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EXIT—THE ONE-ROOM SCHOOL

ENTER—The Modern School for Country Boys and Girls—By R. P. Crawford

GOOD-BYE to the one-room school. It is a sad farewell for many of us, but a happy one for others. Fifty thousand of the little red and white buildings that once dotted the landscape of the open country are no more, or with barred windows suggest that they no longer are the scenes of reading, writing, and arithmetic, emphasized by liberal applications of the hickory stick. Instead the boys and girls go to fine up-to-date buildings, every bit as good as their city cousins, riding in automobile busses, a thing which not so many years ago would have been thought impossible.

Those of us who live in states where the consolidated school is a new development would find the progress that has been made in many of our more fortunate states almost incredible and indeed difficult to believe. Indiana has more than one thousand of these new kind of schools, Ohio more than nine hundred, Iowa more than four hundred consolidated schools, either erected or under construction, and Minnesota more than three hundred, while Colorado, notwithstanding the mountainous character of that state, has more than one hundred such schools. About fifty thousand of the little one-room schools have been abandoned the country over to make room for the twelve thousand fine, modern buildings, in which these boys and girls receive high school educations, just as good as the city boys and girls.

It does not necessarily follow that these consolidated schools are located in town. A very large number of them are set right out among the farms. In a great number of cases the people in the tiny villages and the surrounding country have gone together and erected a school, thereby securing educational facilities far better than could have been obtained if they had each

maintained their own schools. In practically no cases are consolidated schools located in large cities.

It does not necessarily follow that in every case a consolidated school should be erected and one-room schools abandoned, but in thousands of places in this state and in the surrounding states such schools afford practically the only solution of giving the country boys and girls an adequate education. Iowa is remarkable in the development of consolidated schools. It took approximately seventeen years for Iowa to secure its first seventeen consolidated schools, but it took only six years to secure the next three hundred. During the last school year approximately one new consolidated school district was formed for every day the schools of the state were in session. In that state, approximately three thousand one-room rural schools have been closed, and more than fifty thousand children are being transported every day to these up-to-date consolidated schools.

Those who are acquainted with only the little one-room schools would certainly be amazed at many of the modern school buildings in Iowa. The first place that we shall visit will be the Orange township community near Waterloo, Iowa. Here is found not only a fine consolidated school, but also perhaps one of the most elaborate country churches in the United States, and a community life and development that is remarkable. Probably the Orange

township school is one of the most imposing country schools to be found anywhere. It is set well back from the roadway with five acres of grounds, well laid out in front with shrubbery and trees. The school building was erected in 1916 at a cost of \$52,000. A home for the janitor and a residence for the superintendent have since been built. When I visited this school some months ago, there were two hundred and forty-four students enrolled. Out of this number seventy were enrolled in high school. Before the consolidated school was established there were ten little country schools with a total enrollment of one hundred and

forty. There was no high school work offered in the township either, and perhaps only the fifteen or twenty boys would leave the township each year for further education. The school district itself embraces thirty-eight sections and twelve busses are used for transportation. The high school boys furnish teams and are employed as drivers at salaries from \$50 to \$75 a month.

Community Spirit Important.

The community spirit that prevails in this township is one of its remarkable features. The school house is in use nearly every night in the week for some community entertainment or meeting. The community library society meets every Friday and everyone takes part in the program. The Orange township band of thirty pieces is an important organization. The last day of school, even when the district

school were in operation, has always been made an important celebration, with picnic dinner, games for adults and children, and the base ball game. Each fall the harvest picnic is held on the banks of some stream, when the men and older boys teach the younger boys to swim. Here and there is also a community banquet when newcomers are the guests of the town.

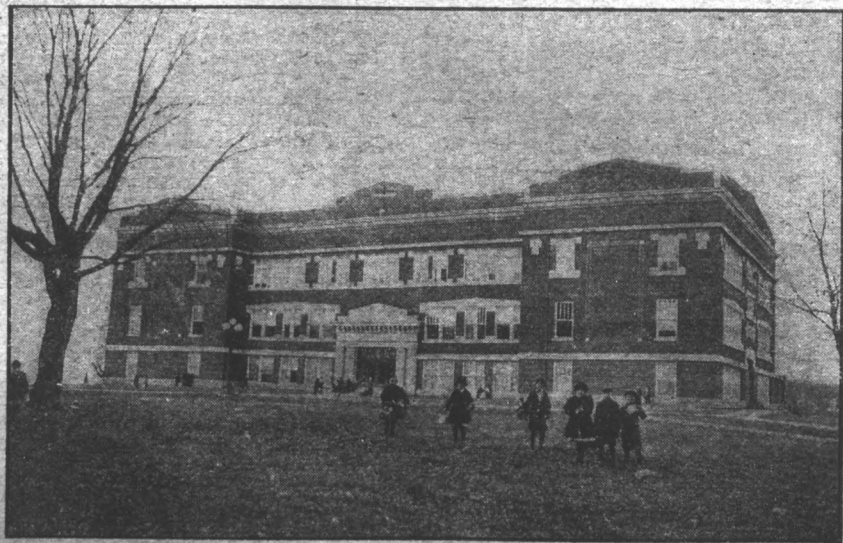
Of course, the church plays an important part in community life. It was erected a few years ago at a cost of approximately \$40,000. It is heated by steam, lighted by electricity, and has an air pressure water system with hot and cold water throughout the building. There is a well-equipped kitchen, no high school large dining-room, twenty small individual Sunday school rooms and a rest-room where the little children are cared for during the church service. The church has about three hundred members, and the average attendance at the morning service is about three hundred and fifty, and at the evening services about two hundred.

This township is remarkable in that farmers when they retire, instead of moving to town buy a little acreage near the church and school and settle down there. Along the country road, one will see a row of fine, modern homes, comparing favorably with any in a city, but it is in no sense a town, since there are no stores or places of business. It is simply a little country community. The teachers in the school never have trouble finding boarding places, because the homes are always open to them. The story of these other features of the Orange township community life is told here, because it shows what can be accomplished.

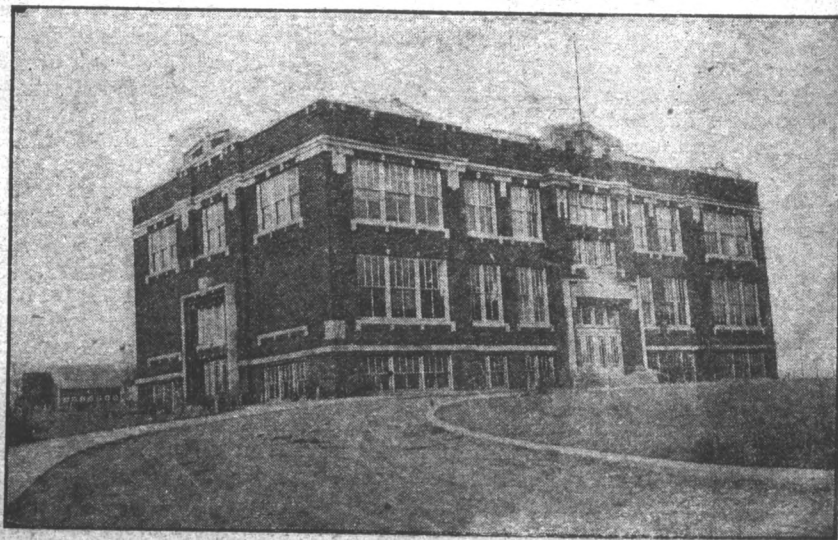
Readers who would like to know just how good a village school may be, are invited to take a little trip with us to

(Continued on page 259).

Editor's Note.—This is the first of a series of five articles dealing with consolidated rural schools written for the Michigan Farmer. The author has traveled approximately ten thousand miles studying the best rural schools in America and gathering material for these articles. He is recognized as an authority on this subject.



This 400-pupil Consolidated School is Every Bit the Equal of Any City Educational Institution.



The Orange Township School is Strictly an Open Country Institution and the Center of a Remarkable Community Life.



