agricultural College.

Cockerels and Pullets: Several breeds; see Catalog. We solicit your interest in the Homestead Farms plan of Pure Breed Poultry raising.

STATE FARMS ASSOCIATION
Desk F. Kalamazoo, Mich.

Baby Chicks Bred-to-Lay and Exhibition S. C. W. Leghorns, stock that produced the winners in the state demonstration farm work. Winners at Detroit, Toledo and Oil City, Pa. Shows. \$10.50 per 50, \$20 per 100, \$35 per 500. Safe delivery postage paid. Sunnybrook Poultry Farm, Hillsdale, Mich.

30 DAYS TRIAL Don't Take Any Chances!

Find Out What an Incubator is Made of Before You Buy. We will gladly send you samples of materials we use. Get our Catalog and samples before buying. We give 30 Days—10-Year Guarantee. These two well-made, nationally known machines—

130 Eggs 130 Chicks

Both Freight Paid East of Rockies **Only \$16.25**

Wisconsin are made of genuine California Redwood. Incubators have double walls, air space between, double glass doors, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc., ready to run. Send today for our new 1920 catalog, free and postpaid.

Large Size 180-EGG INCUBATOR AND BROODER, BOTH \$20.00.

WISCONSIN INCUBATOR CO. Box 82, Racine, Wis.

MONEY BACK IF NOT SATISFIED

\$12.95 Buys 140-Egg Champion Belle City Incubator

Prize Winning Model—Hot-Water, Copper Tank, Double Walls, Fibre Board, Self-Regulating, Thermometer Holder, Nursery, With \$7.55 Hot-Water 140-Chick Brooder—Both only \$18.50

Freight Prepaid East of Rockies Towards Express

With this Guaranteed Hatching Outfit and my Guide Book for setting up and operating your success is sure.

My Special Offers provide ways to earn extra money. Save time—Order Now, or write for Free Catalog, "Hatching Facts"—It tells all—Jim Rohan, Pres.

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

DAY OLD CHICKS

Guaranteed to 1,500 miles. Eggs for Hatching. Bar. Rocks, S. C. W. Leg., S. C. & R. C. Reds, W. Wyand., Buff & W. Orp. Catalog free.

COSHEN POULTRY FARMS, R. 19 Coshen, Indiana

her just because you want to be pig-headed. Only a kid struts around and hollers 'Who's afraid?' No, it's up to you to pull out, not because of Luck Cullison but on account of his daughter."

"Who is such a thorough friend of mine," the sheepman added with his sardonic grin.

"What do you care about that? She's a girl. I don't know the facts, but I can guess them. She and Luck will stand pat on what they promised you. Don't you owe her something for that? Seems to me a white man wouldn't make her any more worry."

"It's because I'm a white man that I can't dodge a fight when it's stacked up for me, Bucky."

He said it with a dogged finality that was unshaken, but O'Connor made one more effort.

"Nobody will know why you left."

"I would know, wouldn't I? I've got to go right on living with myself. I tell you straight I'm going to see it out."

Bucky's jaw clamped. "Not if I know it. You're under arrest."

Fendrick sat up in surprise. "What for?" he demanded angrily.

"For robbing the W. & S. Express Company."

"Say, Bucky. You don't believe that do you?"

"Never mind what I believe. There's some evidence against you—enough to justify me."

"You want to get me out of Cullison's way. That's all."

"If you like to put it so."

"I won't stand for it. That ain't square."

"You'll stand for it, my friend. I gave you a chance to clear out and you wouldn't take it."

"I wouldn't because I couldn't. Don't make any mistake about this. I'm not looking for Luck. I'm attending to my business. Arrest him if you want to stop trouble."

There came a knock on the door. It opened to admit Luck Cullison. He shut it and put his back to it, while his eyes, hard as hammered iron, swept past the officer to fix on Fendrick.

The latter rose quickly from the bed, but O'Connor flung him back.

"Don't forget you're my prisoner."

"He's your prisoner, is he?" This was a turn of affairs for which Luck was manifestly unprepared: "Well, I've come to have a little settlement with him."

Fendrick, tense as a coiled spring, watched him warily. "Can't be any too soon to suit me."

Clear cut as a pair of scissors through paper Bucky snapped out his warning. "Nothing stirring, gentlemen. I'll shoot the first man that makes a move."

"Are you in this, Bucky?" asked Cullison evenly.

"You're right I am. He's my prisoner."

"What for?"

"For robbing the W. & S."

Luck's face lit. "Have you evidence enough to cinch him?"

"Not enough yet, but I'll take no chances on his getting away."

The cattleman's countenance reflected his thoughts as his decision hung in the balance. He longed to pay his debt on the spot. But on the other hand he had been a sheriff himself. As an outsider he had no right to interfere between an officer and his captive. Besides, if there was a chance to send Fendrick over the road that would be better than killing. It would clear up his own reputation, to some extent under a cloud.

"All right, Bucky. If the law wants him I'll step aside for the time."

The sheepman laughed in his ironic fashion. His amusement mocked them both. "Most as good as a play of the movies, ain't it? But we'd ought all to have our guns out to make it realistic."

But in his heart he did not jeer. For the situation had been nearer red tragedy than melodrama. The resource and firmness of Bucky O'Connor had alone made it possible to shave disaster by a hair's breadth and no more.

CHAPTER XIII.

A Conversation.

BUCKY O'CONNOR and his prisoner swung down the street side by side and turned in at the headquarters of the rangers. The officer switched on the light, shut the door, and indicated a chair. From his desk he drew a box of cigars. He struck a match and held it for the sheepman before using it himself.

Relaxed in his chair, Fendrick spoke with rather elaborate indolence.

"What's your evidence, Bucky? You can't hold me without any. What have you got that ties me to the W. & S. robbery?"

"Why, that hat play, Cass. You let on you had shot Cullison's hat off his head while he was making his getaway. Come to find out you had his hat in your possession all the time."

"Does that prove I did it myself?"

"Looks funny you happened to be right there while the robbery was taking place and that you had Luck's hat with you."

The sleepy tiger look lay warily in the sheepman's eyes. "That's what the dictionaries call a coincidence, Bucky."

"They may. I'm not sure I do."

"Fact, just the same."

"I've a notion it will take some explaining."

"Confidentially?"

"Confidentially what?"

"The explanation. You won't use it against me?"

"Not if you weren't in the hold-up."

"I wasn't. This is the way it happened. You know Cullison was going to prove up on that Del Oro claim on Thursday. That would have put the C. F. ranch out of business. I knew he was in town and at the Del Mar, but I didn't know where he would be next day. He had me beat. I couldn't see any way out but to eat crow and offer a compromise. I hated it like hell, but it was up to me to hunt Luck up and see what he would do. His hat gave me an excuse to call. So I started out and came round the corner of San Mateo Street just in time to see the robber puff out. Honest, the fellow did shape up a little like Luck. Right then I got the darned fool notion of mixing him up in it. I threw his hat down and shot a hole in it, then unlocked the door of the express office carrying the hat in my hand. That's all there was to it."

"Pretty low-down trick, wasn't it, to play on an innocent man?"

"He was figuring to do me up. I don't say it was exactly on the square, but I was sore at him clear through. I wanted to get him into trouble, I had to do something to keep his mind busy till I could turn round and think of a way out."

Bucky reflected, looking at the long ash on his cigar. "The man that made the raid of the W. & S. shaped up like Luck, you say?"

"In a general way."

The ranger brushed the ash from the end of the cigar into the tray. Then he looked quietly at Fendrick. "Who was the man, Cass?"

"I thought I told you—"

"You did. But you lied. It was a moonlight night. And there's an arc light at that corner. By your own story, the fellow took off his mask as he swung to his horse. You saw his face just as distinctly as I see yours now."

"No, I reckon not," Fendrick said. "Meaning you won't tell?"

"That's not how I put it, Bucky. You are the one that says I recognized him. Come to think of it, I'm not sure the fellow didn't wear his mask till he was out of sight."

(Continued next week.)



Introducing

Wurthmore

TRADE MARK REG.

Brand

Field & Grass Seeds

A New Arrival
Especially Produced
for the Better Farmer
and the Better Farm

WURTHMORE SEEDS are the pick of all seeds, the best that the market affords. Not ordinary, everyday seeds, but seeds of the very highest grade. Through our careful selection and cleaning, they yield more therefore they are worth more. That's why they bear the quality name—"WURTHMORE."

Like high bred cattle—WURTHMORE SEEDS will give best results. Just as sure as thoroughbreds produce thoroughbreds so will these better seeds yield better crops. When you plant legumes you get a further additional profit from the greater soil building strength of these better seeds. They cost but little additional—yet their greater returns are immediately noticeable in quality and quantity of product and soil improvement. It pays to sow the best. WURTHMORE SEEDS are the best.

Under the WURTHMORE label—we have Alfalfa—Clover—Timothy and Sweet Clover. Each variety shows class and tests 99% for purity. Quality considered and returns measured—they are the best seeds in the long run. Select your seeds like you do your live stock. Get the best because the best yields the best. Begin now to "breed up" on your seeds—go in for quality and you'll get greater yields, better production, more profits. Plant WURTHMORE SEEDS this year and you'll sure get more.

Ask for samples of the seed you want. Let us quote prices and tell you about the "WURTHMORE" Guarantee. No charge.

The American Mutual Seed Co.

43rd and Robey Street

Dept. 1231

CHICAGO, ILLINOIS

Sleep Is Sweet

—so if coffee
plays tricks with
your nerves and
breaks your rest
try

INSTANT POSTUM

This economical beverage has a rich coffee-like flavor that truly satisfies.

Made by
Postum Cereal Co. Battle Creek, Mich.
Sold by Grocers and General Stores.

There is REAL ECONOMY in Using

"SALADA"

ORANGE PEKOE TEA

"The Tea of Sterling Worth"

Black, Green, or Mixed—Sealed Packets Only
With PRICES PLAINLY MARKED for Your Protection



Indoor Closet \$10.85

Have a warm, sanitary, odorless toilet in the house anywhere you want it. The Bennett is made of enameled steel with wood seat and lasts a lifetime. Disinfects automatically. Splendid for invalids. Shipped complete ready to operate, all charges prepaid. Satisfaction guaranteed or money back.

BENNETT HOMES
(Equipment Dept.) 435 Main St., N. Tonawanda, N. Y.

A Bargain in Reading Matter

OFFER No. 115.

The Michigan Farmer, one year... \$1.00
American Fruit Grower, one year 1.00
Everybody's Poultry Journal, 1 yr .50
Gleanings in Bee Culture, 1 yr... 1.00

Total value\$3.50
All for \$2.60.

OFFER No. 116.

The Michigan Farmer, one year... \$1.00
Needlecraft, one year50
McCall's Magazine, one year..... 1.00

Total value\$2.50
All for \$1.85.

OFFER No. 117.

The Michigan Farmer, one year... \$1.00
Swine World, one year 1.00
American Sheep Breeder, one year 1.25

Total value\$3.25
All for \$2.25.

Coates Inside Toilet

Only \$17.50 Direct To You

GIVES your home or cottage the coziest modern convenience. Costs less than 5c a week. Catalogue and full information free. Mail this ad and \$17.50. Get a "Coates" on 10 day's trial. Same-day shipments. Money back if not satisfied.

Coates Sanitary Mfg. Co.,
134 S. Division Ave.,
Grand Rapids, Mich.

High-Test Chemical, \$1.50 per Gallon

DIRECT TO YOU

Double the strength of ordinary chemical. 16 charges from each gallon. Works equally well in any style toilet. Guaranteed satisfactory. Address:

SANITARY PRODUCTS CO.,
501 Division Ave. S., Grand Rapids, Mich.

FISH FISH

Fresh Frozen Herring 5c lb. Pickerals 9c. Dressed Bluefish 6½c. Salmon 16c. Yellow Pike 16c. 20 lb. basket Smoked Bluefish at \$2.00. Write for our complete price list Frozen, Salted, Spiced, Smoked and Canned Lake & Ocean Fish.

JOHNSON FISH CO.

Dept. M, Green Bay, Wis.

Woman's Interests

Pass the Stew to Everyone

WHY can't the animal that beef comes from be all steak?" It was a small boy, gorged with porterhouse, who propounded the question. Memories of the stews of yesterday—with their small boy horror—carrots and onions—lingered in his mind and robbed the steak of some of its joys. "That's the trouble with everything," he grumbled on. "When it's chicken you have to eat the neck, and you dasen't eat the inside of the bread and leave the crusts. Every blessed thing you get to eat has something tacked onto it you don't like."

"I'd be glad if it stopped with eats," chimed in his elder brother. "First thing when I saw the snow this morning I was tickled thinking of the fun we'd have coasting, and then right away I thought of the miles of paths we'd have to shovel first."

"When I get big I'm going to have money enough so I'll never have to do anything I don't want to, and I won't eat anything but steaks and soft bread and ice cream," announced the first boy largely.

"Yes, but someone will have to eat the crusts," objected the older boy. "I'm going to have it so there won't be any stews and crusts. Then we'll have just the things we like."

It pretty aptly illustrates the two types of people in the world. One class who want the white meat all the time, without a thought to the folks who lunch off the neck, and another class who'd like to see the good things passed around. So far the second class hasn't made much headway. There have always been the few who grabbed all the "white bread and chicken fix-ins" and left the "brown bread and common doin's" for the folks who were not clever enough—or selfish enough—to grab first. But it begins to look as though there was to be a change. An unusually large number of folks have developed a strong dislike for the

crusts and stews, and are voicing a long suppressed demand for a piece of the steak and mushrooms.

Some want to grab everything they see and in their turn enjoy leisure and soft living, while the former parasites get to work. This may be an ideal condition for the ones who make the change, but it will hardly benefit the rest of it, since it simply substitutes one set of parasites for another, and a set unfitted to rule.

Others have a different aim. They want things evenly distributed so that everyone will have the privilege of going without occasionally and everyone will be given a chance at the good things in turn. Like the second boy, they want to fix it so there won't be any stews and crusts, or else if there must be, they want everyone at the board when the stew is served.

This should be the aim of every true citizen. Not a world without its work and occasional sacrifices but one where we all share alike. Nature has shown us that we are not to expect life to be one long day of ease and soft living. As the small boys figured it out, everything has its drawback. It would be a queer bird that was all breast and drumsticks. So it would be a one-sided life that was just one long holiday of feasting. There have always been the few who have been able to play all their lives, and have lived on the productiveness of others.

We want to change this. We don't want anyone loafing on the job, whether it is the so-called society group, or simply the tramp who begs and steals his way from town to town. It doesn't matter whether it is the idle rich or the idle poor, both are a menace to the hard-working classes in between. Both have the same aim, to get all the white meat without regard to the other fellow, and we won't get much farther along than we are now until we get rid of both classes of parasites.

DEBORAH.

Fighting Constipation

By Emma G. Wallace

I REALLY don't know what is the matter," Father Brown said with a shrug of his shoulders, "but this whole family seems to be headachy and grouchy and out of kilter! What's wrong?"

Mother Brown shook her head despairingly.