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DETROIT, FEBRUARY 26, 1921

CURRENT COMMENT

The Future Economic Balance

AS the period of readjustment progresses, a more general and pronounced note of optimism is to be heard in business circles. This is especially true in the eastern section of the country, which was first to feel the stress of general readjustment and liquidation. It is just beginning to be true in the central areas, where the general condition of unemployment is being gradually relieved, but according to current report has not yet reached the western areas which were last to feel the full force of general liquidation.

In this connection it is significant that this note of optimism is most generally voiced by those who have the best opportunities and facilities for a comprehensive economic analysis of the situation. The opinion that business conditions will soon be stabilized and begin to improve is constantly finding more frequent expression in every quarter, and as soon as this opinion becomes general, practical results of this kind are sure to follow. How soon this will occur and how it will affect the business of agriculture is a subject of great interest to every farmer, particularly at this time when plans are being matured for the season's production campaign.

Farm products were first to feel the full effect of the readjustment process, for obvious reasons. The season's crops were matured during the early stages of the period, speculative holding was discouraged by the general and urgent necessity for liquidation, by the general restriction of credit and by the lessened demand which always accompanies a general condition of unemployment. As a result prices for farm products suffered a greater decline than prices for most other commodities. This fact is clearly illustrated by price figures recently compiled by a committee on economic research maintained by Harvard University, which is doing some very significant work in studying the general trend of commodity prices and business activities.

Figures recently compiled and released by this committee show the present level of prices for farm products to be thirty-two per cent above the pre-war prices which obtained in 1914, while the index price for all commodities is seventy-seven per cent above the pre-war level, and individual commodity prices range as high as 184 per cent above that level, which is the

figure given for house furnishing goods.

While there is always considerable variation between the index prices of all commodities and the prevailing price of individual commodities, this difference is always less pronounced under normal business conditions than in periods of business disturbance and adjustment. It is thus logical to look for a narrowing of the spread between commodity prices with the progress of readjustment and the resumption of more normal business conditions. This movement may be in either one or both of two directions. It may result from the advancement of prices for commodities which have suffered the

greatest decline or from the further decline of prices for commodities which have suffered least. The opinion of the Harvard committee is expressed in the following excerpt from their late statement: "The heavy liquidation which has been forcing down commodity prices is apparently at an end, but buyers in certain lines believe that further concessions are to be gained by holding off a little longer."

The logical interpretation of this statement, which we believe fairly represents general business opinion is that the general drop in commodity prices has been stayed, and that while further readjustments will tend to level the wide spread between these prices, the

reaction of prices which have reached the lowest levels will be most pronounced in this movement.

Viewed from this standpoint it is a reasonable conclusion that this reaction will be most marked in future prices for farm products. And if the conclusions of the Harvard committee and the general opinion in business circles is correct this reaction may begin to be apparent during the spring months.

Certainly, business conditions are likely to become better stabilized and at least nearly approach normal during the present year, which prospect warrants the immediate resumption of normal activities by the farmers of Michigan and the country. Agriculture is the nation's greatest source of new wealth, the benefits of which will first accrue to the farmers who create it, just as surely as the full burden of readjustment was first felt by them.

Farm Bureau's New Secretary

Executive Committee Selects Mr. Brody

THE Michigan State Farm Bureau has a new secretary. Clark L. Brody, the very efficient and successful agricultural agent of St. Clair county, was the choice of the executive committee. Mr. Brody after careful consideration, has accepted the responsibility and will start upon his new duties March 1.

No one seems to know of an agricultural leader better qualified to take up the exacting duties and to fill the difficult position of carrying on the work of this great organization of farmers. Mr. Brody has just finished six years of service as St. Clair county's agricultural agent. He is largely responsible for the organization of 2,350 St. Clair county farmers into twenty-three cooperative marketing associations, ninety per cent of whom were made farm bureau members; for

the tile drainage project mentioned above, has received the widest publicity. Throughout the state and nation the story has been told of his successful effort to persuade the farmers of the level areas in the county that their first important act in the program of production is the construction of an adequate system of tile drains. The results from the six hundred and more acres drained during the past two years has converted whole neighborhoods to the necessity of soil water control. Although an expensive undertaking the farmers and the county leaders have become so convinced of the value of this work that they have engaged a county tiling engineer to work under the direction of the County Farm Bureau.

Another activity in which this progressive agricultural agent was the moving spirit was the ridding of St. Clair county of tubercular cattle. Out of more than one thousand cows tested in 1920 from five to seven per cent were found to be reactors and were destroyed. To complete this work the farmers of the county are now arranging for an expert tester to test every cow in the county. The Port Huron City Commission has recognized Mr. Brody's work for better milk by requiring that all milk sold in the city be from healthy cows.

The attitude of the board of supervisors of St. Clair county toward their agricultural agent has been unusually generous. Beginning with an appropriation of \$1,000 the supervisors have shown their appreciation of Mr. Brody's work by each year increasing the appropriation until in 1920 it had reached the sum of \$5,000.

No person could be in closer sympathy with all phases of practical farm life than is the new secretary of the Michigan State Farm Bureau. He was born on a farm in St. Joseph county in 1879 and was graduated from the Michigan Agricultural College with the class of 1904. For eleven years thereafter Mr. Brody worked his father's farm and during the last three winters of this period he served his alma mater as extension specialist. He left the farm in 1915 to take up his work in St. Clair county.

Through hard but careful work and the constant devotion of his efforts to constructive lines, Clark has won the fullest confidence of all who have come in contact with him. In the words of one of his associates, a former county agent, and one who worked along with him in the State Farm Bureau organization movement, "Mr. Brody is a quiet, rather reserved man who wears well. He inspires confidence wherever he goes, and the longer people work with him, the better they like him."

We bespeak for Mr. Brody the fullest cooperation of all those constructive agencies looking for the development of an efficient farmers' economic organization.



How the Newly Elected Secretary Looks on Sunday.

raising the number of farmers' clubs in his county from five to twelve; for the introduction and adoption of a practical scheme of tile draining the flat lands of St. Clair county; for the launching of a campaign looking toward the elimination of tubercular cattle from the herds of the county—these are some of the outstanding things on Mr. Brody's record of these past six years of work.

In but few counties of the state are the farmers as thoroughly organized for marketing the products of their farms as in St. Clair. Mr. Brody went about the matter in a business-like way, insisting that each cooperative association be incorporated separately and placed on a sound financial basis. These associations now number twenty-three. There have also been established four local markets for the disposal of surplus milk, cream, eggs and fruit.

While Mr. Brody's success as an organizer has without question been his greatest accomplishment during this period, his work in connection with

News of the Week

Wednesday, February 16.

REPRESENTATIVES of every business factor in the industrial world are sitting in Philadelphia to consider ways and means of putting the building industry on the road to normal activity.—The Canadian government, according to recent information, will hereafter select its own governor-general.—American sugar production in 1920 broke all records, the aggregate being 2,605,174,000 pounds, or a twenty-five per cent increase over the previous record.

Thursday, February 17.

THE United States Senate passes the Fordney emergency tariff bill by a vote of forty-three to thirty, and the bill now goes back to the house for amendment.—Japan is coveting the new Chinese port of Hulutao which is being developed by Chinese merchantmen.—March wheat advances 28½ cents in three weeks.—Michigan republican state convention convenes at Detroit, nominating James B. Moore, of Lapeer; Joseph Steere, of Sault Ste. Marie, and Howard Weist, of Lansing, for justices of the supreme court; W. H. Sawyer, of Hillsdale, and Victor M. Gore, of Benton Harbor, for regents of the university; Frank F. Rogers, of Lansing, state highway commissioner; Thomas E. Johnson, of Coldwater, for superintendent of public instruction; Fred A. Jeffers, of Painesdale, member of state board of education; John A. Doelle, of Marquette, and M. B. McPherson, of Kent county, members of the state board of agriculture.

Friday, February 18.

AN agreement is apparently reached between the United States and Great Britain in the Mesopotamia oil controversy.—The American Farm Bureau Committee of Seventeen votes to recommend the formation of a non-stock, non-profit corporation to be known as the National Sales Agency which will handle the marketing of grain after it leaves the producer.—Improvement of trade with the Orient is noted from reports of transportation companies.—Twenty states will join with Wisconsin in challenging the right of the Interstate Commerce Commission to regulate state railroad rates under the transportation act.

Saturday, February 19.

LOYD-GEORGE declares in the House of Commons that the British should not expect Germany to pay all that is being asked of her by the allies.—In six hours the senate passes appropriation bills aggregating more than \$860,000,000.—According to a statement of the Michigan Tax Commission, there was paid \$30,000,000 more into the state, county and city treasuries during 1920 than in 1919.—Because fifty per cent of her population is on farms, France has been able to weather the unemployment situation better than most other European countries.

Sunday, February 20.

FORMER JUSTICE HUGHES accepts President-elect Harding's offer of the position of secretary of state in the next administration.—The senate passes an immigration bill which will permit 354,000 foreigners to land in the United States during the year 1921.—James R. Angell, son of Dr. James B. Angell, for many years president of the University of Michigan, is elected president of Yale University.—A blizzard is raging along (Continued on page 284).

The Agrarian Movement in Canada

What the Organized Farmers Are Doing Across the Border—By John Gladstone Grace

AGRICULTURE now promises to become the dominating calling of the twentieth century on this continent. "Get into politics or get out of farming," is the slogan in all the provinces of Canada. Agriculture has no status in any country. History will be searched in vain to find a clear definition or recognition of the class which cultivates the soil. Denmark, Belgium and Britain are breeders and exporters of stock, but these countries do not class with Russia, the United States, France or Canada as grain-growing nations. In the days of George and Martha Washington, a young man could not be classed as a "gentleman" unless he belonged to the learned professions or enlisted in the army or navy. Such was the rigid standard of citizenship laid down during the reigns of the Georges and Henry VIII. In more recent times in old Britain, successful distillers, brewers, landed gentry and promoters, made up the most exclusive aristocratic circles.

The United States was probably the first among the great powers to recognize agriculture in their international treaties and tariffs, since the Civil War. Many of our Canadian governor generals, since confederation in 1867, were men of wealth, who owned fine herds, deer parks, landed estates and many saloons in London. Lord Dufferin had great admiration for the American republic and when viceroy of the Dominion in the '70's, had almost decided either to go into mixed farming in Ohio, or fruit growing in California. The great estates in England, Scotland and Ireland, of the Clarendons, Devonshires, Lansdownes, Derbys, Greys, Marlboros, and others such, can be traced to the days of religious persecutions and land confiscations.

The rapid growth and achievements of the agrarian movement in Canada have no precedent on two continents. Old Europe can point to kingdoms being swept by a brilliant personality or a popular war cry, but they are no parallel. The populists of the western states of the American nation in 1893, and the free silver parties, both looked formidable in some sections about thirty years ago, but faded quickly. The Granges and the Patrons of Industry in Canada loomed large on the political horizon in 1893-4, but they never got anywhere. It is not a prophecy but an established fact that four of the largest grain-growing and mixed farming

provinces or states of the Dominion today are successfully governed by the cultivators of the soil. Over seven billion dollars is the estimated capital invested in agriculture in Canada. The progressive party—farmer, labor and soldier—base their claim to national recognition on the grounds that this enormous sum of money and the legion of producers involved, have practically no voice in the government. The same is practically true of Washington. Saskatchewan is the foremost wheat-producing province in the British Empire, ranking next to Siberia in the grain lands of the world. Canadian farmers realize that our war debt must be paid from the top six inches of the soil, and not by bankers, brokers, promoters or lobbyists who own administrations while temporarily in charge of the treasury.

At its birth the new movement had many transplanted American farmers to stand sponsors at the christening of the "Grain Growers' League," and like a patch quilt it soon covered the provinces of Manitoba, Saskatchewan and Alberta. The eastern statesmen neither at Ottawa nor Washington heeded the farmers' organization. This I may say, is made clear by the late Sir Wilfred Laurier's attitude while prime minister in 1910. Going along through the prairie provinces in a C. P. R. special train, a flag in the distance was the signal to stop to hear a delegation. Mr. Tom King, the famous Toronto journalist and nephew of General Sherman, who was Sir Wilfred's closest personal friend, would call out: "Another grain growers' petition, and another speech, Sir Wilfred." The aged chieftain and the whole party joined in the laugh. Premier Laurier would say: "These grain growers are very persistent, but they will vote Liberal or Conservative on election day in the same old way."

That was before the farmers found the young school teacher, Tommy Crerar, who gave up the classroom to return to his father's farm. At the big farm conventions the grain brokers, market manipulators and the whole

plant of middlemen were there with bells on. In ringing tones young Crerar told the convention that the farmers were only wasting their time. "You must resolve to be farmers on election day, as well as the other three hundred and sixty-four days of the year. Otherwise you might as well dissolve."

H. W. Woods, from Missouri state, was new in the west then, and young, but he endorsed Crerar. The problem was solved. The basis of an organization was formed which today is nationwide in its usefulness and influence. Mr. Wood is president of the farmers of Alberta province, and many of the leaders in the agricultural development of the Canadian West came from Pennsylvania, Ohio, Missouri, Minnesota, Dakota, Kansas, Wisconsin, Michigan. Unlike so many of the foreign elements, the Americans brought with them trainloads of stock and modern farming implements. They made a deposit in the nearest bank, and without further ceremony went to work as full-fledged citizens. The late James J. Hill, of St. Paul, who was Ontario-born, was heard at his best when he recalled the relations between the troops of Minnesota and Manitoba when they exchanged visits about fair time, after harvest, in the old days. London, Washington or Ottawa were never consulted.

Ontario dominates the official and political life of the new provinces of Scotch, Irish and English extraction, but the next house of commons of Ottawa will have a good-sized contingent of transplanted American farmers who will be nominated by the agricultural constituencies of Saskatchewan, Alberta, Manitoba and British Columbia provinces. In the provincial legislatures elected within the past few months are several former citizens of the United States.

In the county and municipal bodies of the Canadian West the Yanks of the younger school are given a preference. They are all advocates of the state or provinces controlling the natural resources—vast coal areas along the Rocky Mountain foothills; gushing oil

wells; timber and water powers. They argue, for instance, that it was a continental misfortune that the Pennsylvania coal fields were not appropriated by the state or nation when first discovered. The laws, customs, climate and traditions of both countries were so similar that the settlers from the great republic who took up land were never strangers. In the Civil War in the early '60's the Canadians, disregarding British sympathies with the south, were strongly allied with Lincoln, and forty-five thousand men, chiefly of Irish extraction, the records show, fought in the northern battalions.

Underlying the agrarian movement in this Dominion is a strongly developed "Canada first" sentiment which is manifesting itself in the insistence of a Canadian embassy at Washington, and reserving the right to veto hereafter the appointment of governor-generals who are known to harbor imperial or jingo leanings. What are the farm-labor-soldier leaders demanding? Better laws for the producers; cooperation in purchasing farm implements and equipment; the abolition of the middleman in feeding the masses; better rural roads; exercising more care in the selection of seeds and sires; improved facilities for marketing or withholding from speculators the grain crop and live stock for export; cooperation in household work, such as washing, milking, baking and a general lightening of the burdens of the farmers' wives and daughters. These are only some of the reforms, but the chief aim of the new progressive party in the federal house of commons, is to see that the "invisible government" to which the Borden Union administration surrendered after being returned in 1917, and which is still in control, is dislodged and banished as a pirate and war profiteer. Hon. T. A. Crerar, M. P., of Manitoba, is the accredited federal leader of the farmers and will be prime minister of the Dominion.

Our only war heroes are our private soldiers. The Canadian publicity bureau at New York, acting under instructions from the regency at Ottawa, and the press propaganda, are tireless in their efforts to make Americans believe otherwise. With the restoration of peace, I believe all patriotic Canadians share the view that we should enter upon a new international era of industrial development with a new charter.