"I can't solve the problem," she said, "but everyone of us seems to be frightfully troubled with constipation, and that, too, in spite of coarse breads and molasses cookies and vegetables. Diet should regulate the condition but with us it doesn't seem to. I think I'll talk with the doctor this very day."

And that's how it came that Mrs. Brown was seated in Dr. Tripp's office on a sunny afternoon, explaining that she had come on the part of the whole family.

He questioned her closely and discovered that they rarely ate fruit for breakfast; that the older members of the family had tea or coffee, and the children a cup of cocoa or a glass of milk as a rule.

"It looks to me, Mrs. Brown," the doctor said, "as if the trouble really is with your diet, and I am going to rec-

ommend that each one of you drink a glass of water the first thing on arising in the morning. If you older people can take two glasses, sipped slowly, better yet. Then begin your breakfast with either fresh fruit in season or stewed fruit. Here are some which are especially laxative—rhubarb, figs, dates, prunes, oranges, plums, grapes, peaches and apples. Soak the dried fruits in water and cook in your fireless cooker over night. Give the children a glass of milk except with their noon meal, but always have water on the table too, that they may drink this when they wish.

"You say that you give them coarse breads. Remember that all of the cereals require long, slow cooking—four hours at least for oatmeal. Hasty cooking of say a half an hour, makes a pasty mass which encourages constipation. In the same way, in making coarse breads, either soak or cook the cereals or else steam or bake the bread very slowly, using molasses or brown sugar as sweetening. Half-cooked cereal bread is difficult to digest. Among the laxative foods to use frequently are bran muffins, whole wheat crackers,

gingerbread, honey, onions, spinach, oil-dressed salads, cream, pecan nuts, peanut butter, and vegetables properly prepared.

"It will do no harm for each to eat a couple of nice figs just before retiring, taking these with a glass of water. Then impress upon each the necessity of having a fixed time every day to attend to the body hygiene, so that regular habits may be established. If necessary, to get the system into good shape, take a tablespoonful of plain mineral oil every night for a while. None of this is digested. It simply acts as a body lubricant, and after a few days oils up the machinery so that the system functions properly."

"But oughtn't I to have a prescription?" Mrs. Brown asked.

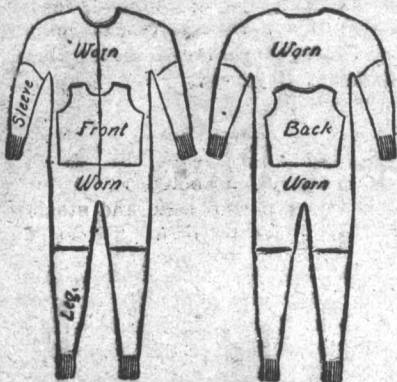
"Yes, I'll tell it to you. You can easily remember it and it won't cost anything either. On the other hand, it will save you money. Here's the prescription:

"RX good common sense, oz. 16.

"Take a tablespoonful three times a day with plenty of water."

KEEPING AFLOAT IN THE H. C. L. BY GERTRUDE K. LAMBERT.

SEVERAL little folk in the family, zero weather, and the smallest size winter-weight union suits one dollar-plus, each. Only a drop in the ocean of H. C. L., but oceans are made up of drops; so a big armful of cast-off grown-up-sizes of knit underwear was brought from the closet and looked over for possibilities. Even the most worn was found to be fairly good below the knees; about the body and the upper sleeves. Below the knees of a grown-up-size suit, makes a to-the-waist of a kiddie-size, so several pairs of little drawers were made by cutting



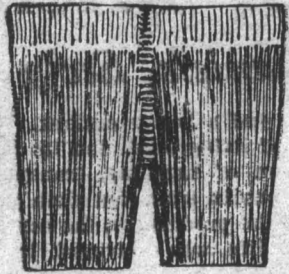
UNION SUITS FOR THE CHILDREN

down the grown-up size legs to a waist-length kiddie-size, just cutting off the tops of the big legs and ripping open the seams far enough down the remaining legs to form the body part of the little drawers, leaving the lower legs—unripped—long enough for the little legs. Pin the tops of the closed seams together for the crotch, and open out flat, the upper or body parts to shape the top, the back two inches higher than the front. Now stitch together the two fronts down to within three or less, inches of the crotch and fell the seam. Take out the pin and behold, a neat little pair of drawers all ready for a waist!

Waists to match were cut from the body parts of the cast-offs; high neck, no under-arm seams, open in backs. The backs were faced with muslin for button-holes and buttons and the necks bound with muslin or tape. Sleeves were cut short and the ribbed tops of half-hose stitched on for cuffs, to fit about the wrists. The top of the front drawer-seam was pinned to the middle of the waist-front bottom, the back edges of waist and drawers pinned even, any fullness of the drawer-top being kept to front and back as the waist and drawers were stitched together and the seam smoothly felled. The results were most satisfactory, and not a cent out unless we reckon the thread used.

Several little knit shirts were also made of the lower parts of knit under-

shirts; these were cut off under the arms, leaving the desired skirt length below, a placket cut and hemmed in the back, and the top gathered to sew to a waist. Waists for these skirts were cut from the best parts of cast-off outing shirts of medium weight cotton and wool, or all cotton, by the same pattern used for the drawer waists, but low-necked and sleeveless, buttoning at the back. Where a border of bright yarn was crocheted around the



"Tights" from Winter-weight Hose.

bottom of the skirt, with feather, or other fancy stitching, of the same yarn above it, the finished garment was all that could be desired by even the most critical kiddie.

As a final triumph in home-manufacture, some little black "tights" were made from cast-off winter-weight long hose. These were cut off at the ankle and the ribbed tops of half-hose stitched on for an ankle finish; the tops were cut down the backs to form the body part, leaving the proper length for the legs uncut; pinned together at the crotch and the two sides, legs, stitched together. The ribbed tops were fastened to elastic tape long enough to slip up over the body.

HOME QUERIES.

Household Editor.—Will you please publish a recipe for marmalade where oranges and carrots are used?—A Subscriber, Belleville.

I have no recipe, nor know of none, where oranges and carrots are used in marmalade. A good marmalade is made from carrots and lemons as follows:

Mock Marmalade.—Three pounds of carrots, three pounds of sugar, six lemons, two ounces of blanched almonds. Boil scraped carrots until tender. Put through meat chopper with almonds and thin rind of lemons. Add sugar, juice of lemons, and cook until thick.

Orange Marmalade.—One dozen oranges, four lemons, four quarts of cold water, eight pounds of granulated sugar. Choose thin-skinned oranges. Wipe and cut fruit fine, peel and all. Add cold water, let stand for thirty-six hours, then boil two hours. Add sugar and boil one and one-half hours. Seal in jelly glasses or pint jars.

REMOVING IODINE STAINS.

MANY a housewife has been perplexed to know what to do with iodine stains. These are most often made by accidentally spilling tincture of iodine on cotton or linen goods, such as clothing, table linen, etc. The cheapest, easiest, and most convenient way to remove such stains, says Prof. Vail, of the Colorado Agricultural College, is to use the sale called sodium hyposulphite or "hypo" by photographers and druggists. Dissolve about one ounce of hypo in about half a pint of water, and immerse the stained portion of the goods in this until the stain disappears. In case of very extensive or numerous stains a larger quantity of hypo solution may be necessary. The fresher the stain, the more readily it is removed. Working the goods about in the solution hastens the action. The colorless substances formed by this chemical reaction are entirely harmless to any fabric, and furthermore are easily rinsed out. The current price of hypo is ten cents per pound.

GREAT CUT-PRICE SALE OF NEW SPRING STYLES

THIS BOOK OF
GUARANTEED
VALUES

SEND A
POSTAL
CARD
FOR IT
AT ONCE

NEW YORK'S
LATEST SPRING STYLES
IN WOMEN'S WEARING APPAREL AT
SPECIAL BARGAIN PRICES

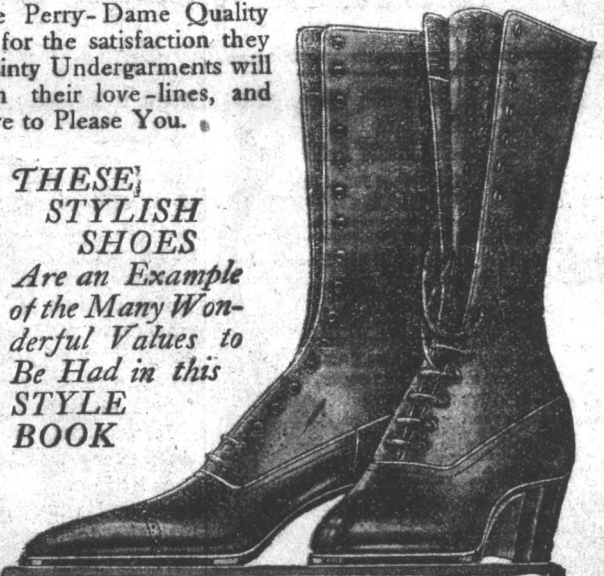
THESE BARGAIN SALE PRICES FOR THE NEWEST SPRING STYLES ARE MADE POSSIBLE BY THE FACT THAT THE PERRY-DAME INTERESTS ARE AMONG THE LARGEST DEALERS IN WOMEN'S WEARING APPAREL IN THE WORLD.

Consequently our Enormous Purchase for Cash Enables us to Offer These Wonderful Values at Unprecedentedly Low Prices to YOU.

Be one of those to profit by this Great Money-Saving Sale of New York's Latest Spring Creations. Send a postcard for this Great Style Book. You will find a Gorgeous Selection of Dresses, Suits, Coats, Skirts, Waists, Millinery—All splendid in Design, Rich in Materials, and Exceptionally Well Made. The Perry-Dame Quality Shoes are Famous for the satisfaction they give, while the Dainty Undergarments will Delight You with their love-lines, and Our Prices Are Sure to Please You.

A book of **THESE**
Wonders filled **STYLISH**
With Extraor- **SHOES**
inary Values *Are an Example*
at **PRICES** *of the Many Won-*
GUARAN- *derful Values to*
TEED TO BE *Be Had in this*
BOOK

THE LOW-
EST in the
Country. Send
for It Today—
It Is Free.



THE "PEDESTRIENNE" 6W439
A high cut, exceedingly comfortable walking boot. Made of serviceable, soft Black Cabaretta Kid Leather. Built on the smart "College" last with sensible military heel. Medium weight sole. An altogether satisfactory boot in which style, comfort and service have been successfully combined.
The Greatest Shoe Value Offered Anywhere.
SIZES: 2½ to 8.
WIDTHS: C, D and E. **\$3.79**

Remember—Satisfaction Guaranteed, or Your Money Back

PERRY, DAME & CO.
150 EAST THIRTY-SECOND STREET—DEPT. J
NEW YORK CITY

Burpee's Seeds Grow



BURPEE'S ANNUAL
THE LEADING AMERICAN SEED CATALOG
Burpee's Annual is a complete guide to the vegetable and flower garden. It fully describes the Burpee Quality Seeds, with a hundred of the finest vegetables and flowers illustrated in the colors of nature. If you are interested in gardening, Burpee's Annual will be mailed to you free. Write for your copy today.

W. ATLEE BURPEE CO., Seed Growers, Philadelphia

Test Your Own Soil
FREE Test Papers
Learn if you are trying to grow crops in sour soil. We will send you Free Litmus Test Papers that tell.

Sour soil needs lime. Clover, alfalfa and other legumes that put plant food in soil won't grow unless soil is sweet. Sweeten your soil with the

HOLDEN
Lime and Phosphate Distributor

TEN DAYS FREE TRIAL

Try out the "HOLDEN" for 10 Days. See how it spreads evenly, 16½ feet wide, TWICE AS FAR as any other. Attach the "HOLDEN" in few minutes to any wagon. Load your wagon at cars with wet or dry material. Adjust to spread any amount from 100 lbs. to 10,000 lbs. per acre. You need handle material ONLY ONCE.

Send Your Name

Let us mail you the FREE SOIL TEST PAPERS together with literature, prices and 10 Day Trial Offer on the "HOLDEN." Write us a postal today.

The HOLDEN CO., Inc.
Dept. 9 Peoria, Ill.

SEEDS
Reliable and Full of Life
SPECIAL OFFER
Made to build New Business. A trial will make you our permanent customer.

PRIZE COLLECTION Radish, 12 Varieties, worth 15¢; Lettuce, 12 kinds, worth 15¢; Tomatoes, 12 the finest, worth 20¢; Turnips, 7 splendid, worth 10¢; Onions, 5 best varieties, worth 15¢; 10 Spring Flowering Bulbs, worth 25¢. 65 varieties in all; worth \$1.

GUARANTEED TO PLEASE
Write today; mention this paper.

SEND 10 CENTS
to cover postage and packing and receive this valuable collection of seeds, postpaid, together with my big instructive, beautiful Seed and Plant Book, tells all about Buckbee's "Full of Life" Seeds, Plants, etc.

H.W. BUCKBEE
Rockford Seed Farms
Farm 42 Rockford, Ill.

LET US TAN YOUR HIDE.

Horse or Cow hide. Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. Your fur goods will cost you less than to buy them and be worth more.

Our illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call our Fashion Book, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also fur garments remodeled and repaired.

You can have either book by sending your correct address naming which, or both books if you need both. Address

The Crosby Frisian Fur Company,
571 Lyell Ave., Rochester, N. Y.

Our Boys' and Girls' Department

A Message to the Farm Boys and Girls of Michigan

By Josephus Daniels, Sec'y of the Navy

The trend to the city in the days when farm products were low has caused some people to forget that the bulk of young people still live away from the great centers of population. With prices for agricultural products at or near the cost of production the exodus to city life was natural and American. It is not characteristic of ambitious American youths to be satisfied with mere existence. They wish to better their condition and go forward. The slogan, "Back to the Farm," had no music or response while farming was unprofitable.

The complaint of the high cost of living sometimes finds a demand that as the first step the cost of wheat and corn and cotton and tobacco shall be reduced to pre-war times. I hope never to live to see that day. Farmers, like city folks, have passed the point where they will be satisfied with "a living wage," a phrase much in vogue some years ago. Nobody who labors industriously and efficiently should be satisfied with a living wage. They are entitled to a living wage or return and then some. Comforts should be the reward of capable performance on the farm, in factory and everywhere, with something to lay by for a rainy day or for old age.

The youths on the farm today see a

better day and a better outlook. The high cost of living must find its relief in reduction of handling, transportation, and profits from the time products leave the producer to the consumer. Farm life was universal in the early America. Let the rising generations preserve the simple virtues and

Sincerely yours,
JOSEPHUS DANIELS.



We owe much of our Success in the Great War to the Wonderful Efficiency of our Navy under Secretary Daniels. The Photo shows Mr. and Mrs. Daniels at the christening of United States' Greatest Drydock.

When Boys and Girls Have a Plan

By E. L. Vincent

ON a summer day when we young folks were out in the field, I turned up a flat stone quite by chance, but from what we saw there we gathered one of the finest lessons in life we ever had. What a commotion there was for a time among the little folks we call the ants! It may be you have had the same experience. If you have, you know how the ants instantly began to hustle for dear life. Here and there, some one way, some another, they ran, and at first it did not seem as if there were any purpose in their hurrying. But as we watched we could not help seeing that nothing was done without a plan. Was somebody directing, or did they each know what was to be done and set themselves about it?