Michigan's Efficient and Progressive County Agricultural Agents



Reading Left to Right.—C. L. Drake, Antrim; Kris P. Bemis, Mason; R. L. Olds, Kalamazoo; V. C. Vaughan, Leelenau; J. P. Johnson, Alger; O. I. Gregg, Wayne; C. B. Cook, Oakland; Stanley F. Wellman, Lapeer; L. V. Benjamin, Baraga; H. V. Kittle, Clinton; F. S. Dunks, Livingston; William Murphy, Macomb; J. V. Sheep Shiawassee; A. J. Hutchins, St. Joseph; Arthur C. Lytle, Otsego; E. S. Brewer, Presque Isle; C. P. Milham, Ottawa; H. E. Dennison, Shiawassee; L. T. Pickford, Oceana; H. S. Osler, Washtenaw; Frank Bennett, Barry; C. O. T. Scheetz, Alpena; E. E. Twing, Kalkaska; C. M. Kidman, Cass; Wm. F. Johnston, Wexford; E. L. Kunze, Chippewa; Alex. McVittie, Tuscola; G. Carr, Kent.



Reading from Left to Right.—Ralph Carr, Lenawee; Clayton Cook, Gratiot; M. C. Thomas, Monroe; P. C. Jamieson, Calhoun; C. L. Brody, St. Clair; C. H. Knopf, Manistee; S. S. Smith, Genesee; Mr. Cavanaugh, Sanilac; Karl H. Miller, Dickinson; Roy E. Decker, Eaton; J. D. Martin, Sanilac; Irving Kirshman, Menominee; L. B. Walker, Marquette; C. E. Gunderson, Gogebic; C. V. Ballard, Jackson; Alex. McVittie, Tuscola; L. Kraker, Benzie; Clair Taylor, Newaygo; C. W. Wing, Charlevoix; Alfred Bentall, Allegan; P. H. Smith, Missaukee; C. P. Pressley, Schoolcraft.

New Members for Board of Agriculture

Electorate Will Undoubtedly Choose These Men At Spring Election

JOHN A. DOELLE.

THE Michigan Farmer has asked me to give a sketch of John A. Doelle, nominated for membership on the State Board of Agriculture at the republican convention in Detroit on February 17. I suppose that what the readers of the Michigan Farmer will particularly wish to know is the significance of Mr. Doelle's nomination—in this state equivalent to election—to the Michigan Agricultural College and to Michigan agriculture. Does he possess a first-hand knowledge of farming and of school methods and problems? What will be his attitude towards the Agricultural College and the other members of the State Board of Agriculture? What kind of a personality has he? Is he a politician or a constructive worker in the cause of better education and agriculture? How is he regarded in the upper peninsula?

Mr. Doelle learned agriculture in the most practical school of agriculture that the state possesses—a Michigan farm. He was born on a farm near Yale in St. Clair county, just long enough ago to place him now in the prime of life. He helped clear that farm, when yet a mere boy, and he followed the plow, swung the ax, did the chores and whatever else belongs to life on a Michigan farm in the pioneering period.

After his graduation from the University of Michigan, a score of years ago, Mr. Doelle followed the profession of teaching. I say "profession," for he made teaching the serious business of life. He believed in it and worked at it with all the energy that belongs to him—and Mr. Doelle is always a very energetic man.

His first school job was at Benton Harbor as high school principal. Then he took the long jump to Houghton in the copper country, where he soon became superintendent of schools. The Portage township school system which centers at Houghton, covers a district containing one hundred and seventeen square miles, served by thirteen separate school buildings under one management. This is a township school system, quite characteristic of the northern peninsula of Michigan, and it would be well if it were more characteristic of the southern peninsula also. The district comprised an aristocratic residential section on Portage Lake, several mining "locations" chiefly populated by un-Americanized Finns. During Mr. Doelle's superintendency the district adopted many progressive ideas in education, such as free textbooks, domestic science and manual training, employed busses to bring the pupils living at a distance to school, and built up a personnel of teachers that was freely conceded to be one of the strongest in the state. As an educator, Mr. Doelle's principle was, to secure the best talent that he could find and then meddle as little as possible, leaving the teacher free to make or break, being answerable for results only. Strong teachers liked his attitude. Weak teachers were encouraged to do better, and it was only when on rare occasions that hopeless incapacity was manifested, that resignations were called for.

Near the southern extremity of his district dwelt the Otter Lake settlements of Finnish farmers. Its agricultural methods were primitive. In their midst the school district, under Mr. Doelle's leadership, erected the well-known Otter Lake Agricultural School, the parent school of some thirty similar schools now established in Michigan. The building had the construction and equipment usually found only

in the better sort of city schools—electric lights, flowing water, modern lavatories, laboratory apparatus, and hygienic surroundings. It also stood on a tract of forty acres adapted to field work in agriculture, and much of it was eventually put to this use. This school has wrought a revolution in rural conditions at Otter Lake. What was good for Otter Lake seemed good for the rest of the state, and since such schools are performing a service in the cause of improving rural conditions and agriculture to the benefit of the state as a whole, it was deemed well to encourage their erection generally throughout the state by securing provision for state aid. Mr. Doelle, with the assistance of Mr. L. M. Geismar, agricultural agent of Houghton county, and of Mr. J. G. Stone, a corporation lawyer interested personally



Northern Michigan's Nominee for Agriculture Board.

in agriculture and a member of the township board of education, drafted the law which, with amendments, is now the statute under which some thirty rural consolidated agricultural schools have been established in Michigan. I had knowledge of the proposal before it was presented to the legislature of 1917, and I can say that not many people besides Mr. Doelle, had faith in it or took it seriously. Few, including the then superintendent of public instruction, believed it would pass; but the Grange got behind it, and it went through and surprised most people by instantly winning favor in the rural portions of the state. It required some amendment at the hands of the experts in the department of public instruction, but since its enactment in 1919, it has taken its place as one of the most constructive pieces of agricultural legislation in the history of the state.

While engaged in building up his "pet" school at Otter Lake, Mr. Doelle manifestly was becoming more and more interested in the problems of the upper peninsula agriculture and development. In 1917, he relinquished his superintendency of the Portage township schools, to take active charge of the work of the war industries resources committee in the upper peninsula, with office at Ishpeming. This work ceased soon after the armistice, and, the secretaryship of the Upper Peninsula Development Bureau becoming vacant, Mr. Doelle was appointed to the position which he still holds. This position has afforded Mr. Doelle full opportunity for investigating and experimenting in relation to the natural resources and agricultural possibilities of the upper peninsula. He

in it. Not everything which he has tried out has proven successful, but the bureau under his leadership has promoted every promising developmental idea, and it is quite likely that the district owes the newly aroused public interest in its possibilities to Mr. Doelle's tireless efforts.

Mr. Doelle seemingly is tireless. He is the best illustration of the human dynamo that I know of. He is particularly likely to be working when and where most men take a rest. At Houghton we were quite sure that, if the day were particularly disagreeable, Mr. Doelle would choose that occasion for the long sixteen miles to the Otter Lake school for a visit of inspection. Mr. Doelle believes in not trusting to hearsay in regard to matters entrusted to his charge.

As a member of the State Board of Agriculture, he will inform himself fully as to its needs and performance. Yet he is not the meddlesome, hard-driving, ruthless executive. After four years of employment under Mr. Doelle, I do not know any master I would rather serve. He is extremely sympathetic towards all who are associated with him and extremely anxious to be of service himself. He has the spirit of cooperation in a very high degree, and in no sense does he seek to dominate. He is very much alive, however, and if he can do anything to vitalize the work of the college, make no mistake, he will do it.

His interest in Michigan agriculture is not confined to the upper peninsula. His early career and present associations assure concern for the whole lower state, but he is particularly anxious to have the college function for the development of northern agriculture, without curtailing its present work for the southern counties. He has had to undertake experimental work that properly belongs to the upper peninsula station at Chatham. He is deeply interested in the state soil survey and classification, and the development of our cut-over lands, in land colonization and rural credits.

I know of no man in public life who is freer from purely selfish motives or who is personally less corruptible. That he should become one of the six members of the State Board of Agriculture is well, both for the college and for agriculture in Michigan.—C.

M. B. McPHERSON.

THE second member nominated for a position on the State Board of Agriculture by the Michigan state republican convention at Detroit was M. B. McPherson, of Vergennes township in eastern Kent county. As with Mr. Doelle, this nomination means election—the election of a man unusually well qualified to discharge the important duties incumbent upon the members of this body.