It was not long before we noticed that every ant had picked up one of the little egg-shaped things we call eggs and was carrying it away down into the deep recesses of the earth for safe keeping. That seemed to be the very first thing they thought of, if indeed they do think, and if they do not how is it they know how to do so many things and do them so well? It was only a few minutes until every egg was out of sight, the ants themselves had plunged away down out of sight and the little city which had been so disturbed had regained its quiet. And here are some of the things we learned that day, and which we never will forget.

In the first place, everything that is worth doing is worth planning for. Somehow those ants were working, not at haphazard, but strictly according to a fixed plan. I asked a boy once what he was going to be when he grew

up. "Oh, I don't know. Guess I'll have to wait and see." Another lad had his mind all made up. Quick as a wink he said, "I'm going to be a farmer, like my father." All the difference in the world, you see, between the boy who had no plan and the one who knew just what he wanted to do. You do not need to guess many times to think which of those lads will make his mark in the world. Because things do not turn up in this world; we have to turn them up.

Speaking to a man who has done a great many good things in the course of his lifetime, he told me that he never knew the time when he did not know just what he wanted to do for a life work. "I just felt," he said, "that I must do that one thing, or I never would be happy." His whole life was bent upon that one object and he won out.

And then, here is another lesson we



may gain from the little folks of the anthill. They do not stop long to mourn about losses. It was a serious thing for them to have the home they had been so long in building all torn to pieces. But they started right in without a moment's delay to build it up again and make good the loss. Some boys are terribly hurt if their plans come to grief. They scold and pout and fret about it, as if everything had come to nothing. No way to do, boys and girls. Every loss can be made good. The only thing is to have the will and the gumption to get right at it and repair the damage. In a little while you will wonder why you grieved at all.

Still another lesson from the anthill. They all worked together. So far as we could see there was no stepping on each other's toes. Each had his particular work to do and he went at it, apparently acting in perfect harmony with all the rest of the ants of that pretty meadow home. And this is greatly worth while. One of the great sources of trouble in this world is that men do not work together for the accomplishment of a given end. We are learning to do this better than we did in the early days. Men are more and more organizing. Some folks think the farmers have been the most slow of anybody in this respect, but even the farmers are now getting their shoulders together to lift at the heavy loads they have to bear. It will be more and more so.

This is how we may do still better, however. We need to learn to consult with each other and all work after some real definite plan for the best good of all the world. Some day the

men in the steel mills, the men and women of the factories and the farmers, the consumers and the producers will work together earnestly and without quarreling, to bring about the great things that need to be done, so that all may be as happy as possible.

Here, then, are our lessons from the ants: First a plan, then courage in the face of difficulties, and finally united effort.

A BOY'S LIKES AND DISLIKES—UNFAIRNESS.

A BOY has his likes and dislikes, and he has them hard. Why, a boy without his likes and dislikes would be a human chameleon, he would change color every time he associated with a different boy or bunch of boys—what the fellows were, he would be.

A boy has an instinctive dislike for unfairness. If a boy likes unfairness it is not a natural taste; it has to be learned by troublesome lessons while he is having an awful time to still his conscience as it seems to shout at him, "It isn't fair! It isn't fair!" It is an acquired taste, like the taste for bitter beer.

Every drop of blood in the veins of a boy naturally rebels against trickery, deceit and unfairness. My boy, you can grow up to be tricky, unfair, dishonest, but the Lord knows that you will have a hard time doing it. There is one thing that has more lives than a cat, and that this is the conscience of a boy. Just as a boy thinks he has a strangle hold on his conscience it awakes and performs more stunts than a crack aviator.

Fairness appeals to a boy with irresistible power. My good father's fairness never seemed to fail. I was never punished unjustly or hastily. On the old farm there were always tasks that seemed to be beckoning to father, and saying, "Me next!" To me they seemed to say, "Watch out! I will get you yet!"

But father was always fair when he set me a task, he never expected a boy to do two days' work in one day. This reminds me of the story of the father who was accustomed to lay out big stunts of work for his three boys whenever he was absent for a day. This is the story:

One day the old farmer went to town. Before leaving he laid out a big day's work for the boys. Just for fun one of the boys said: "Dad, what shall we do when that work is all done?" If dad had said: "Do, why, go fishing, of course," the boys would have said: "Dad's all right!" No, he said: "Well, boys you can hoe that patch o' corn next to the old pasture."

The boys winked at each other and said: "Well, what shall we do next, dad?"

Dad began to suspect that his boys were incipient humorists. Dad could also be humorous when opportunity smiled upon him. He would show these boys a thing or two. So he quickly added a nice bunch of extra tasks, and said: "Now, boys, when all those jobs are finished you can saw up the wagon and split the tongue into kindling wood."

Dad went away, chuckling to himself, but when he returned the tasks were all done and the wagon tongue had been reduced to kindling. The temptation had been too great and the boys had nearly worked themselves to death to get the best of dad. I expect that dad did a lot of thinking while he was using that expensive kindling. But you do not have that kind of a dad. He is fair with you; are you fair with him? Shun unfairness as you would the small pox; it would pit your life as small pox does your face. Unfairness in work, play, studies—unfairness in anything. Take no tricky thoughts and unfair plans to bed with you—why be a bed-warmer for evil?

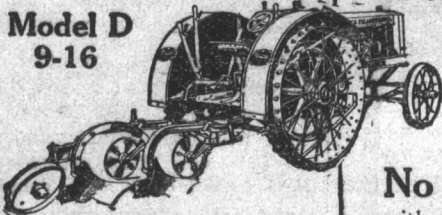
Heider

Twelve Years Actual Field Work

Think of the assurance of service you have in the fact that America's leading power farmers have used the Heider on their farms for 12 years. Many of the original Heiders are in faithful use today. You do not have to take one or two days' "demonstration" as proof.

No Gears to Strip! That means saving wear, trouble and expense. Heider Friction Drive does away with clutch, transmission gears and bevel gears. All three units are in one. Power ordinarily used up by these parts is put into drawbar pull or belt work. Steady, resistless power under perfect control. Seven speeds forward, seven reverse, for traction or belt with one motor speed and one lever.

Two sizes, 12-20 and 9-16. Write for catalog of Heider Tractors and Rock Island Tractor Tools.



Model D
9-16

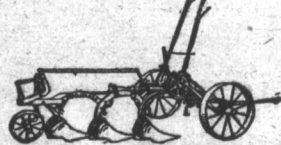
Rock Island One-Man Outfits

Heider Model D 9-16 with No. 9 Rock Island CTX two-bottom Power Lift Plow directly attached. To the right, Heider Model C 12-20 with Rock Island No. 19 CTX two-three bottom Power Lift Plow. Foot-lever control. Automatic power lift.



Close-up levers. One man easily operates both tractor and disc. Extra high clearance. Two sizes. 8 and 10 feet cut. Solid or cut out discs.

Rock Island No. 12 Tractor Plow



Successful behind any tractor. Front furrow wheel lift equipped with 2, 3 or 4 Rock Island CTX bottoms that turn the furrow slice clear over, pulverizing soil and preventing air spaces.

Quick Detachable Shares

Rock Island Plow Co.

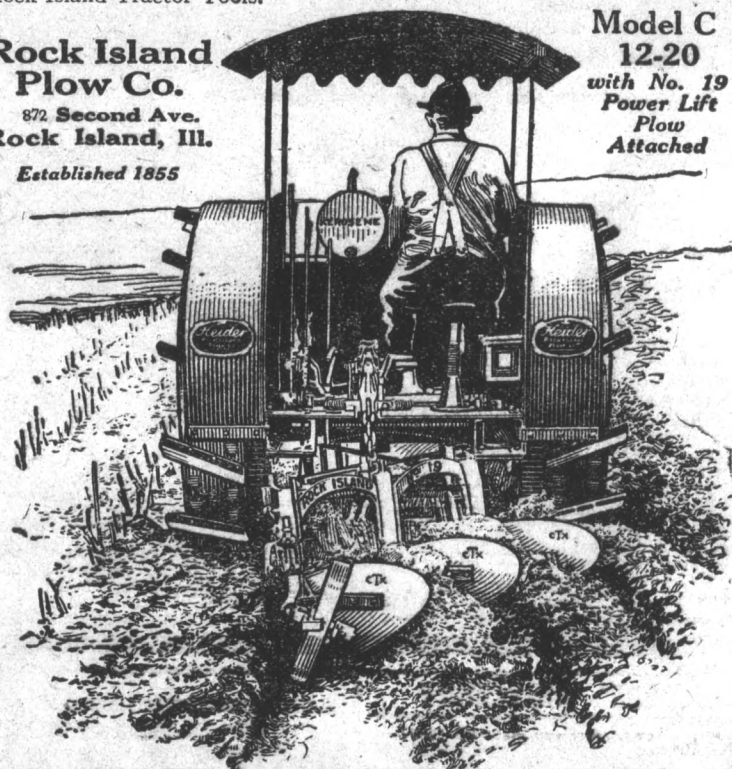
872 Second Ave.
Rock Island, Ill.

Established 1855

Model C

12-20

with No. 19
Power Lift
Plow
Attached



Ring Neck Pheasants

THOROUGHBREDS PAY

Lay 40 to 50 eggs each per year—Raised as easily as chickens—Only eat half as much—Very profitable—Bring \$2.00 per pound alive.

Genuine Wild Mallard Ducks

Lay 50 to 60 eggs per year—Guaranteed to be only from Wild Trapped Mallards.

Giant Bronze Turkeys

Prize Flock, headed by 55 pound tom.

S. C. R. I. Red Chickens

Fine laying strain of prize birds.

Send for Free Illustrated Booklet and Price List of Eggs.



Bloomfield Farms
America's Largest Game Farm
1778 Penobscot Bldg.
Detroit, Mich.

ANCONAS Now is the time to place your order for HATCHING EGGS Write for prices C. & M. WHITTIER Hand Station, Michigan ANCONAS Eggs

S. C. Anconas and S. C. White and Brown Leghorn chicks at 1919 prices. Catalog free. April hatched Ancona pullets, M. D. Wyngarden, R. 4, Zeeland, Mich.

Barred Rocks. Choice Cockerel and pullets from pure bred quick maturing heavy laying strain. Cockerel \$4.00 to \$6.00, Pullets \$3.00 to \$5.00, Pens \$15.00 to \$25.00. H. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

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

BABY CHICKS S. C. White Leghorns \$20.00 per 100, eggs \$2.00 per 100. Order early. Hillside Poultry Farm, Hillsdale, Mich.

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

Baby Chicks 100,000 Barron Strains, also S. C. Brown Leghorns and Barred Rocks for early delivery, cat. free. Knolls Hatchery, R. 3, Holland, Mich.

Baby Chicks J. O. W. and Brown Leghorns, and S. C. Anconas. Healthy, vigorous, and from a good laying strain. We guarantee safe delivery. Order now. Seventh season. Send for price list. City Limits Hatchery and Poultry Yard, R. 5, Holland, Mich.

Buff Leghorn and White Leghorn Cockerels, from 200 egg strains. Booking orders for eggs and chicks. DR. WILLIAM SMITH, Petersburg, Mich.

Barred Plymouth Rock Cockerels, large, from prize-winning laying strain. \$5.00 each. J. A. BARNUM, Union City, Mich.

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

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

CHICKS CHICKS

12,000 chicks a week after Mar. 30. Grand laying strains utility S. C. White Leghorns and Mottled Anconas. Strong, sturdy chicks shipped everywhere parcel post guaranteed safe arrival in lots 25; 50; 100 or more. 12th season, order now. Fine free catalogue. W. VAN APPELDORN, R. 7, Holland, Mich.

COCKERELS: Rose and Single Comb R. I. Reds. Bred for color and eggs. \$3.50 and \$5 each. Satisfaction guaranteed. CHICKS. Rose and Single Comb R. I. Reds Barred Plymouth Rocks. Prepaid by parcel post and safe delivery guaranteed. Write for free illustrated catalog. INTERLAKES FARM, Box 39, Lawrence, Mich.

CHICKS We have shipped thousands each season since 1904. Are booking orders now for Spring delivery, booklet and testimonials. FREEPORT HATCHERY, Box 12, Freeport, Mich.

Chicks Leghorns, Minorcas, Spanish, Houdans, Campines, Reds, Rocks, Orpingtons, Bra-mas, Wyandottes, Tyrone Poultry Farm, Fenton, Mich.

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

DANGER If chicks and eggs are not shipped right **Chix 15c Up** 100,000 Chix this season. Best Blooded stock ever produced at low prices quoted. Selected Utility, Exhibition trapped stock. 16 varieties. Hatching eggs. Hens, Ducks, Turkeys, Geese. Book your orders early. Avoid disappointment. Stamps appreciated. Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

FOR SALE, an extra fine pen of pure bred R. O. Golden Wyandotte cockerels, from prize winning laying strain, \$5 each. George A. McFate, Horton, Mich.

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

John's Big beautiful Barred Rocks are hen hatched grow quick, good layers, sold on approval, males \$4 to \$5. Circulars photos. John Northon, Clare, Mich.

LOOK: BABY CHICKS AND DUCKS 10 breeds of chicks, 4 breeds of ducks. Utility and Exhibition grades. Postage paid and live delivery guaranteed. Capacity 100,000 weekly Catalog free. Stamps appreciated. NABOB HATCHERIES, Gambier, Ohio.

R. C. Br. Leghorn Hens and unrelated Cockerels. Mrs. CLAUDIA BETTS, Hillsdale, Mich.

S. C. R. I. Reds. Choice cockerel and pullets from pure bred quick maturing heavy laying strain. Cockerels \$4.00 to \$6.00, Pullets \$3.00 to \$5.00, Pens \$15.00 to \$25.00. H. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

S. C. R. I. Reds (only) 15 chix, 3 cocks, a few pullets and trios. Aristocrat Strain. Heavy layers. Can sell you "High class stock at a REASONABLE price." Satisfaction or money back. BABCOCK & SON, R. 6, Battle Creek, Mich.

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

S. C. W. Leghorn cockerels, egg record sires 283, dams 230 to 264, weight 4 to 5 lbs. Price \$2.50 and \$3.00. Loren B. Frank, Rochester, Mich.

White Wyandottes Choice cockerels and pullets from pure bred quick maturing heavy laying strain. Cockerels \$4.00 to \$6.00, Pullets \$3.00 to \$5.00, Pens \$15.00 to \$25.00. H. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

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

White Rocks. Choice Cockerel and pullets from pure bred quick maturing heavy laying strain. Cockerel \$4.00 to \$6.00, Pullets \$3.00 to \$5.00, Pens \$15.00 to \$25.00. H. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

White Wyandotte: out of choice stock for sale; cock, cockerels \$3.50 each, send for my circular. DAVID RAY, Ypsilanti, Mich.

White Leghorns, Brown Leghorns, Ancona chicks \$15 per 100. Live arrival guaranteed. Eggs of all varieties. Catalog free. Triangle, Clinton, Mo.

Natco Dairy Barns Are Warm in Winter

NATCO barns are warm in winter, yet cool in summer. They provide year-round comfort for your cows. More comfort in the stable means more milk in the pail—more money in the bank.

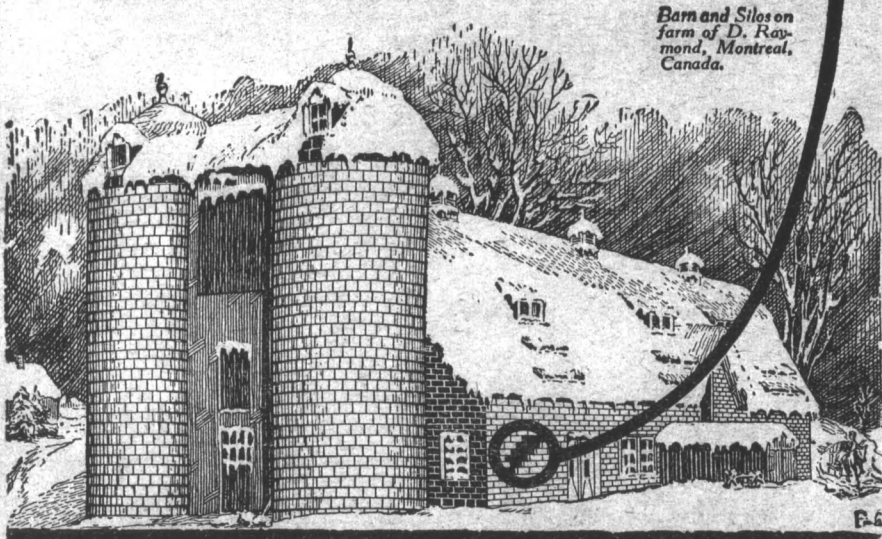
The hollow spaces in a glazed Natco Hollow Tile wall provide a blanket of still air through which heat, cold or dampness will not pass.

And the cost? Perhaps a little more at first, but far less in the end than for other construction. The saving in insurance and upkeep will repay the added investment within a few years. All further savings are clear profit.

Whatever you intend to build, our book, "Natco on the Farm," will offer helpful suggestions. Write for it today—no charge.

Ask your building supply dealer to quote you prices on Natco Hollow Tile.

National Fire Proofing Company
1302 Fulton Building
Pittsburgh, Pa.
23 Factories assure a wide and economical distribution.



Section of Natco Wall showing still air spaces.

Barn and Silos on farm of D. Raymond, Montreal, Canada.

Breeding for the Future

(Continued from page 159).

economically. They name the food supply first, then equipment, then cows and last care and management. Get the soil in condition to grow grasses, clovers and grain crops. Lime may be needed to make the soil grow these crops. Save and apply all of the manure. Buy phosphorus in its cheaper forms and use it liberally with the manures. The manures and organic matter plowed under will liberate sufficient potassium for years to come.

Every dollar, every effort, employed in getting the land in shape to produce large crops of grass, forage and grain feeds will yield a large and compounding interest. The returns from systems which give such results are, in some instances, obtained rather slowly at the outset, but they multiply with the progress of the work. Any farmer open to conviction can be shown to his entire satisfaction that his net profits can be largely increased by improving his soil. Within a few years soils that have yielded scant crops can be restored to full productive vigor. Any man who sets about it intelligently can build up the productivity of his land to a point beyond its virgin condition. Soils that have been properly handled and fed are richer, so far as crop production is concerned, than they were before the plow touched them. To feed his soil and adopt a proper rotation of crops should be every dairy farmer's foremost object. His largest returns lie in the direction of producing a maximum of dairy products per acre. The path is clear; the experience of others stands as a guide to direct him.

As one travels among dairy farmers in different parts of the country he is greatly impressed with the fact that much of the money spent for improvements has been wasted in doing things that are only temporary, that must be done over and over again. Dairy farmers are constantly repairing buildings and fences, building new walls and new foundations, patching leaking roofs and mending broken gates. The tax of maintenance on the farm is too large and now is the time to begin to correct this evil. For the sake of the remaining years on the old farm, for the sake of the boys that will come after us, let us not look at things so cheaply, and build more for permanence, so far as we are able. Concrete makes substantial foundations and floors. It makes cheap walls for the lower stories of dairy barns and out houses. Concrete corner posts and gate posts should last a hundred years. A tile or slate roof will last for many years. Let us begin to add to our farms an equipment that is adequate, useful and that needs only a small outlay each year to keep it in repair.

Let us not look cheaply at the dairy cow. Among the most worthy achievements of the breeder's art she stands, the admiration of every human being who appreciates the combination of beauty and utility. The archives of breeding hold no more fascinating entries than those which record the evolution of the modern breeds of dairy cattle. The Channel Islands have produced the Guernsey and Jersey breeds, famous for the richness of their milk. The dyke-hemmed Hollanders have sent over to us the large black and white Holstein-Friesians, the greatest milk producers in the world. Scotland has given us the flashy Ayrshires with their udders of perfect conformation and their rugged and strong constitution. Though developed under widely different environment and slightly different ideals, these cattle possess a striking and well defined relation between form and function. It shows that the breeders of dairy cattle in three countries and working with the four different breeds were all working

toward the same general ideals.

Breeders surely have done their part. It has remained—it yet remains in large part—for the dairy farmers to avail themselves of the good blood which is within their reach. Years ago good blood was not at hand, but for the past decade or more an abundance of improving blood has been available, and if the two-hundred pound butter cow still has a more prominent place on our farms than the three-hundred-pound butter cow, it is because we are "looking at things cheaply."

Let us not look cheaply at things that add to the joy of living on a farm. Life is primarily for living. It is not a wasted dollar that is spent for things that contribute to the comfort and pleasure of living. Is it not more than probable that with the "living" on a dairy farm developed to near what it ought to be we would feel so much more heart for the farm work that we would make more money from the farm? There is another thought here; our families, the ones in our care. It is a great opportunity, is it not, to make the home and surroundings what they ought to be for the wife and the children she has borne? The time has come when we in America should begin moving in and taking possession of our own opportunities. The opportunity for a satisfied and contented country life lies within a hundred feet of many of you who read these lines. While not neglecting the fields and herds, while continuing to strive to make the farm pay, let us consider first of all the "living" on the farm. Why look at life on a dairy farm so cheaply?

CHEAP DITCHING IN NEWAYGO COUNTY.

A FEW days ago while attending to some business matters near Grant, Michigan, I was told of a man who was doing some rather extraordinary good ditching. Having always been more or less interested in drainage, I went out to the farm of Mr. Albert Hyma.

Mr. Hyma had a considerable area of fine muck land that was covered with a foot or two of water. He investigated the various methods of draining well known in this state and became interested in the use of dynamite for the work. In fact, it was about the only method that promised results due to the amount of water on the soil. After getting some information in regard to the use of the explosive which he had thought to be very dangerous he found that it could be handled with safety so secured a supply and began trying various loadings until he had gotten the proper results.

The ditch is to be three hundred feet long and is only partly completed due to the fact that Mr. Hyma had not gotten his last order of dynamite on the ground.

The section that was already shot was from six to eight feet wide at the top and averaged about four feet in depth. The ditch being clean and straight, without the use of shovel or scrapers.

The propagated method was used, that is, a line of holes were punched to a depth of three and a half or four feet and each loaded with one stick of sixty per cent straight nitro-glycerin dynamite, that is, one-half pound to the hole. The holes were placed about eighteen to twenty-four inches apart. A cap and fuse in one hole fired the entire section.

Mr. Hyma was extremely well pleased at not only the excellence of the work performed but also fully convinced that he had a good ditch at small cost. I am going to try this method out at the earliest opportunity.—D. K.

BREEDERS' DIRECTORY

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

Wildwood Farms Angus

Bulls in service are, Black Monarch 3rd, Grand Champion Bull, Michigan State Fair 1914, 1915, 1916.

Imp. Edgar of Dalmeny, Grand Champion Bull, Michigan State Fair 1918.

President Wilson 4th, Grand Champion Bull, Michigan State Fair, 1919.

We offer for sale 6 choice young bulls by Black Monarch 3rd.

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

A visit will interest you, write for particulars to

WILDWOOD FARMS ORION, MICHIGAN

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

WOODCOTE AUGUS

1919 Winnings to Date
Mich. State Fair 12 1sts 2 cham. 1 gd. ch.
N. Y. " 9 " 2 " 1 " "
West Mich. " 11 " 2 " 2 " "
Saginaw " 10 " 4 " 2 " "
International—2 firsts including the undefeated calf herd for 1919.
Every Animal Bred At
WOODCOTE STOCK FARM, Ionia, Mich.

Registered Aberdeen-Angus. Seven bulls from size, best of breeding. Prices reasonable. Come and see them. Inquire F. J. WILBER, Ohio, Mich.

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

For sale at reasonable prices, several Aberdeen Angus bull calves and yearling bulls sired by Lord Ida 2nd No. 246330. Lang Bros., Davison, Mich.

For Sale Pure Breed Aberdeen (Angus) Cattle. Males and Females of different ages. Andrew Eitel, Vermontville, 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



Butter Fat at Lower Cost Per Lb.
No other breed can produce rich golden butter fat as cheaply as the

Guernsey. Official yearly records show—one cow has given 24,008 lbs milk and 1,098 lbs butter fat. Write for our free booklets. The American Guernsey Cattle Club, Box 140, Peterboro, N. H.



GUERNSEY BULLS FOR SALE

Atta Boy of Maple Crest born April 1919, Sire Imp. Spotswood Sequel A. R. 19 A. R. daughters Dam imp. Albinia price \$175.00. Pride's May King of Avondale born June 1919 Sire Nora's May King of Bailey Falls dam Queens Pride of Harriton A. R. price \$150.00.

Avondale Farms, Wayne, Mich.

GUERNSEYS

Two fine bull calves for sale, by our A. R. May Rose Herd Sire. Priced to sell. Send for pedigree and description. GILMORE BROTHERS, Camden, Mich.

Registered Guernseys

A nicely marked four months old bull calf. F. E. ROBSON, Room 307, M. C. R. R. Depot Building, Detroit, Michigan.

REG. GUERNSEY'S

The best of breeding—at prices you will pay—for good bulls—and bull calves—we can't beat the best. J. W. WILLIAMS, No. Adams, Mich.

GUERNSEYS Reg. bull calves, 6 mos. old, at \$75 each. Write your requirements. Walter Phipps Farms, 80 Alfred St., Detroit, Mich.

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

For Sale Yearling Guernsey Bull for \$100. No better animal in Michigan at this price. LOREN DYGHET, R. F. D. No. 3, Alto, Mich.

3 Registered Guernsey bull calves, 1 to 10 months old. Priced to sell. GEO. W. REEVES, R. R. No. 7, Grand Rapids, Mich.

For Sale Registered Guernsey Bull calves, sired by Starlight of Bonayre 53061, undefeated bull, John Ebels, R. 2, Holland, Mich. yet cheap.

JAN. 31, 1920.

THE MICHIGAN FARMER

27-179



Harvesting the Ice Crop

EACH year dairymen lose thousands of dollars from returned sour milk, poor butter, and low-quality cheese. These losses are very largely due to improper cooling of the milk and cream on the farm. For good results milk and cream should be cooled to fifty degrees or lower and held there; and as this usually can best be done by the use of ice, dairymen should take advantage of any near-by lake or stream to obtain a supply of ice for next year.

Ice Costs Little.

The ice-harvesting season fortunately comes at a time when there is the least work on the farm for men and teams, and consequently the actual money cost is usually not very great.

The quantity of ice needed depends upon the location of the farm—whether in the north or in the south, the number of cows milked, and the method of handling the product. In northern states it has been found that, with a moderately good ice house, one-half of a ton of ice per cow is sufficient to cool cream and hold it at a low temperature for delivery two or three times a week. One and one-half to two tons per cow should be provided where milk is to be cooled.

Capacity of Ice Houses.

A cubic foot of ice weighs about fifty-seven pounds, so in storing it is customary to allow from forty to fifty cubic feet per ton for the mass of ice. At least twelve inches must be left between the ice and the wall of the building for insulation, unless the ice house has permanently insulated walls and an unusually large space for insulation beneath and above the ice. From these figures it is possible to calculate readily the quantity of ice that any given ice house will hold.

Where a lake, pond, or stream of clear water is not available, some preliminary work in preparing the ice field will be required before freezing weather sets in. It is therefore advisable to make all plans for the work as soon as possible. Water for the ice supply should be entirely free from contamination or pollution. Ponds and sluggish streams usually have grass and weeds growing in them, so that the ice harvested is likely to contain decayed vegetable matter, which is always objectionable. They should therefore be thoroughly cleared of such growths before the ice has formed.

In some sections it is necessary to impound the water for producing ice. This may be done either by excavating and diverting a stream into the excavation, or by constructing dams across low areas. In localities where very low temperatures prevail for several weeks at a time, and the supply of pure water is limited, blocks of ice may be frozen in metal cans or in special fibre containers.

Size of the Ice Field.

In harvesting ice it is desirable to have a field of sufficient size to fill the ice house at a single cutting, as the thickness and quality of the ice will be more nearly uniform, and the necessary preparation for cutting and harvesting need not be made but once. In many instances, however, the size of the pond or stream is such that it is necessary to wait for a second crop in order to fill the ice house. The average farmer requires only a comparatively small quantity of ice, so that even a small harvesting surface will usually prove large enough, especially if ice is cut the second time. The square feet of surface required per ton when the ice is of different thicknesses is shown in the following table. Size

of cake is twenty-two by twenty-two inches.

Square Feet of Ice Surface Required Per Ton of Ice.

Thickness of Ice.	Number Cakes Required Per Ton.	Cutting Space Required Per Ton.
4	31.3	105.4
6	20.9	70.2
8	15.6	52.6
10	12.5	42.1
12	10.4	35.1
14	8.9	30.1
16	7.8	26.3
18	6.9	23.4
20	6.3	21.1
22	5.7	19.1

Few Tools Required.

When a small quantity of ice is to be harvested, but few tools are required. The following list contains those actually needed for harvesting ice on a small scale: Two ice-saws, one hand-marker, one pulley and rope, two pairs of ice tongs, two ice hooks, one pointed bar, and one straight-edge. While these tools are all that are necessary, additional ones, such as the horse plow and marker, horse scraper and marker, and a calking bar, are convenient, and will help to expedite the work of ice harvesting.

HOLSTEIN BREEDERS OF EATON COUNTY ORGANIZE.

TWENTY-TWO Holstein breeders from various parts of Eaton county met in the Farm Bureau office at Charlotte recently and organized the Eaton County Holstein Breeders' Association.

The meeting was called to order by County Agent Roy E. Decker, acting as temporary chairman, and the following officers were elected: President, Clifford Brunger, Grand Ledge; vice-president, C. Jordan, Charlotte; secretary-treasurer, Almerin Loucks, Charlotte. A board of directors consisting of the following was elected: Milton Chappell, of Charlotte; J. B. Strange, Grand Ledge; Edwin Vander Eaton Rapids.

Twenty of those present joined the Beck, Dimondale, and Dennis Miller, new organization and in the near future it is expected that nearly all of the sixty Holstein breeders and those interested in Holstein cattle in the county will sign up.