Mr. McPherson does not need to be introduced to things agriculturally for he is a real farmer, having been born forty-four years ago on the farm he is now working. He is a graduate of the Lowell High School and of the Grand Rapids Business College.

His efforts at farming have been attended with unusual success. On the two hundred and twenty acres of land which he owns and operates, the production of tree fruits and pedigreed grains has been carried to a high degree of perfection and according to Mr. Carr, Kent's agricultural agent, Mr. McPherson is a very strong advocate of Red Rock wheat.

Besides being a successful farmer he has given considerable attention to

public affairs. For several years back he has represented his township on the board of supervisors and in that capacity has championed the rights of the rural folks on a county board with a very large city representation. His sympathies are broad. He is at home among all classes of people and has the ability and the courage to stand by his convictions.

Those who know Mr. McPherson well have confidence in his ability and believe he will make a valuable man on the board to which he will be elected, without doubt, at the April election. Those functions of the college relating directly to practical agriculture will receive his very closest attention.

LATEST FARM BUREAU NEWS.

A STATE income tax to supplant the present intangible tax on bonds and mortgages is favored by ninety-one per cent of County Farm Bureau officers in fifty-two counties making reply to the State Farm Bureau questionnaire on that proposition. The farm bureau stated in its questionnaire that Governor Groesbeck has informed the legislature that real estate was paying eighty per cent of the state taxes and that personal property paid but twenty per cent. Proponents of the state income tax plan argue that the present intangibles tax is easy to evade and is evaded.

The Michigan Hardwood Association has appointed a committee of three, headed by M. L. Saunders, of Cadillac, to work with the Michigan State Farm Bureau in effecting corrective legislation with respect to Michigan timber lands. A yearly tax based on the bare land with a deferred tax on the timber when it is marketed is favored. The present taxation system taxes the timber each year, a condition which causes the lumbermen to lumber off their holdings as rapidly as possible, bringing about the evils of overproduction and an undue depletion of the state's supply of lumber, according to F. H. Sanford, of the Farm Bureau Forestry Department.

Inequalities in freight rates between Michigan and southeastern territory and those between eastern and southeastern territory, said to give eastern agricultural shippers an advantage over Michigan producers shipping into the south will be removed, says the State Farm Bureau Traffic Department in reporting that the railroads have agreed to make concessions and prepare new rates on middle west agricultural shipments into the south.

Shipments of seed may possibly be accorded the stop-over privilege on transit freight, says the Farm Bureau Traffic Department. Seed has not been accorded this privilege.

Manufacturers are absorbing much wool from the Michigan State Farm Bureau wool pool. Sales made recently bring the sales total to approximately a million pounds. Of the remaining 2,500,000 pounds over a million pounds has been graded. The grading work is progressing at the rate of 20,000 pounds a day. The farm bureau now has two factories manufacturing blankets and auto robes.

A CORRECTION.

In last week's issue the announcement was made that A. J. Rogers, of Beulah, former member of the executive committee, was appointed secretary pro-tem of the Michigan State Farm Bureau. The word "former" should have been omitted, since Mr. Rogers is still a member of the executive committee.



Here Two of the Old One-room School Buildings Are Used as Homes for the Janitor and Superintendent.

Exit—One-Room School

(Continued from first page). The other side of Waterloo, Iowa, and visit the consolidated school in the village of Jesup. It is an unusually fine building, the total cost of which, including building, ground, and equipment, was \$110,000. Here there are about four hundred pupils in attendance, half coming from the country and half from the village. Approximately forty-eight sections are embraced in this consolidation and eleven one-room schools were abandoned.

The school grounds embrace approximately eight acres, furnishing a splendid setting of grass and trees for the school building. The building itself has an extreme length of one hundred and fifty-nine feet, and a depth of ninety-eight feet. A very noticeable feature is the wide corridors approximately sixteen feet wide. The building has three floors, the lowest floor being nearly level with the ground. The first floor takes care of the two lower grades, the manual training department, the gymnasium, the shower baths and locker rooms, and a lunch room off the gymnasium. On the main floor are grade rooms, and quarters for the agricultural department and a sewing room. On the third floor is a model house-keeping suite consisting of kitchen, dining-room and bedroom. There is a tile bathroom off of the bedroom. The dining-room has a fireplace in it. The kitchen is equipped with a large gas range and a built-in refrigerator. There is also a dumb-waiter running to the lowest floor so that some things may be cooked upstairs and sent down to the lunch room. The idea here is to give girls practical experience in keeping up a home of their own. On this floor is also a suite of rooms for the various science departments. There are also four recitation rooms on this floor. The school is provided with a good auditorium, opening out into the corridors, and as many as six hundred and fifty people have been accommodated at one time.

In fact, one might say that this school building is equipped as well as any city building in every particular. There are telephones connecting the office with every room, a large vacuum cleaning plant in the basement, and a clock system with clocks in every room operated by one central clock. Outside the building there is a covered driveway so that the children can be unloaded from the busses in stormy weather without getting wet.

Cost of Running Schools.

Professor Macy Campbell, of the Iowa State Teachers' College at Cedar Falls, completed a very interesting

study of the Orange township and the Jesup schools just mentioned. He first found that the cost of one hour of schooling under the immediate direction of a teacher in the one hundred rural schools of Black Hawk county was twenty-seven cents per pupil per hour. In the Orange township school the cost was eighteen cents per pupil per hour, and the Jesup school twenty-four cents. The tax levy for the running expenses of the Jesup school was twenty-three mills and for the Orange township school 23.3 mills. The tax levy for the running expenses of the one hundred one-room schools in that county averaged 11.6 mills, while the levy for the Waterloo city school was 32.2 mills. Consequently it will be seen that the consolidated schools cost more money than the one-room school, but are really cheaper when one takes into consideration what one gets for his money. Even at that, the country people get off with a smaller tax than in the city. If a farmer was offered twenty acres of stump-covered, marshy land for \$1,000, and twenty acres of the best land in the world for \$2,000, he would probably buy the latter, and call it a bargain. The same thing is true with schools, and Iowa farmers seem to be finding it out.

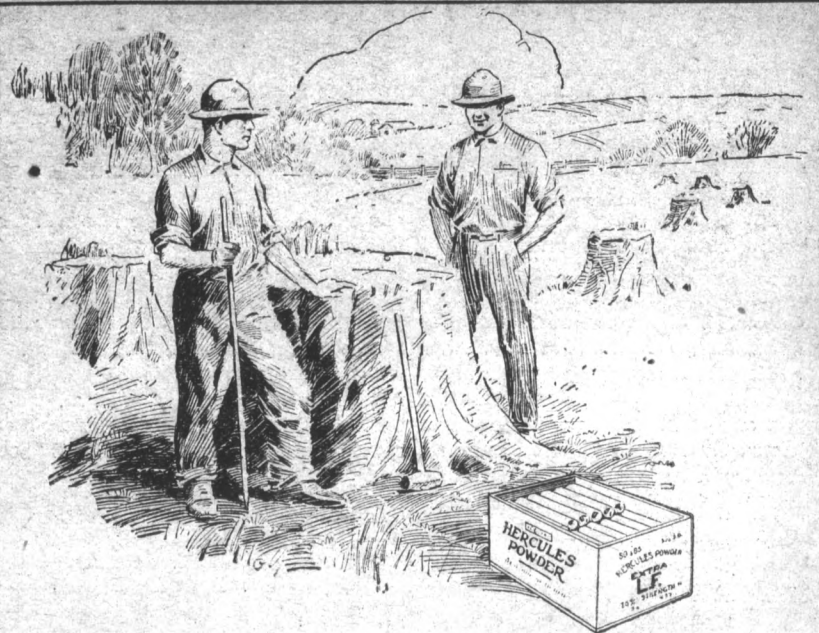
However, just because the schools we have described are elaborate and represent a good-sized investment, it does not necessarily follow that all consolidated schools have to be large and imposing buildings. There are a number of splendid examples of country schools in the state of Iowa where good types of brick buildings have been erected in the open country at a cost of \$20,000 to \$25,000. These schools are especially desirable where it is not advisable to tie up a large amount of money. We shall visit two such schools.

Five miles north of the town of Alta, Iowa, is the Fairview consolidated school. Buena Vista county, in which this school is located, has numerous splendid consolidated schools, and this school is only representative of a number of others.

In fact, approximately three-fourths of this county is consolidated. The Fairview school is a good type of small open-country consolidated school. Thirty-four sections are embraced in the new district and ten or eleven schools were abandoned in 1915 when this school was built. There are approximately one hundred students enrolled in the school and about a fifth of these are in the high school. The building, a small two-story structure, cost about \$25,000. On the first floor are a large assembly room, domestic science room,



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The machine I bought of you in 1916 has given continual service to date without a single repair, and at present needs only the small cast wheels that support the drum, and their supports. —J. McGRARY, Massena, N. Y.

I am more than busy with my Sheldon Mixer. I have more work than I can do. I get \$10 a day when I work out. —JESSE L. WITTER, Wellsville, N. Y.

Last spring we purchased a set of castings to make a concrete mixer. It was constructed per the plans furnished and it sure is a great asset. —D. M. BRUBAKER, Freeport, Ill.

George Hank of Ackley, Ia., writes that he "put through" 100 yards of concrete in 21 hours. That's more than 40 cubic yards for an eight-hour day.

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Mention The Michigan Farmer When Writing Advertisers

and rooms for manual training and agriculture. On the second floor are five classrooms. The building is heated with steam and a pressure water system is provided. Near the school is an eight-room modern home provided for the five teachers free of charge. The expenses of running this school are between \$12,000 and \$15,000 a year. The cost of operating the seven bus routes is between \$650 and \$700 per month.

A unique feature of this school is a three months' short course in the winter for farmers and farm boys who have left school and desire to do some extra work during the winter months. During one winter, for instance, a week was devoted to traction engines, another week to farm accounts, another to stock feeding, and still another

week to electric wiring. Perhaps a third of the voters in the proposed district may file a petition with the county superintendent asking for the consolidation. Objections may also be filed with the same officer. Those finding fault with the county superintendent may make an appeal to the county board of education. The law then provides that an election shall be called after the preliminaries have been decided upon. Village and country people vote separately and if a majority vote is not secured in both village and country, the consolidation cannot take place. Of course, this applies only where it is proposed to consolidate with a village, and not where the proposed district is entirely rural.

Another good open-country consolidated school in Iowa is the Okoboji consolidated school near Milford. This school has about one hundred and sixty pupils, with a third of them in the high school. The cost of this school was \$25,000 and the cost of maintenance per year is about \$12,500. A unique feature in connection with this school was the moving in of two of the old school houses to serve—after being remodeled—as homes for the teachers and janitor.

In Iowa a consolidated school dis-

trict must have sixteen sections. One third of the voters in the proposed district may file a petition with the county superintendent asking for the consolidation. Objections may also be filed with the same officer. Those finding fault with the county superintendent may make an appeal to the county board of education. The law then provides that an election shall be called after the preliminaries have been decided upon. Village and country people vote separately and if a majority vote is not secured in both village and country, the consolidation cannot take place. Of course, this applies only where it is proposed to consolidate with a village, and not where the proposed district is entirely rural.

Iowa's record with the consolidated school shows what can be accomplish-

ed when the people really decide that they want better schools. These new consolidated schools in the villages and open country of Iowa today resemble the big city schools that a few years ago were pointed out as being the model schools of the nation. In fact, it would not seem strange that in the future some of the consolidated schools will eclipse anything to be found in our cities as far as the school plants are concerned. Today one finds many of the school buildings far in advance of those in any neighboring city.

("Subsidizing the Rural School," another article by Mr. Crawford, will appear in an early issue. This article will deal especially with the consolidated schools in Minnesota and the way in which state funds are made available for these schools.—Editors).

American Farm Bureau Will Sell Grain

To Handle Through a Non-stock Non-profit Concern

PLANS for handling the grain crops of the United States through a national, farmer-controlled sales association, were adopted last week by the Farmers' Marketing Committee of Seventeen at its meeting at Kansas City. This plan, which is the result of five months' intensive study of cooperative marketing by the committee, will now go to the various farmers' organizations of the grain belt for their approval. In the meantime a special organization committee is making plans to put the new grain marketing system into effect. The committee expects to be able to market part of the 1921 crop through the new channel.

The national grain sales association will be organized on the non-stock, non-profit basis. Its members will be actual grain producers, and it will be controlled by them through a board of directors. Under the control of the sales association will be several subsidiary corporations. Various sales companies will be established to hold seats on grain exchanges and sell grain through the usual channels for the present. An export corporation will find foreign outlets for surplus grain. A warehousing corporation will provide

facilities for grain storage, cleaning and conditioning. A finance corporation will issue debentures based on warehouse receipts to assist in financing grain movement.

The existing system of farmers' elevators will be made an integral part of the new system. The only requirements are that these elevators be cooperative, the stockholders be members of the national sales association, and that only grain producers can be permitted to hold stock. Farmers' elevator companies that do not now meet these requirements will be given a reasonable time to change their form of organization, and even after that time will be taken into the organization any time that they do change.

Where there is no local elevator company meeting these requirements, local members of the national sales association will be organized into a grain growers' association, which will provide for handling and loading their grain, either by contract with a local elevator company, or by buying or leasing an elevator.

Growers will contract with the cooperative elevator company or grain growers' association to deliver their

surplus grain to it for a period of five years. The local elevator company can purchase its members' grain direct for resale, it can ship it for them on consignment, or it can pool all grain locally by kind and grade.

The local elevator companies will contract with the national sales association to sell all their surplus grain through it for a period of five years. They can ship this grain on consignment, in which case the sales association will simply act as a commission house, or they can pool with one or more other local elevator companies. In the latter case the sales association will provide funds to make advances to the growers, and will take title to the grain, disposing of it when and where it sees fit. When the pooled grain is disposed of the entire amount received, less overhead costs, will be paid to the local elevator company for distribution to its members.

An important department of the national sales association will be the statistical department. It will collect and interpret complete world statistics relating to supply of grain and prospective demand. Thus farmers will have information on which to market grain

intelligently, which they lack now. Following are the principal results the plan is expected to achieve:

1. Stabilize the movement of grain, regulating available daily supplies to the daily demand.
2. Prevent or greatly reduce daily fluctuations in price, and greatly lessen variation in price from season to season.
3. Meet organized buying with a centralized selling agency which will have the fullest possible information about world conditions affecting supply and demand.
4. Handling all the exportable surplus through one channel.
5. Eliminate waste and excessive costs in grain distribution by handling grain through one central sales agency.
6. Provide adequate capital, farmer-controlled, for marketing grain in an orderly manner.
7. Eliminate waste and excessive costs by regulating grain movement, by controlling exports, and by opening new outlets for surplus grain at home and abroad, add substantially to the net price received by the farmer without any material increase in the price to the consumer.

What Is Happening At M. A. C

RECENT advancement of upper peninsula farmers in improved crop production work, to which the excellence of their exhibits at the potato and crop shows at M. A. C. in connection with Farmers' Week bears witness, has caused the Michigan Crop Improvement Association to recognize this section of the state by including one of its residents on the board of directors—Veryl Gormely, Newberry.

Upper peninsula farmers winning prizes at the Michigan Crop Improvement show were Murphy & Gormely, Newberry, first in Rosen rye; W. B. Stevens, Newberry, fourth on Rosen rye, and John Dunbar, Rudyard, second on Wolverine oats.

Potato growers of Cloverland also showed their products to advantage at East Lansing. In all cases it was evident the growers had been very careful in their selection. C. R. Millar, of Manistique, exhibited samples of certified potatoes of the Russet Rural and Sir Walter Raleigh varieties. He also furnished samples of Woodbury White Rose, Bliss Triumph and Russet Burbank.

The Whitney farms, of Whitney, furnished a very fine exhibit of the Russet Rural, or Late Petoskey. These potatoes were remarkably uniform in size and shape and were of excellent color. John Norman, L. L. Malloy and

Alphons Verschure supplied samples of the Green Mountain variety that were inspected for certification.