The black and white cattle are becoming very popular among dairymen here and this association will help to improve the breed, eradicate contagious diseases, and dispose of a surplus of good stock to the best advantage.

COMMUNITY STOCK BREEDING IN INDIANA.

INDIANA has over one hundred and twenty local pure-bred associations in the various classes of live stock. Most of them are very active working out helpful programs, while others are active getting a program to accomplish definite results.

This is generally true of those associations organized during the past year. These one hundred and twenty different local associations have developed in Indiana during the past six years. They are the very foundation stones upon which Indiana is building its live stock business today. Recognizing this fact, the Indiana Live Stock Breeders' Association thought it wise to spend considerable time upon fundamental factors that keep these associations alive.

WHY DE LAVAL CREAM SEPARATORS ARE BEST

There's a reason for everything, and surely one for the superiority of DE LAVAL Separators.

The DE LAVAL was the first continuous discharge centrifugal cream separator. Invented in 1878, it has led ever since. The great DE LAVAL shops in both America and Europe are devoted solely to the production of centrifugal separating and clarifying machines.

Large staffs of DE LAVAL experimental and developmental engineers, in both America and Europe, constantly devote their time, skill and knowledge to the further improvement of the DE LAVAL Cream Separator.

Every single step of cream separator advancement, for forty years, has been DE LAVAL conceived or developed.

On the other hand, practically every feature of construction ever used in any other cream separator has been one that run-out DE LAVAL patents left free. Such features have then always been out of date in the later improved DE LAVAL construction, and most of them were



never quite good enough to have been actually used in DE LAVAL construction at all.

It might aptly be said that DE LAVAL has forgotten more about cream separators than its imitators and would-be competitors ever knew.

And then it must be remembered that the cream separator, with its necessarily high revolving speed; great capacity, ease of operation, simplicity and durability, is a very difficult machine to build right, and can only be built right with long experience, highly skilled employees and a vast amount of special equipment. Hence there's nothing strange about the fact of DE LAVAL Cream Separator superiority.

THE DE LAVAL SEPARATOR CO.

165 Broadway
NEW YORK

29 East Madison Street
CHICAGO

61 Beale Street
SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

Facts in BLACK & WHITE

Holstein-Friesian the Leading Dairy Breed

Purebred Holsteins have made Holland the leading dairy country, and maintaining there great national industry, the dairymen of Holland for 2,000 years have bred to perpetuate these distinctive characteristics:—Size, health, strength, cleverness and vitality. Scientists claim that the Holstein Cow is able to impart her great vitality through her milk to the consumer.

Holstein Cow's milk is more easily digested because of its normal percentage of fats, which are suspended in the milk serum in corpuscles nearly as fine as "Mother's Milk."

Send today for "Specialists' Evidence."

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
Brattleboro, Vermont

Holstein-Friesian Cattle

Herd Headed by
Segis Pontiac De Nijlander

A 32-lb. grandson of Michigan's great 55-lb. champion. His dam, Oak Valley Korndyke Bests Segis Fan, 32.06, is also a Michigan prize winner. Write for calf list. Wah-be-me-me Farms, White Pigeon, Mich.

Match Herd (State and Federal Tested) Ypsilanti, Michigan. Offers young sires out of choice advanced registry dams and King Korndyke Artis Vale Own dam 34.16 lbs. butter in 7 days; average 2 nearest dams 31.61, 6 nearest 33.93, 20 nearest 27.93

GRADE UP YOUR HERD

with a young son of Spring Farm Pontiac Cornucopia 18th, whose five nearest dams have an average record of 34.22 pounds of butter in seven days. Have several priced to sell.

JOSEPH H. BREWER, Grand Rapids, Michigan

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.

\$125 Liberty Bonds or terms gets bull calf born May 20, 34 white, 9 nearest dams avg. 28.85 lb. but., 533 lb. milk in 7 days. Dam gddam. of Pontiac Cornucopia M. L. McLAULIN, Redford, Mich.

"Top-Notch" HOLSTEINS

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

McPherson Farms Co., Howell, Mich.

For Sale High class Holstein bull calves sired by Flint Maple Crest Vassar and out of A. R. O. dams at half price to make room, be quick if you want one they won't last long.
RIVEVIEW FARM, Vassar, Mich.

GET A BETTER BULL WINNWOOD HERD

BREEDERS OF

Registered Holstein-Friesian Cattle

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

JOHN H. WINN, (Inc.)

Lock Box 248, Roscommon, Mich.

A Grand Opportunity

We have for sale one more son (ready for heavy service) of the famous sire "Alcartra Pontiac Butter Boy" (136933) whose daughters sold so well at the Lansing sale, one selling for \$2000 and one a ten months old calf for \$500.

The dam is nearly ready to freshen and we expect her to materially increase her present record of 18.6.

Write for pedigree.

SINDLINGER BROS.

Lake Odessa, Michigan

King of the Pontiacs and King Segis

Bull calf born Dec. 10th. 1919. Sire: from son of King of the Pontiac whose dam is 33 lb. daughter of King Segis. Sire's dam Bucca Lassie Jean Butter 33.05 Milk 721.

Dam, Fine large cow now on test making 23 lbs. Price \$150.00 if sold at once.

A. W. COPLAND, Birmingham, Mich.
Herd under state and federal supervision.

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.

BUY your next herd sire from Lake Side Dairy. We have a 26-lb. son and a 24-lb. son sired by our 32-lb. bull that will improve your herd. Write LAKE SIDE DAIRY, Lake Odessa, Mich.

Seven Yearling Heifers

FOR SALE—These heifers are of King Segis and Pontiac Korndyke breeding. All will be bred this month to "The Milk and Butter Champion", the only bull in the world whose dam is a world's record milk cow and whose sire's dam is a world's record butter cow, and both are yearly records. A good chance to get started right. L. E. CONNELL, Fayette, Ohio.

LONG DISTANCE

Holstein calves of either sex. Can spare a nicely marked heifer backed by seven dams that average above 120 lbs. butter and 2400 lbs. milk in one year. Choice Duroc Sows. A. FLEMING, Lake, Mich.

CLUNYSTOCK FARM

A Semi-Official Bred Bull to Head

Your Herd

Maplecrest Application Pontiac No. 132652, heads

Our Herd

His dam's record is 1344.3 lbs. butter, 23,421.2

lbs. milk in 365 days, and 35,103 lbs. butter and

515.6 lbs. milk in 7 days.

One of his sons from our good record dams will

carry these great blood lines into Your Herd.

For Pedigrees and Prices write to

R. BRUCE McPHERSON, Howell, Mich.

MICHIGAN JERSEYS

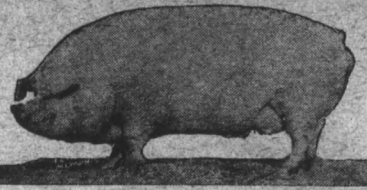
Michigan is an ideal place for the raising of Jersey Cattle and there are no better cattle for dairying than Jerseys.

Jerseys mature early, live long, produce persistently, give the greatest amount of butter-fat obtainable from every pound of feed. They are hardy and vigorous, always on the job and the greatest mortgage-lifters that ever entered a barn.

Michigan should have more Jerseys and the Jersey breeders of the state are anxious to cooperate with anyone who is interested in successful dairy farming.

MICHIGAN JERSEY CATTLE CLUB

THE FAMOUS O.I.C. SWINE



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

CRANDELL'S PRIZE HOGS, Cass City, Mich.

O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan

Spring gilts and fall yearlings bred for March, April and May litters. I ship C. O. D., pay express and register in buyer's name. If you want a BIG TYPE sow, guaranteed right in every way, write me.

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

Reg. Holstein Bull, nicely marked, born Dec. 1, 1912, choice breeding. \$60 Reg. and Del. J. Robert Hicks, St. Johns, Mich.

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

For Sale Four Reg. Holstein heifers due to freshen within a month. Good stock. MARTIN MOON, Brunswick, Mich.

The Wildwood Farm

Jersey Cattle, Majesty strain. Herd on State accredited list. R. of M. testing constantly done. Bulls for sale. ALVIN BALDEN, Phone 145-5, Capac, Mich.

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

Maple Lane R. of M. Jersey Herd. For sale Blue Belle's Premier son of Sophie's Premier that sold for \$1750 this fall. Bulls and bull calves. R. C. Red cockerels. IRWIN FOX, R. 3, Allegan, Mich.

FOR SALE Jersey Bulls ready for service. R. of M. ancestors. Raleigh-St. Lambert breeding. Jerseys stand for economy. Waterman & Waterman, Packard Rd. Ann Arbor, Mich.

Registered Jersey bulls ready for service. Some bred heifers, best of breeding. CLARENCE BRISTOL, Fenton, Mich.

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

Bulls ready for service from our herd bull Marguerite's Premier, son of Pogue's 9th of Hood Farm, and cows now on test for R. of M. Smith & Parker, Howell, Mich.

HARWOOD HEREFORDS

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

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

HEREFORDS

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

ALLEN BROS.

PAW PAW, MICHIGAN

Herefords Special low price on the following for a short time. One four year old cow, due in spring. Two 2 year olds with calves by side. One yearling heifer. Three bull calves, about 2 months old, one polled, two horned, all well marked and good dark color. COLE & GARDNER, Hudson, Mich.

HEREFORDS

of Quality. Renner Bullion, sired by the \$9500.00 Bullion the 4th. now heads our herd. Inspection invited. COLE & GARDNER, Hudson, Mich.

Herefords. 150 head, we offer you anything desired either sex, horned or polled, any age. Priced reasonable. THE McCARTY, Bad Axe, Mich.

Hereford Herd Headers only the upper crust retained, undesirable unsexed, not the largest herd, but few as good. Come and see. Farm adjoins town. E. J. Taylor, Fremont, Mich.

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

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

BIDWELL SHORTHORNS

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

BIDWELL STOCK FARM
Box B, Tecumseh, Mich.

Richland Stock Farms

Home of the Michigan Champions. Shorthorn Sires in Service:

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

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

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

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

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

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

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

Milking Shorthorns of best Bates breeding. Nothing for sale at present. E. H. KURTZ, Mason, Mich.

Central Mich. Shorthorn Breeders Assn. offer 40 bulls, 33 females, write for new list. OSCAR SKINNER, Sec., Gowen, Mich.

The Kent Co. Shorthorn Assn. have males and females of quality for sale. L. H. LEONARD, Sec., Caledonia, Mich.

Wanted Several Scotch and Scotch topped heifers or young cows that are in calf to good Scotch bulls. Lawrence P. Otto, Charlotte, Mich.

FOR SALE Six Registered Durham Bulls. Reds and Roan eight mths. to one year old all by Richard Pride 564679. HENRY C. LYNCH, Mayville, Mich.

For Sale Reg. Durham bred heifer, price \$150.00. W. W. SARGENT & SON, R. 3, Linden, Mich.

HOGS

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

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

Registered Berkshire boars, one yearling, two spring boars priced reasonable and guaranteed to be O.K. B. B. KEAVEY, Akron, Mich.

DUROC AUCTION

60 pure bred registered Duroc-Jersey bred sows, boar pigs and gilts will be sold under the direction of the Michigan Duroc-Jersey Swine Breeders Association at M. A. C., East Lansing.

Friday, February 6th, 1920
1:00 o'clock

Every thing sold is backed by a guarantee by the State Assn. This offering will be a useful lot of sows and pigs that will go on any farm and make a profit to the purchaser.

Catalogue or further information address Newton Barnhart, St. Johns, Michigan.

SALE COMMITTEE;

Eugene Inwood, - Romeo
Henry Philips, - Milan
Newton Barnhart, St. Johns

Col. Andy Adams of Litchfield, Michigan, and assistants will conduct the sale.

Registered Duroc Boars

We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 11487. Ira Jackson selected this boar to head our herd. Our prices are within every farmer's reach. The Jennings Farms, Bailey, Mich. R. F. D. No. 1.

Walnut Hill Durocs June farrowed boars ready for service from Ira Jackson and Brookwater stock, also bred gilts and sows of all ages for Mar. and Apr. farrow, priced right and registered in buyer's name. Write JOHN C. DEAN, R. 1, Mason, Mich.

Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him. It paid this man to use one of our boars it will pay you.

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

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

DUROC JERSEYS

CAREY U. EDMUNDS, Hastings, Mich.

DUROC JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

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

MICHIGANA FARM has a few good farmers Boars at farmer's prices. Also boars good enough to head good pure bred Duroc herds. Get our prices on bred gilts and sows. They will interest you whether you are planning to get a bred sow or not. O. F. FOSTER, Mgr., Pavilion, Mich.

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

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

Duroc bred sows and gilts sired by Orion Cherry King Col. 2nd, bred to All Col. of Bangamo 2nd. First class lot, reasonable. W. C. Taylor, Milan, Mich.

Raise Chester Whites

Like This
the original big producers

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

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

O. I. C. and Chester White Swine

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

O. I. C's. Last spring boars all sold. Have an extra good lot of last spring gilts, good fall pigs not skin. Good stock, registered free, 1/4 mile west of Depot. OTTO B. SCHULZE, Nashville, Mich.

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

O. I. C's. Big type gilts, fall yrs., tried sows, Mar., Apr. farrow. Summer and fall pigs. I pay exp. reg. free, satisfaction guaranteed. G. P. Andrews, Dansville, Mich.

O. I. C. Gilts bred for March and April farrow. I pay express and register in buyer's name. H. W. MANN, Dansville, Mich.

O. I. C's Service boars, fall pigs no skin also Buff R. oks. at \$3.00 each. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C's. one 18 mo. herd boar, a few bred gilts and a choice lot of fall pigs. JOHN C. WILK, Alma, Mich.

O. I. C's Have some Choice Spring Gilts, bred for spring farrow. THAYER BROS., R. 1, Mason, Mich.

O. I. C. Gilts bred for March and April farrow, guaranteed safe with pigs. Fall pigs and a few service boars. Herd immuned by D. T. F. C. Burgess, R. 3, Mason, Mich.

O. I. C. yearling sow for sale bred for Feb. also bred gilts for April. WILL CHRISCHINSKE, Inlay City, Mich.

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

FOR Sale—Large Type Poland China Gilts, bred for April farrow. Inspection invited. Free delivery from Manchester. A. A. Feldkamp, R. 2, Manchester, Mich.

Poland Chinas sows bred for March and Apr. farrow. Large type with best of breeding. R. W. MILLS, Saline, Mich.

MILLER Meadows L. T. P. C. boars all sold. Gilts Mated by General Jones and bred to our young boar Alaska, address CLYDE WEAVER, Ceresco, Mich.

Boars also sows and pigs. Real Big Type Poland B. Chinas. Bred big for 25 years. Sired by Mich. Buster by Giant Buster, litter 14 out of 16 by Queen 2nd, some breeding, also by Butler's Big Joe by Rust's Big Joe, out of a Wonder Queen, not said. Write us your wants, we will treat you right, our prices are low. J. C. BUTLER, Portland, Mich.

LARGE Type P. C. the largest in Mich. Spring boars now ready to ship. Boars for the breeders and boars for the farmers. Come and see the real large type with quality. Free delivery from Parma furnished visitors. Look up my exhibit at the Great Jackson Co. Fair, Sept. 8th. to 22th, expenses paid if not as advertised. W. E. Livingston, Parma, Mich.

M. R. P. C. Breeder if you want to get in the King row, Buy a Gilt bred to Big Bob Muscoda, more Grand Champion Blood in his veins than any other Boar in Michigan. C. E. Garnant, Eaton Rapids, Mich.

Farmers' Week at M. A. C.

THE annual round-up of Michigan farmers at the Agricultural College comes next week, February 2-6. A record attendance is predicted. In order that readers may know of the hundreds of good things scheduled for the various sessions, we are giving herewith a complete program of the general and special meetings.

Upon arrival visitors will register at any of the stations in Lansing, or at the People's Church. Registration booths will also be open in the Agricultural Building, and in the College Gymnasium, for those who do not register before reaching the campus.

The registration cards which will be issued to all out of town guests will admit to the afternoon and evening meetings in the gymnasium at any time. The general public will be admitted only after 2:15 for afternoon and 7:00 for evening meetings. To be sure of a seat visitors should be on hand before these hours.

Monday Afternoon Session.

1:30—State Club Leaders' Conference, room 101; 12:00—College exhibits opened for the week.

Evening Session at the College Gymnasium.

6:30—Moving pictures; 7:10, "Farmers' Tour Around the World," Dean Alfred Vivian, Ohio State University; 7:50, music; 8:00, "Through the Eyes of Youth," Cecil Roberts, well-known English poet.

Tuesday Morning.

Home Economic Conference—Lecture Room Woman's Building: 8:30, "Infant Clothing," Mrs. Grace S. Frear, Home Economics Department; 9:45, Community Singing; 10:00, "Cleaning and Cleaning Equipment in the Home," Miss Ruth Kellogg, Home Economics Department.

Michigan Muck Farmers' Association, room 206. 8:30, question box and discussion, Roger Reed, Saugatuck; 9:00, "Observation on the Use of Muck as a Fertilizer," C. B. Cook, Pontiac; 9:45, "Muck as a Fertilizer in Grand Traverse County," R. Wiley, Traverse City; 10:15, "Bacteria in Relation to the Decomposition of Muck," Mrs. R. Wyant, Department of Bacteriology; 11:00, "Composting in China and Japan," Stereopticon Lecture, Dean Alfred Vivian, Ohio State University.

9:00—State Club Leaders' Conference in room 101.

9:30—Meeting of executive committee, Michigan Veterinary Association, at Hotel Kerns, Lansing.

Afternoon Session.

Michigan Veterinary Association at Old Veterinary Building at 1:30. President Kedzie gives words of welcome, response by D. R. H. Wilson, Rochester; committees will report.

General Session in College Gymnasium.—2:00, music, by College Military Band; 2:30, "Cost of Production," Dr. H. C. Taylor, Chief of the Bureau of Farm Management, Washington, D. C.; 3:15, Community Singing; 3:30, "The Farmer's Responsibility to Society," President G. C. Creelman, Ontario Agricultural College.

5:30—Country Life Leaders' Banquet at People's Church; 6:30, Veterinary Association Banquet at Hotel Kerns, Lansing.

Evening General Session in College Gymnasium.

Moving pictures 6:30; 7:10, "Farmers' Tour Around the World," Dean Alfred Vivian, Ohio State University; 7:50, Music; 8:00, "Vital Problems of Country Life," Kenyon L. Butterfield, President Massachusetts Agricultural College.

Wednesday Morning.

Swimming demonstration by M. A. C. young women at College Gymnasium, 8:00.

Home-keepers' Conference, Woman's Building. 9:00, "Selection and Use of Kitchen Equipment," Miss Ruth Kellogg; 10:00, Community Singing; 10:15, Demonstration by Miss Lucile Brewer, Extension Specialist, Cornell University.

Michigan Veterinary Association, Old Veterinary Building at 8:00. "Hemorrhagic Septicemia," Dr. H. Preston Hoskins; "Tuberculosis in Live Stock," Dr. J. A. Kiernan; "Army Experiences in Europe," Dr. William C. Keck; "Differential Diagnosis of Diseases of Swine," Dr. F. E. Stiles; election of officers; demonstration, "Anatomy of the Digestive Tract of the Cow in Relation to Surgery and Medicine," F. W.

Chamberlain; "Sterility in Cows—Latter Methods of Treatment," E. T. Hallman.

Michigan Potato Producers' Association, in room 110, at 8:30.

Michigan Maple Syrup Makers' Association in Forestry Building at 8:30.

Michigan Muck Farmers' Association in room 206. 8:30, question box and discussion, Ezra Levin, East Lansing; 9:00, "Grains on Muck," Robert Zimmerman, Constantine; 10:00, "Successful Muck Farming in Sanilac County," Lewis Merriman, Deckerville; 11:00, "The Development of Muck Land Farming in Europe," Prof. A. J. Alway, University of Minnesota.

Farm Crops, Room 402, at 9:00. A review of crop experiments of timely interest to Michigan farmers by the experiment staff of the Farm Crops Section, M. A. C., will be given.

Country Life Conference, Room 109. 9:45, a Community Organization Program, President Kenyon L. Butterfield, Massachusetts Agricultural College; 10:30, "The Country Community of the Future—a Dream," Dean Alfred Vivian, Ohio State University; 11:15, "The Rural Education of Tomorrow," Dean Ernest W. Groves, New Hampshire State College.

Michigan Branch American Poultry Association, Room 207. 10:00, Address of Welcome, Prof. C. H. Burgess, Secretary Michigan Branch, American Poultry Association; response, John Convey, Secretary Detroit State Show; "Poultry Needs," Dwight E. Hale, of Chicago.

Members of Grange who are interested in Farm Account Book Cooperative Project will meet in room 101, at 10:00.

Afternoon General Session in College Gymnasium.

Music at 2:00; 2:30, "The Education of the Rural Home," Henrietta W. Calvin, Bureau of Education, Washington, D. C.; 3:15, Rural Y. M. C. A. Demonstration; 3:30, "The Education of the American," Dr. G. W. Gunsaulus, President of Armour Institute of Technology.

Crop Improvement Association Banquet in Woman's Building at 5:45.

Evening General Session in College Gymnasium.

Moving pictures 6:30; 7:10, "Farmers' Tour Around the World," Dean Alfred Vivian, Ohio State University; 8:00, Rural Play Demonstration, "Just Plain Jones," Direction of Prof. C. B. Mitchell and Prof. E. S. King, English Department, M. A. C.

Thursday Morning.

Business Session Michigan Farm Bureau in Room 109, at 8:30 for delegates only; registration of delegates in Room 110.

Milk Producers' Meeting, in Dairy Building at 8:30. Address by Dr. C. V. McCollum, Nutrition Expert, Johns Hopkins University.

Training Conference for Rural Leaderships, by Rural Y. M. C. A., in room 101; 8:30, Devotional Period, L. E. Buell, State Secretary; 9:00, Christian Citizenship Training Program, George Carhart, Jr., State Boys' Work Secretary; 10:00, "Rural Psychology and Sociology," Ernest R. Groves, New Hampshire State College; 10:45, "Training of the Secretary," H. C. Coffman, State County Work Secretary; 11:30, "Rural Health and Recreation," Judson A. Hyames, State Physical Secretary.

Michigan Muck Farmers' Association in Room 206; 8:30, question box and discussion, Dr. Orrin Lloyd Jones, Bitely; 9:00, "Beets on Muck," L. C. Robart, Eaton Rapids; 9:45, "Searching for a Muck Corn," E. L. Woodhams, Menasha; 10:15, "Observations on Muck Lands in the Upper Peninsula," J. J. Jeffrey, Duluth; 11:00, "Fertilizing Muck Lands in Minnesota," Prof. F. J. Alway, University of Minnesota.

Home-keepers' Conference, Woman's Building. 9:00, "The Newer Knowledge of Nutrition," Dr. C. V. McCollum, Johns Hopkins University; 9:45, Community Singing; 10:00, Demonstration, Miss Lucile Brewer, Extension Specialist, Cornell University.

Annual Business Meeting Michigan Crop Improvement Association, Room 402. 9:00, Reports of Committees; 10:00 President's Address, L. Whitney Watkins, Manchester, Mich; 10:30, Report of the Secretary-treasurer, J. W. Nicholson, East Lansing, Mich; 11:00, "Getting Good Field Seed Into Farm Practice," W. G. Eckhardt, Farm Advisor, DeKalb County, Illinois; 11:45, "The Cooperation of the State Farm Bureau in Marketing Farm Seed," Dr. Eben Mumford, State Leader of County Agents.

Michigan Branch American Poultry

(Continued on page 183).



SAGINAW SILOS

THE fact that there are four different Saginaw Silos shows how thoroughly we are prepared to meet your silo requirements.

Only a company with our resources and manufacturing facilities can afford to plan and develop such a complete line. Each Saginaw Silo has been accepted as a standard of silo value—proved by years of use.

Substantial service is built into Saginaw Silos by careful selection of materials and experienced and skilled workmanship. The long established reputation of Saginaw Silos is your assurance of getting permanent satisfaction from your silo.

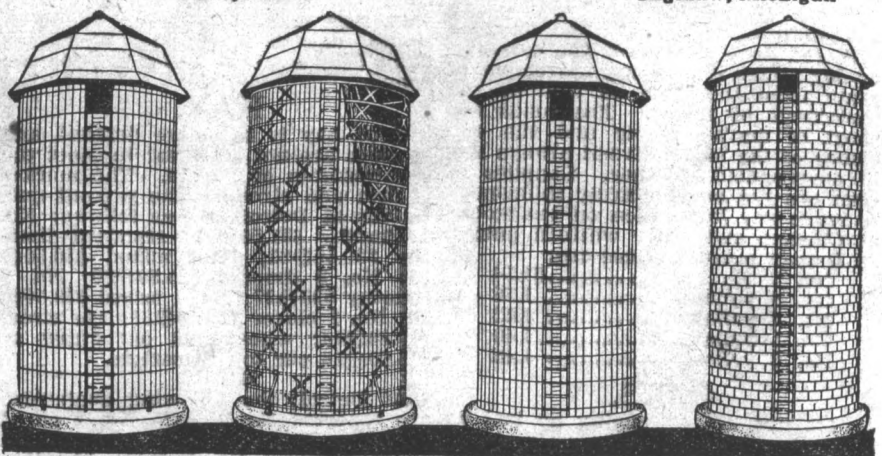
Undoubtedly one of these Saginaw Silos is just what you want.

Write Dept. 10 for Latest Silo Information

THE McCLURE COMPANY

Cairo, Illinois

Saginaw, Michigan



Saginaw Steel-Built Wood Stave

Saginaw Hollow Wall Wood Stave with Cross-Truss

Saginaw Leader Wood Stave Silo

Saginaw Vitrified Clay Silo

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

HOGS

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

TWO HERD BOARS

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

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

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

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

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

T. F. C. tried sows and spring gilts, from 1st prize sire and dams, bred for Mar. and Apr. farrow, also fall pigs. H. M. Jeffries, St. Louis, Mich.

HAMPSHIRE

Steuben's Hampshire Farm

A few No. 1 bred gilts left, a few choice fall boar pigs, can furnish pairs not akin. Booking orders for spring pigs, large type, no better blood lines. Satisfaction guaranteed.

STEBEN'S HAMPSHIRE FARM ANGOLA, IND.

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

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

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

B. T. P. C. Tried sow and gilts bred to our Grand Champion Bear Big Type King Junior Champion Gertrude Timm and first prize Senior boar pig A. Wonder Jumbo. W. Brewbaker & Sons, Erie, 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 Type P. C. Gilts bred to Big Orange Model and O. H. Defender. None better in State. Priced to sell. W. J. Hagelshaw, Augusta, Mich.

Big Type Poland Chinas. Up-to-date in breeding, with size and quality. We like good ones and believe you do also. Have three choice gilts for sale, bred for April 7, 8, 10, respectively. Their sire at 18 months weighed 640 lbs., not fitted, and stood 40 in. tall, 78 in. long and on a 10 in. bone. They are bred to a great son of Mountain Giant. Write or come and see. You're always welcome. WESLEY HILL, R. 6 Ionia, Michigan.

L. T. P. C. Spring gilts ready to ship also fall pigs both sexes. P. R. ALEXANDER, R. F. D. 6, Albion, Mich., Bell phone 842F11.

B. T. P. C. Gilts sired by Big Giant and O's Orange. Bred to C's Orange and Col. Jack Jr. No better breeding to be had. L. L. Chamberlain, Marcellus, Mich.

Tamworths The great bacon breed. Some good registered gilts bred for March farrow, also fall pigs. W. H. WARNER, Concord, Mich.

SHEEP.

KIDS of Mich. You are the future farmers of the state. I am one of the best sheep breeders in the state. Let's get together that you may start your own flock of registered Shropshires now. A lot of kids have already done so, but I want more. I will buy your ram lambs and cooperate with you in every way. Write me for my proposition and prices. KOPE-KON FARMS, S. L. Wing, Prop. Box 4, Coldwater, Mich.

BUY A SHEEP

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

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

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

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

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

20 choice Reg. Shrop. ewes due to lamb in March also about 15 Reg. ewe lambs unbred. Priced for quick sale. H. F. MOUSER, R. 6, Ithaca, Mich.

Cotswolds ewes bred to one of Canada's best rams, start right buy good ones while they can be had. A. M. BORTEL, Britton, Mich.

HORSES

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

For Sale Reg. Percheron Stallions and Mares also a car of grade draft colts. CHAS. A. BRAY, Okemos, Ingham Co., Mich.

THE BEST Percheron Stallion in Michigan for Sale. Must sell on account of poor health. O. L. STOCKDALE, P. O. Box 37, Wayland, Mich.

BLACK registered Percheron stallion 7 yr. old weight 1800 lbs., gray 4 yr. old weight 1800 lbs. JACK PEAK, Niles, Mich.

LATEST MARKET REPORTS

SECOND EDITION.

The markets in this edition were revised and corrected on Wednesday afternoon, January 28.

WHEAT.

Wheat is firm and the demand is active. The mills have light stocks on hand and are anxiously awaiting shipments from government stores. Cash wheat in Minneapolis took a drop of five to ten cents. At Detroit the prices are as follows:

No. 1 red	2.65
No. 1 mixed	2.63
No. 1 white	2.63
No. 2 red	2.62
No. 3 red	2.59

CORN.

The weather is working hard to keep up the price of corn. The extreme cold and deep snow over the corn-producing states is delaying movement of grain from the farm as well as the movement of trains. The roads are short of motive power and the efficiency of the locomotive is always low in severe cold weather. Supplies of corn are not accumulating sufficiently to make any impression on the stocks at Chicago and other western points. At Detroit present prices are:

No. 3	1.54
No. 3 yellow	1.56
No. 4 yellow	1.52
No. 5 yellow	1.49
No. 6 yellow	1.46

OATS.

Oats are not advancing as fast as the bulls would like. There is steady buying and the market is well-sustained, but on all advances there are oats for sale and any marked advances are checked. Shipping is slow and there is not sufficient supply on the local market to make any decided changes in prices. Present quotations at Detroit are:

No. 2 white	.90
No. 3 white	.89
No. 4 white	.88

RYE.