During the last year approximately five thousand bushels of potatoes were certified, practically all of them Green Mountain. Counties that led in the work were Baraga, Delta, Mackinaw and Schoolcraft.

The future promises a wider field for the veterinary profession in Michigan than it ever held in the past, it was indicated at the annual meeting of the Michigan State Veterinary Medical Association held at M. A. C. from February 8 to 11. Something of the optimistic spirit prevailing may be drawn from the fact that the meeting was attended by one hundred and fifty delegates and their wives, fully fifty per cent more than ever before.

Although the doctoring of horses has declined, there is a continually widening opportunity in the treatment of cattle, and in fact, veterinarians today are turning their attention more toward cattle than horses. It was predicted that the situation existing at M. A. C., where, as in all other colleges of

the country, the number of veterinary freshmen is the smallest in history, will not continue to exist long.

At the same time it was reported the horse is again coming into his own. Now that the first wave of enthusiasm for the tractor as the "beast of all work" has passed, farmers are settling down to a realization of the place the draft horse must hold in the Michigan farming system. It has been demonstrated that the tractor is not profitable on farms of less than two hundred and fifty acres, it was said.

Most of the addresses were technical. Out-of-state speakers included Dr. David S. White, of Columbus, Ohio, president of the American Veterinary Medical Association, and dean of the veterinary college at Ohio State University, and Dr. T. H. Ferguson, of Lake Geneva, Wis.

A tuberculosis conference was held in connection, the state and national departments of animal industry and the veterinary department of M. A. C. cooperating.

Officers elected for the coming year were: President, Dr. B. A. Perry, of

Hastings; first vice-president, Dr. A. Z. Nichols, of Pittsford; second vice-president, Dr. B. J. Killham, of Adrian; third vice-president, H. Preston Hoskins, of Detroit; secretary-treasurer, Prof. R. A. Runnells, of East Lansing; directors, Dr. E. T. Hallman, of East Lansing; F. M. Blatchford, of Brighton; Dr. E. B. Cavell, of Northville; Dr. A. McKercher, of Lansing; Dr. H. M. Gohn, of St. Johns; Dr. G. D. Gibson, of Adrian.—HENSCHAW.

FEDERAL WAREHOUSE ACT SUCCESSFUL.

THE Bureau of Markets is greatly encouraged over the success of the federal warehouse act. Officials of a wool warehouse company in Chicago report that they received 33,000 consignments in 1920, six times as many as they had in the preceding year. The four warehouses owned by this company were the first wool warehouses licensed under the United States warehouse act, and the company officials say that their increased business is largely a result of this. They feel that the department's approval establishes business confidence.

Dirt and filth taken into the stomach along with feed, impair digestion and reduce the gain, also affecting the appetite and general health of the pig.



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American Wool Situation

By James N. McBride

Chairman Wool Marketing Committee of the American Farm Bureau Federation

THE sheep industry of the United States is the most hopeful of those whose conditions today are in the midst of disaster. We are exporters of grain, beef and pork, and the dairy industry is dependent to a certain extent upon foreign markets. Cotton must be exported, while wool is used at home.

Our normal wool production is approximately 282,000,000 pounds and our importations in 1920 were in excess of 427,000,000 pounds. At the close of the year these later figures would probably require some additions, as the difference in exchange and assurance of a duty on wool after the election in November stimulated imports. November imports alone were over 12,000,000 pounds.

The sheep owner in the United States then has an assurance of a condition not vouchsafed to other farm products, viz: a duty on imports and only about fifty per cent of production at home. In addition to this the best estimates of sheep decrease is about 2,000,000 over the high water mark in this country. The possibilities of the range have probably been reached in sheep production, and the farm flock is the promise of dependability in continued supply.

The work done by the Extension Service in Indiana covering approximately one thousand sheep in twenty flocks in 1919 shows the cost of keeping sheep per year to be \$8.64, average fleece 7.9 pounds, and applying the United States tariff commission basis to secure the wool cost would be 52.5 cents per pound. These figures are reasonably correct for Michigan flock owners to apply and use as a basis of calculation.

The question then arises, what is a fair price basis for wool? A reasonable allowance for profit should make Michigan wools worth sixty cents per pound as a base rate, with some spread for grade and quality. How to adjust the import duty to build up the flocks in Michigan and the United States is then, a very pertinent question. Under present conditions this duty would have to be over one hundred per cent. But this starts on a base line which is depressed approximately fifty per cent by reason of difference in exchange. In fact, the tariff schedules will have to be written with the expectation of revision.

With the close relations of the great wool-producing sections of the world to Great Britain and their enormous war debts public and private, the United States tariff schedules on wool can not be permanently made. It is doubtful if parity of exchange can be established for several years, hence the wisdom of expert knowledge is minimized. To meet these conditions on the ground, wool buying houses are sending their representatives to Australia and New Zealand to act quickly and with exact knowledge. Also the wool growers of these countries are establishing great wool pools for their protection and to facilitate quick action.

The first move in this great chess board of international conditions which reaches out to the remotest sheep owner in the United States is how to write a tariff schedule that will meet the needs of the wool grower on cost of production, and meet elasticity of exchange with flexibility of duties. A flat rate of duty per pound would be a constant menace and invitation to increase the difference of exchange which is just the weapon foreign competitors will use to lessen the import duties.

The extended research made by the United States Tariff Commission was

the agreement to use forty-eight per cent as the wool cost based on annual sheep maintenance. For example, Indiana wool cost would be \$.525 and Illinois \$.534. Now to apply this new type of ad valorem duties based on wool production costs in the United States is really the most scientific approach to equalize difference in labor and exchange costs that has ever been made in the application of protective duties. The Federal Tariff Commission would each year determine the base, viz., production costs, and then apply the coefficient of equalization. For example, the London price of Australian fines would be forty-two cents—United States money—and the American standard cost of production determined by the Tariff Commission was sixty-two cents f. o. b. Boston, then the duty would be twenty cents. From an administrative standpoint all wool would have to be on a classification agreed upon or determined by a board of wool men. This method would have its limitations and might become applicable after a period of several years, or when production in the United States would have become stable.

About the same results would now be reached by applying the percentage of duty to make up the difference between the present market price of three-eighths Ohio staple, viz., fifty-two or fifty-three cents. However, another year this base would have disappeared. The proposed plan is suggested for a period of three years, or until exchange becomes stable. Today the difference in exchange is a bounty on wool imports, and considering that flocks are being sent to the slaughter, a reasonable encouragement could be safely extended to the sheep industry.

The approximation of production costs for wool with a small profit would increase the flock wealth in Michigan within the next four years around \$25,000,000 without any serious displacement of any other farm industry. A living wage and return from investment would be morally guaranteed by this form of tariff revision, and at an absolute gain to the consumer if congress should take the next forward step in enacting the Truth-in-Fabric bill. If the wearer of a suit of woolen clothes were to actually pay \$1.20 more for the day wool and be assured his suit was virgin new wool, his investment would add twenty-five per cent to the wear of his clothes.

MILLIONS FOR THE MILITARY, BUT LITTLE FOR PEACE.

IN the discussion on the navy appropriation bill there was an unsuccessful attempt made to prevent the expenditure of \$90,000,000 for continuing naval construction work until the President called an international conference on disarmament. It was stated on the floor of the house that the appropriations for the expenses of the army and navy for the next fiscal year would total \$610,000,000, which is more money than was appropriated for the entire expenses of our government prior to the war with Germany, exclusive of the postal department. It was also said that congress was making appropriations for the year reaching upwards of five billions of dollars. With this enormous expenditure it was predicted that federal taxation could not be reduced, and tax legislation would only result in shifting the burdens of taxation from one shoulder to another.

No man deserves sympathy when he is compelled to sell his stock in a half-finished condition because they are not doing well in a muddy feed lot.