The rye market is lower. The market is slow. Present Detroit quotations are \$1.68 for cash No. 2 rye.

BARLEY.

No important changes have taken place in the barley situation during the past week. Cash No. 3 barley is quoted at \$3@3.20 on the Detroit market.

BEANS.

The bean market at Detroit is quiet and inactive. Choice hand-picked pea beans are quoted at \$7.25. At Philadelphia choice pea beans are quoted at \$7.80 and red kidneys at \$14.75@15.

SEEDS.

The market is steadily advancing. At Detroit prime red clover is quoted at \$35.50; alsike \$36; timothy \$6.90.

FEEDS.

There has been no marked change in the feed market during the past week. Present quotations at Detroit are as follows: Bran \$48@49; standard middlings \$50@51; fine middlings \$60@61; coarse corn meal \$60@62; cracked corn \$63@65; corn and oat chop \$52@55 per ton in 100-pound sacks.

POTATOES.

The supplies are light. Demand and movement very slow, market strong, with very little change in prices. Sales to jobbers of Michigan U. S. Grade No. 1 Round Whites in 150-lb. sacks mostly \$7.50 per sack. At Cleveland the supplies are light, market is higher and prices advancing slightly. Sales to jobbers of New York U. S. Grade No. 1 Round Whites are reported at \$7.75 per 150-lb. sack. At New York very few sales are reported and the market is strong. Sales to jobbers of Maine and New Brunswick stock are mostly at \$8.75@9 per 180-lb. sack.

BUTTER.

Butter is easier and the market suffered a slight decline. Offerings are coming freely and consumers are buying in small quantities. At Detroit fresh creamery firsts are selling at 61½¢; fresh creamery in one-pound prints 61@63c per pound.

EGGS.

The demand for fresh eggs is increasing faster than the supply. The demand for storage eggs is firm and active. Present prices on the Detroit market are 64@65c for fresh eggs; storage 51@53c.

POULTRY.

The poultry market is firm in all lines. The receipts are moderate and the demand lively, especially for chickens and hens. Present Detroit quotations for live poultry are as follows: Spring chickens 34@35c for large and 30@32c for small; hens 36@38c for large and 33@35c for small, roosters 23@24c; geese 23@33c; ducks 40@45c; turkeys 44@45c per pound.

CHEESE.

Jobbing prices for cheese on the Detroit market are as follows: New York flats, new make 31@32½¢; Michigan single daisies 32½@33c; Wisconsin twins 31c; domestic Swiss 36@40c per pound.

HAY.

Good hay is in active demand and receipts are not sufficient to meet the requirements of buyers. The market is firm and strong. The present quotations at Detroit are as follows: No. 1 timothy \$31.50@32; standard timothy \$30.50@31; light mixed \$30.50@31; No. 2 timothy \$29.50@30; No. 3 timothy \$25@27; No. 1 mixed \$29.50@30; No. 1 clover \$29.50@30; rye straw \$13.50@14; wheat and oat straw at \$13.50@14 per ton in carlots.

HIDES.

At Detroit the following quotations are reported for hides: No. 1 cured calf 75c; No. 1 green calf 70c; No. 1 cured kip 50c; No. 1 green kip 45c; No. 1 cured hides 32c; No. 1 green

hides 27c; No. 1 green bulls 20c; No. 1 cured bulls 25c; No. 1 horsehides \$11; No. 2 horsehides \$10; sheep pelts 50c@53.50.

WOOL.

The private wool market at Boston was very quiet last week. Woolen manufacturers were examining the British wool and showed little interest in the private stock, except the three-eighths blood fleeces and quarter-bloods of similar growth. The several series of governmental auctions are upsetting the private trade. The United States and the British governments will have sales again next month. The official statement of the volume of wool left unsold in the hands of the government shows the total on January 17, including 257,487 pounds of tops, was 82,368,193 pounds. To this must be added 275,555 pounds of carpet wool held in Philadelphia and New York. Of this total only 4,289,965 pounds is classed as fine and half-blood wool, 51,823,613 pounds being low quarter-blood and below, and the balance three-eighths blood and straight quarter-blood. This confirms what has been hitherto claimed, that the government has comparatively little good wool left. Holdings of Australian and New Zealand crossbreds total 9,088,880 pounds.

GRAND RAPIDS.

Increase in winter lay, jobbers in eggs have dropped the price to producers to 50c per dozen in case lots. Clover seed continues to advance. Retail price last week was \$40 per bushel, both medium and mammoth. The old saying, "a ton of hay for a bushel of prime clover," no longer holds good. Alsike seed is now \$40. Other seeds

steady at previous week's prices Potatoes are higher than a week ago. Last fall farmers sold for \$1.50 per bushel, field-run. Now they ask \$2.75 for ungraded which they have been holding. One farmer refused an offer last week of \$2.50 for 200 bushels. At present the present potato market is a weather proposition. None moving from up state in carlots. Owing to baled hay being preferred to loose, both at same price, farmers ceased marketing when it struck \$27 per ton. They have been holding for a raise but baled is plentiful and winter is somewhat advanced. Farmers have begun marketing again but not on a raise in prices. There was a little flurry in the hide market last week and the price advanced five cents per pound for green, to 30c per pound for No. 1, and 29c for No. 2. Live fowls are higher, dealers offering 27c per pound for heavy; springers are same price; receipts are very light in all lines of live poultry.

PRICES PAID FARMERS AT THE ADRIAN COMMUNITY MARKET.

The following prices were paid to farmers for products delivered at the Adrian Community Market on Saturday, January 24:

Apples, green per cwt \$4; red \$4.50; beans, choice hand-picked per cwt \$7; butterfat 63c; butter (packing stock only) 30c; cabbage, domestic \$60 per ton; Holland cabbage \$120 per ton; cream, butterfat 63c per pound; eggs hennerly white 67c per dozen; do gathered white 62c; do fresh brown 62c; hickory nuts 8c per pound; honey comb 32c per pound; do extracted 23c; dressed hogs 14@18c; lambs 15@20c; maple syrup \$2.25 per gallon; maple sugar 30c per pound; mutton 10@12c per pound; onions (dry) \$5 per cwt; do No. 2 \$2.50 per cwt; potatoes No. 1 \$5 per cwt; do \$2.50 per cwt; dressed veal 100 to 140 pounds 22c; do 80 to 100 pounds 18c.

Live Poultry.—Cocks 12c per pound; ducks 30c; hens, extra large and fat 28c; do ordinary 25c; springers 22c; turkeys 36c.

Hides.—Heavy steers, 60 lbs and up per lb 28c; heavy cows, 60 lbs and up, per lb 26c; bulls, under 60 lbs 28c; do 60 lbs and over, per lb 18c; kips 15 to 25 lbs 45c kips, long haired, per lb 25c; calf skins, 8 to 15 lbs 65c; horse hides large \$10; do medium \$9.

NEWS OF THE WEEK.

(Continued from page 151).

territory about Chita of East Siberia. the Hudson.—According to reports the en over from Albany to Hastings-on-the-Hudson.—According to reports the Argentine sugar crop will all be used for home consumption.—The discovery of new diamond fields in Bechuanaland, South Africa, starts thousands of prospectors on the trail.

Monday, January 26.

FIFTEEN persons are dead and a number injured in a wreck on the Canadian Pacific at North Bay, Ont.—The general belief is that the former German emperor will not be demanded from Holland by the entente, but that he will be tried in London in absentia.—Poles order mobilization of forces to oppose the advance of the bolshevist forces.—Belgian bankers will subscribe fifty per cent of the \$500,000,000 Belgian loan.—Riots follow strikes by cotton workers in Bombay, India.—Michigan now has 2,360 cases of influenza, with ten deaths from the malady reported.

Tuesday, January 27.

RUMORS that the monarchists of Germany would attempt an insurrection on the anniversary of the former emperor's birthday causes the military leaders to call out troops for the protection of the public.—Japanese workers on the sugar plantations of Hawaii call a general strike for February 1.—New low levels are reached in foreign exchange markets of this country with the German mark now quoted at slightly more than one cent and the Austrian crown at one-third of a cent.—A big fire at Columbus, Ohio, destroys buildings valued at \$800,000.—A strike of 400 miners in the state of Kansas gives the authorities opportunity to test the constitutionality of the new state law providing for an industrial relations court.

Live Stock Market Service

Reports for Wednesday, January 28th

BUFFALO.

On this market today hogs brought \$16.75@17.25; lambs \$22; calves at \$24.50.

DETROIT

Cattle.

Receipts 1,850. Heavy steers are very dull; other grades steady. Best heavy steers \$12.00@12.75. Best handy wt bu steers 10.50@11.00. Mixed steers and heifers 9.50@10.00. Handy light butchers 8.50@9.00. Light butchers 7.25@8.25. Best cows 9.50@10.00. Butcher cows 8.00@8.50. Cutters 6.50@7.00. Canners 5.75@6.00. Best heavy bulls 9.50@10.50. Bologna bulls 8.50@9.50. Stock bulls 7.50@8.25. Milkers and springers \$65@140.

Veal Calves.

Receipts 660. Market steady. Best \$22.50@23.00. Others 9.00@19.00.

Sheep and Lambs.

Receipts 4,410. Common grades are dull; others steady. Best lambs \$20.50@21.00. Fair lambs 18.00@19.00. Light to common 14.00@16.50. Fair to good sheep 10.50@11.00. Culls 5.00@7.00.

Hogs.

Receipts 8,500. Prospects 25c lower. All grades \$15.85@16.00.

CHICAGO.

Hogs.

Estimated receipts today are 19,000; holdover 23,440. Market 10@15c lower. Bulk of sales \$15.20@15.50; tops \$15.60; heavy 250 lbs up, medium, good and choice \$15@15.35; medium 200 to 250 lbs, medium, good and choice at \$15.20@15.45; light 150 to 200 lbs, common, medium, good and choice \$15.35@15.60; light lights 130 to 150 lbs, common, medium, good and choice \$14.75@15.40; heavy packing sows 250 lbs up smooth at \$14.25@14.65; packing sows 200 lbs up rough, \$14@14.25; pigs 130 lbs down, medium, good and choice at \$13.75@14.75.

Cattle.

Estimated receipts today are 7,500. Market steady to 25c higher. Beef

steers, medium and heavy weight 1100 lbs up, choice and prime \$15.50@17.50; do medium and good \$11.50@15.50; do common at \$8.50@11.50; light weight 1100 lbs down, good and choice at \$13@16.25; do common and medium \$9@13; butcher cattle, heifers, common, medium, good and choice \$6.85@13.75; cows, common, medium, good and choice \$6.75@12.50; bulls, bologna and beef, \$7.65@11.35; canners and cutters cows and heifers \$5.65@6.75; do canner steers \$6.25@8; veal calves, light and handyweight, medium, good and choice \$18@19.50; feeder steers, common, medium, good and choice \$8@12.25; stocker steers, common, medium, good and choice \$7.25@10.85; do cows and heifers, common, medium, good and choice \$6.75@9; do calves, common, medium, good and choice at \$8@11.

Sheep and Lambs.

Estimated receipts today are 10,000. Market steady to strong. Lambs 84 lbs down, good, choice and prime at \$19.50@21.60; do culls and common at \$16@19; spring lambs, medium, good, choice and prime \$16@20; ewes, medium, good and choice at \$10.75@13.50; ewes, cull and common at \$7@10.50; yearling wethers, medium, good and choice \$17.50@19.

BUFFALO.

January 27, 1920.

Cattle.

Receipts fifteen cars; slow; others 25c higher; prime steers \$16.50@17; shipping steers \$15.50@16; butchers at \$9@15.50; yearlings \$14@15.50; heifers \$6.50@11.50; cows \$5@10.75; bulls \$6@10.30; stockers and feeders \$6@10.25; fresh cows and springers steady at \$65@175.

Calves.

Market higher at \$7@25.50.

Hogs.

Receipts 20 cars; 10@25c higher; heavy \$16.75@16.85; mixed and yorkers \$17@17.25; light yorkers and pigs \$17.25; roughs \$14.50@15; stags \$10@12.50.

Sheep and Lambs.

Receipts 10 cars. Market is steady. Lambs \$22@22.15; yearlings at \$18@19.50; wethers \$14@14.50; ewes \$12.50@13; mixed sheep \$13@13.75.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Barren Cow.—I have a heifer that came fresh last July. Since then she has not been in heat. What had I better do with her? A. G. I., Utica, Mich.—Give her 30 grs. of ground nux vomica, 1 dr. of ground capsicum and 2 drs. of ginger at a dose in ground feed two or three times a day. If after giving her this medicine she fails to come in heat, fatten and sell her for beef.

Shy Breeder.—Have a boar which is eight months old, and seemingly is in good health. Has served nine sows during the past thirty days and they are all returning for service in twenty to twenty-one days. They are old sows and he seems to do good work. He will weigh about 200 pounds, is fed six ears of corn, and skim-milk twice a day. H. W. E., Camden, Mich.—You should change his feed, give him more exercise, and if he fails to get most of the sows that have been regular breeders, with pig, discard him for the present and breed the sows to another boar.

Lumbago.—I have a fatted hog that appears to have rheumatism or some ailment which causes stiffness in back and hind quarters. The right hind leg seems to be most affected. He first commenced to move stiff some two months ago, at which time he was worse than now, but his appetite was better, now he is not eating good. Is it his kidneys? Mrs. M. M. E., Holly, Mich.—He suffers from muscular rheumatism and such an ailment is invariably preceded by a sluggish action of the kidneys. Give him 510 grs. of ground nux vomica, 10 grs. of salicylate of soda and 10 grs. of acetate of potash in feed twice a day. This is dose enough for a hog weighing 150 pounds or more. Apply one part turpentine and three parts of raw linseed oil to back once daily. If he is ready for market it might be no mistake to slaughter him, as the result of treatment in a chronic case of this kind might be disappointing.

Cow Fails to Come in Heat.—I have a young cow that came fresh the second time last June, since then she has not been in heat. She is a fine cow and I would not like to sell her for beef. A. Y., St. Clair County.—Give her ½ dr. of ground nux vomica, a teaspoonful of ground capsicum and a dessert-spoonful of ginger in ground feed two or three times a day. Massaging of the ovaries by a veterinarian or skilled dairyman has often the effect of stimulating the dormant ovaries into action. This is done through the rectum. Keep her in warm stable, for if out in the cold she is less likely to come in heat.

FARMERS' WEEK AT M. A. C.

(Continued from page 181).

Association, in Room 207. "Poultry Feeding," Dwight E. Hale, Chicago; election of officers.

M. A. C. Alumni Banquet at 12:15. Afternoon Session.

Home-keepers' Conference, Lecture Room Woman's Building, at 1:00; Home Department of the State Farm Bureau Meeting; Round-table conducted by Miss Flora Buell; discussions led by Mrs. Dora Stockman, Miss Edna Smith, and Miss Mary Edmonds.

General Session in College Gymnasium. 2:00, Music, College Military Band; 2:30, "Recent Developments in Nutrition," D. C. V. McCollum, Johns Hopkins University; 3:15, Rural Y. M. C. A. Demonstration; 3:30, "The Live Stock Situation as it is Today," A. J. Kiernan, Bureau of Animal Industry, Washington, D. C.

Evening General Session in College Gymnasium.

Moving pictures 6:30; 7:10, "Farmers' Tour Around the World," Dean Alfred Vivian, Ohio State University; 8:00, "The Economic Relationship Between Food Producers and the Government," Governor Frank O. Lowden, of Illinois.

Friday—Farm Bureau Day—Morning. Swimming Demonstration by M. A. C. Young Women in College Gymnasium at 8:00.

Home-keepers' Conference, Woman's Building. 9:00, "Renovating Clothing and Hats," Miss Cecil VanSteenburg, Home Economics Department; 10:00, Community Singing; 10:45, "Canning in Tin," Demonstration in charge of Miss Barga VanHuelen, State Leader of Girls' Clubs.

Training Conference for Rural Leadership by Rural Y. M. C. A., Room 101. 8:30, Devotional Period, L. E. Buell,

State Secretary; 9:00, "Christian Citizenship Training Program," George Carhart, Jr., State Boys' Work Secretary; 10:00, "Rural Psychology and Sociology," Ernest W. Groves, of New Hampshire State College; 10:45, "Problems, Principles and Programs for County Work," H. C. Coffman, State County Work Secretary; 11:30, "Rural Health and Recreation," Judson A. Hyames, State Physical Director.

The program of the big Farm Bureau Meeting to be called at the College Gymnasium, will be announced during Farmers' Week.

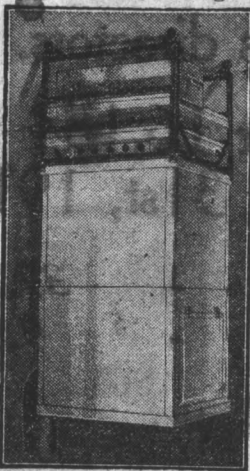
Auction sale of pedigree grains in Pavilion, Agricultural Building, at 9:30. Afternoon General Session in College Gymnasium.

Music, College Military Band; 2:30, "The National Farm Bureau," J. R. Howard, President of the National Farm Bureau; 3:30, "Farm Finance in its Relation to Agricultural Development and Tenantry," by A. F. Lever, Member Federal Farm Loan Board. Agricultural Exhibits.

One of the most important features of Farmers' Week will be the series of exhibits which are to be on display in various college buildings. The exhibits will be extensive and instructive. Practically every phase of agricultural life will be covered, including horticulture, farm crops, farm mechanics, live stock, poultry, home economics, and exhibits by Boys' and Girls' Clubs of the state.

Hickory Smoke House

Also Sanitary Storage for smoked meats



Farmers use them to smoke their Sausage, Bacon, and Hams.

Also to keep meat in so it does not mold and free from insects.

The Hickory was the first Smoke House invented to take the place of the old way of smoking meat. Other similar Smoke Houses are infringements on Patents No. 1166146 and No. 1302952.

Write for free book. 30 days free trial. Built in 10 different sizes.

HICKORY Smoke House Co. Milford, Indiana

Mr. Johnson, Vice-Pres. of a THREE MILLION DOLLAR BANK says

It is a pleasure, indeed, to be able to recommend to the farmers throughout the U. S. A. the Dave Peck Seed Company, of Evansville, Ind.

I am personally acquainted with this Company and know the management to be men of high integrity, with several years' experience in the seed business. I am more or less interested in the success of this growing concern, and I can personally recommend them to you as being reliable and trustworthy. The many customers of the Dave Peck Seed Company will get exactly what they buy, or they will get their money back.

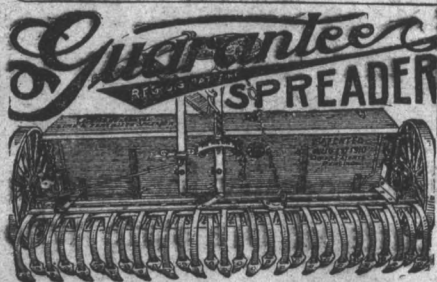
Personally, when I order seeds, the order is given to the Dave Peck Company, for I know that I will get what I buy and a "little more." QUALITY counts with me, and should with you.

J. C. JOHNSON, Vice-President Great Lakes Trust Company, Chicago, Ill.

"DPECK" BRAND SEEDS

Mean bigger yield, finer quality crops. No better, cleaner seeds are offered at any price—and the prices given in my 1920 spring catalog will save you money. Write today for my catalog and samples of any field seeds.

DAVE PECK SEED CO., 205 Pa. Ave., Evansville, Ind.



QUALITY is her middle name. All along the line from wheels to neck-yoke, QUALITY PREVAILS, and for standing up to hard work the GUARANTEE SPREADER never has had an equal. She spreads your lime, ground limestone, or commercial fertilizers evenly, or if you desire to push the spreading lever down, she sows in rows. You will like the special patented features such as THE AUTOMATIC COVERING AND HARROWING ATTACHMENT, shattering catch, spreading device, and the super-steel-blade force-feed. Save \$15.00 by being the first one in your county to purchase the GUARANTEE SPREADER. BETTER write today for free catalog and price. Thank you. GUARANTEE MANUFACTURING COMPANY, Dept. B-90, WOODSBORO, MARYLAND

POSITION WANTED

March 1st as farm manager. 30 years old, married, small family, agricultural education, life experience with general farming and pure bred dairy cattle. Experienced both short and long time A. & C. work. References. Box K 151, c/o Michigan Farmer.

Wanted position on farm by married man experienced in general farming. State wages. Carlotta McNaughton, 1656 Holcomb Ave., Detroit, Mich.

73 Days Work for \$18.00

Are You Satisfied with Your Dairy Profits?

What's the matter?

Hired men are scarce! Wages are way up! Milking cows is hard work!

What's the answer?

UNITED Milking System

One man with a two-unit United Milking System can milk 14 cows in one-half the time it takes by hand.

Saves two hours a day—730 hours a year. That's 73 days of 10 hours each.

No matter whether you have six cows, or a hundred, you should have all the facts about this new proven system that milks cows better and cheaper. Fill out the coupon below and mail it tonight to—

United Engine Company

Dept. M-1 Lansing, Michigan.

Gentlemen: Send me information about the United Milker. I have _____ cows.

Name _____

Town _____

R. D. No. _____

State _____

Mail Coupon NOW

FREE

Special Book of Plants that Grow

WRITE NOW!

Order your 1920 ornamental fruits and trees and plants now. Your order reserved at present prices, and shipped in time for spring planting.

For 75 years we have been known for "Plants that Grow," and fair dealing. Express or freight paid anywhere east of Miss. River on order of \$5 or more.

Peter Bohlender & Son

SPRING HILL NURSERIES

TIPPECANOE CITY (MIAMI COUNTY) OHIO

How to FEED Live Stock

Write today. Free Book.

A post card will do. Get our wonderful free booklet, "How to Feed for Bigger Live Stock Profits." Reveals valuable information on the feeding of swine, cattle, horses, sheep and poultry. Filled with interesting pictures. Also describes our wonderful course in Live Stock Feeding. Right methods of feeding all kinds of live stock, the raising of baby beef, the growing of feeds, scientific rationing—all taught in detail. No matter where you are raising live stock, write today for free booklet and learn how to make the most of your live stock.

We have brought the school to live stock feeders. Get our free booklet. Write today. Just mail a post card.

LIVE STOCK FEEDING ASSN., Div. #61 Pleasant Hill, Ohio

STRAWBERRY PLANTS

25 leading varieties, the real money makers, including the two best everbearing kinds. Also a full line of other berry plants and Garden Seeds. 27 years' experience insures your satisfaction with Weston's vigorous, heavy rooted, true-to-name stock. Our prices are reasonable, and our Free Catalog tells the truth about plants and seeds—a valuable book for the grower. Write for it. A. R. WESTON & CO., R.D. 6 Bridgman, Mich.

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.

494-10th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment.

For Best Net Results

Ship to

CULOTTA & JULL

Detroit, Mich.

"Enough Said!"

HAY

Ship to The Old Reliable House

Daniel McCaffey's Sons,

621-625 Wabash Bldg., Pittsburg, Pa.



CONSUMERS FISH CO.

Send For Price List No Profit Here GREEN BAY, WIS.

Frozen Bayfish dressed 5c; Pickled 8½c; Headless, dressed 10c; Pike 15c; dressed 16c; Steak Cod 9c, Market Cod 7c, Sable Cod 12c; Whiting (Sea Pike) 6c; Whitefish 15c; Salmon 16c; Halibut 15c; Herring large, round, loose 5c, dressed 6c. Smoked Fish in 10 lb. Baskets: Bluefish 10c; Tullibee 20c; Salmon and Whitefish Chunks 22c. Holland Herring, 10 lb. Keg \$1.20. Send remittance with order. Special prices furnished on straight box lots.

Next Year's Crop

Prepare for a better crop next year by shearing this season with a machine. Work is much easier. You not only get longer, better wool without scarring the sheep, but leave a smooth stubble that will increase next year's growth.

Use a Stewart No. 9 Ball Bearing Shearing Machine. Price \$19.25. If your dealer can't supply you send us his name. Write for catalogue. CHICAGO FLEXIBLE SHAFT COMPANY, Dept. B 127, 12th St. and Central Ave., Chicago, Ill.

Wanted

to correspond with Michigan farmers with wood to saw or land to clear in reference to the Wade Portable Gasoline Drag Saw that will take the place of several men; that will save you money, muscle, time and labor; is sold to the trade direct. For sale by

S. N. Castle & Co., Constantine, Mich.

SEED Oats, Barley, Wheat, Potatoes, New kinds Largest yielders. SURE. Catalog Free. C. A. Read, Read's Exp. Farms, Charlotte, Vt.

Farms and Farm Lands For Sale

Beautiful California

If you could own 40 acres of land in the beautiful San Jacinto Valley of California, that under care would produce as much as 180 acres in the Middle Western States, wouldn't you like to know about it? If so, write us. We not only sell the best land in America but it is kept in cultivation for you. No crop failures, no poor markets, no muddy road. Every month a harvest month.

AMERICAN LAND & SECURITY CO.

127 No. Dearborn St., Chicago, Ill.

100-Acre Michigan Farm

\$6200 with 3 Horses and

5 head stock, binder, manure spreader, harrows, gas engine, saw outfit, full list tools. Short distance RR town, stores, churches, high school, etc., 45 acres black loamy fields, balance wire-fenced pasture for 20 head, estimated 100 cords wood; fruit, 4-room house, barn, corn crib, tool, poultry houses. Owner to retire for quick sale makes price \$6200, for everything, easy terms. Details page 82 Strout's Catalog Farm Bargains 23 States; copy free. E. A. STROUT FARM AGENCY, 314 BC Ford Bldg., Detroit.

Two Farms For Sale

at Auction Feb. 4, 1920 1 P. M. 1 Farm of 100 acres, 2 miles from South Lyon on gravel road direct line to Ann Arbor, Pontiac & Detroit, running water, located so that all fields have access to same.

1 Farm of 30 acres, on same section, Virgin timber lot and pasture. Must be sold to close an estate. J. Halsey Sayre, Executor, So. Lyon, Mich.

\$80.00 PER ACRE

Will buy an all improved sugar beet farm of 80 acres in rich Sag. Valley township including a 7-room house, 3-room tenant house, barn 30x50, poultry house, wood shed, corn crib, toolshed, granary, flowing well and some tile 6 acres wheat, 1 acre rye, 6 acre meadow, 11-acre fall plowed.

This farm is owned by a widow and must be sold at once. \$1,200 down, 6% on balance. Saginaw, Michigan.

FOR SALE

Farm 107 acres just outside city limits. Two good houses, good barn, fenced with running water in every field, only half mile to condenser, price, \$5500, with only small payment down if wanted, bal. Ten years time. One of the best dairy propositions in Mich. will pay for itself in five years, and grow in value. Address JAMES S. BICKNELL, Clare, Mich.

FOR SALE

Farm off 2000 acres in the richest sugar beet section of the Thumb of Michigan. Last year's crop netted \$30 per acre other crops fully equal. Fine buildings electric lighted and water all through same. Priced right by owner. Box B-117, care of Michigan Farmer, Detroit, Mich.

OHIO FARMS

If you are looking for a farm, write for catalogue of 50 Ohio farms fully described. H. H. MASTERS, Agent, Cambridge, Ohio.

For Sale To close an estate, full section (640A) out-lying land in Alcona Co., Mich., will be sold for assessed valuation. Two miles from post office. Near Dixie highway. EMIL SCHMIED, 30 No. La Salle St., Chicago.

FARMS and HOMES

Where life is worth living. Moderate prices—genial climate—productive lands. For information write STATE BOARD OF AGRICULTURE, Dover, De.

BARGAIN price for next 30 days on my 135 acre farm in Hillsdale Co. Good soil, buildings, and location. Write for full description and terms. A. G. WELLS, R. 1, Allen, Mich.

Michigan Fruit Belt apple and peach orchard—sixty M acres; planted nine years; well fenced; modern buildings; good shape. L. M. Page, Manistee, Mich.

Wanted from ten to fifteen thousand acres of good land for colonization. Address M. ZAROHINSKI, General Delivery, Detroit, Mich.

Don't Buy A Farm, before you get our free list. DeCOUDRES, Bloomington, Mich.

Wanted To Rent furnished Dairy, Stock and Fruit farm—have sufficient help to operate same. Eugene Wedel, Gen. Del., Bartle, Oreck, Mich.

ANNUAL MEETING

OF THE

CITIZENS' MUTUAL AUTOMOBILE INSURANCE COMPANY

OF HOWELL, MICHIGAN

The annual meeting of the **Citizens' Mutual Automobile Insurance Company**, of Howell, Michigan, was held in the new office building of the Company, Saturday, January 17th.

S. R. Ketchum of Kalamazoo was re-elected Vice-President, and L. S. Hackett of Hillsdale, K. P. Gannon of Brighton, and William Brogan of Lansing were elected as directors.

The Company added during the year 16,154 regular policies. The amount of policies in force, December 31st, 1919:

<i>REGULAR POLICIES</i>	-	39,742
<i>COLLISION POLICIES</i>	-	9,940

Claims paid during 1919 were divided as follows:

	No.	Amount
FIRE	100	\$23,547.22
THEFT	312	65,460.66
PROPERTY DAMAGE	326	22,173.30
PERSONAL INJURY	127	33,087.94
COLLISION	522	38,223.15
Totals	1387	\$182,492.27

Balance on hand in cash and United States Liberty Bonds was \$44,649.65.

This completes the fifth season for the Company. The growth has been very gratifying each year.

The price of automobiles, repairs and labor have increased the past year. The Company has, therefore, made a slight increase in the rate of insurance, now charging 30c per horsepower for the regular policy and also increased the rate of its collision insurance.

The payment of 1387 claims shows the necessity for carrying automobile insurance and the Company has friends in all parts of the state who have received the benefit of the organization during the past year.

The outlook for the coming year is very bright. Automobiles are being purchased during the winter months and the prudent man takes out his policy the day the car is purchased. The agents at the meeting were very enthusiastic and predict 1920 as a *banner year*.