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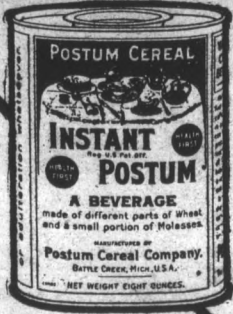
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Wisconsin Wants Cloverland

And Other Upper Peninsular News—By L. A. Chase

I PRESUME that no one takes very seriously the Wisconsin proposal to invite the upper peninsula of Michigan to unite with the Badgers. It is recognized here that such an arrangement would at the outset involve an amendment to the Michigan Constitution which fixes the present boundaries of the state, and that it could hardly be expected that lower state voters would approve the loss of such good taxing values, if they were careless about any other aspects of the scheme. Wisconsin's invitation is undoubtedly a good talking-point. One quite frequently hears it said here that our problems and connections more closely associate us with Wisconsin and Minnesota than with southern Michigan. Northern Wisconsin and Minnesota are in the same latitude with northern Michigan, and latitude signifies much as regards climate, industries and agriculture particularly. It has seemed, too, that Wisconsin is officially more alive to the needs of the north country than is official Michigan. This applies especially to soil classification, forestry colonization and conservation. It must be understood that so far as time and money are concerned we are much closer to Milwaukee than to Lansing and Detroit, and that counts for a good deal; while many of our young people are trained in Wisconsin educational institutions. Still I find very little real secession sentiment, but I do hear expressions of a desire to have upper Michigan get its full share of official attention and good treatment. It is this consideration that is back of the proposal to put an upper peninsula man on the state board of agriculture. It is felt that agricultural development in the upper peninsula can better be promoted by the agencies of the Michigan Agricultural College, if a member of its governing board is in a position to call attention to our peculiar needs.

Miss Cora B. Hall, of the Michigan Children's Home Society, with headquarters at St. Joseph, spoke to the classes in government and sociology of the Northern State Normal School last week. At present twenty-four upper peninsula children are receiving care under the supervision of the Michigan Children's Home Society, which is a non-sectarian, voluntary organization, licensed by the state but maintained by funds contributed by various counties and municipalities and private agencies in both peninsulas, and which operates throughout the state. Mr. Frank G. Bell, of Negaunee, is chairman of the upper peninsula branch of the society, and Mayor Harlow A. Clark, of Marquette, is its secretary. The main feature of this work is to place children whose parents are unable to give them suitable care, in good homes to board at the expense of the society.

Crop Reporters Needed.

Mr. V. H. Church, Agricultural Statistician of the Cooperative Crop Reporting Service, Lansing, informs me that he has had some difficulty in getting a sufficient number of correspondents in the upper peninsula, to furnish him with reports relative to crop conditions. It seems that there are no such reports to be had from Alger and Keweenaw counties, and that there is inadequate service elsewhere in the district. My own opinion is that such reports would be helpful rather than detrimental to the agricultural interests of the district, and it is to be hoped that competent farmers and others will be forthcoming to assist in this work. For the areas involved, my impression is that crop yields run high in northern Michigan—in some instances very high indeed, and this fact ought to be made known generally.

Mr. Church, after the publication of the census reports on upper Michigan counties, which should not be much longer delayed in relation to agriculture, hopes to have full monthly reports from every county and he ought to have them.

New Type Snow Plow.

The Alger county road commission, says the Cloverland Farmer, of Munising, is constructing a large snow plow, to be drawn by a caterpillar tractor, and to be used in keeping the county's roads open in the winter. The plow is twenty feet in length and will clear a road twenty-two feet wide, while the rear wings have a spread of thirty feet. It is said to be planned with reference to over-coming such obstacles as have formerly worked against the use of plows here on roads in winter. Both forward and rear sets of runners have separate steering apparatus which is said to obviate the turning in a curve when necessary to take the side of the road. By using both steering levers, it is stated, the plow can be turned off with a side movement. Upon each runner a plate of movable iron is attached to prevent skidding. These are regulated with set-screws. The front plow can be raised or lowered by a lever as occasion requires. The plow is built so that it can be propelled either by pulling or pushing from the tractor. The cost is given at about \$1,000.

Advocates Rest-room.

A writer in the Evening News, of Sault Ste. Marie, after some investigation of the subject, advocates that the city maintain a rest-room for the farmers of Chippewa county, and particularly their womenfolk, for their use and comfort while in town. This would be a place where they can hang up their wraps, use a phone, get warm, attend to children, etc. As a matter of fact, although many people do not know it, the establishment of what are designated "public convenience stations" in every city and village are required by the laws of Michigan, but this statute has seldom, if ever, been observed.

Activity in Road Building.

Mr. I. H. Davis, district highway engineer for the upper peninsula, predicts great activity in road construction in this territory, next season, according to The Soo Times. Contracts have been let, or will be let, for some three hundred miles of state trunk-line highways will be under contract in the upper peninsula this year. Mr. Davies stresses the coming "Pike Tour" as a promoter of highway development in the upper peninsula.

From various points come reports that robins have remained in the upper peninsula all winter. The very mild weather is the cause of this.

The announced dates for the Gogebic County Fair are September 14-15-16.

The Gogebic Range Poultry Association plans to hold a poultry show at Ironwood the first week in March. It is planned that extension specialists of the Michigan Agricultural College will be present.

B. P. Pattison, agent of Delta county, has purchased 35,000 pounds of clover and timothy seed and 200,000 pounds of commercial fertilizer for members of the farm bureau of his county, for use this spring, says The Escanaba Journal of February 11.

Ironwood reports the trial of a new snow-motor in that vicinity recently as having been very successful. The motor is said to work on the principle of a drum with a spiral arrangement that plows the machine through deep snow and draws a heavily loaded sleigh of logs or people with ease.

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TUNING THE TRACTOR.

BY F. R. COZZENS.

WHILE passing along the road one day last spring I heard the "popping" of a tractor, over in Smith's barn-lot. It was yet too early in the season for active farming operations and I grew curious enough to go over and see what he was doing.

"I'm tuning her up for the spring plowing," he informed me.

I noticed the smooth easy-running engine.

"She seems to be in tune now," I remarked.

"Yes," said Smith, "but I've spent the forenoon in getting the result. I found three loose taps, and a mixture of dirty oil and bearing cuttings in the engine. After that was remedied, I located a rough spot in the cylinder."

I watched while he went carefully over the tractor. He tested each tap with a wrench, oiled the bearings and mopped out the grease cups with a coarse cloth. He found a twisted rod, and removed it.

"I'll get this fixed tonight," he said. "It's not serious, but some day when I am busy it will break, unless it is remedied. Afterward Smith explained his plan.

"Each spring, before the cropping season comes on, I take a day off to tune up my tractor. In spite of good care, some rust is sure to gather, and such places usually cause trouble later on. Grease and oil which was not removed in the autumn will become hard and troublesome. Then, too, slight breaks occur during the summer, and were probably forgotten. This tuning day brings each one of these defects out. I provide myself with an instruction book, a wrench, oiler and several strips of sandpaper. I start the engine—and listen. I have trained my ear to observe the sound of the motor. If there is a "knock" I begin with the rings and cylinder. If the explosions are muffled, or sound dead, I look for filth, dirty oil or rust. Sometimes smooth bearings develop rough spots, these should be noted and repaired at once."

I notice when the machine rattles, it is a sure sign of loose bolts or hood. Loose chains will also cause the trouble. Sometimes, when the motor does not pick up as it should, I run kerosene oil through the bearing surfaces. This cuts away rust and cleans out filth.

If there is trouble which I do not understand, I stop and study the diagram of the machine, in my instruction book. I trace each part and learn what work it performs. In many cases I can locate the trouble without tearing the whole rig apart. "Another thing," Smith cautioned. "When tractors look old because they are not painted, I find it a good plan to give my machine a coat of good paint each season."

FRUIT GROWERS' CONFERENCE CALLED.

The fruit growers of America have requested the American Farm Bureau Federation to call a conference of their representatives to discuss ways and means of advancing their interests. President J. R. Howard has issued a call for such a meeting to be held in the Congress Hotel, Chicago, Illinois, on April 5. The Department of Cooperative Marketing will have the meeting in charge. Each State Farm Bureau Federation has been requested to send at least one official representative of the fruit growers of its state.

TOURISTS MEET AT M. A. C.

The first annual reunion of the Michigan Farmers' Automobile Tour Association will be held at Michigan Agricultural College, June 22-23. Cars will go equipped for camping on the college green. There will be a program for the afternoon and evening of the first day and the morning and afternoon of the second. Sessions will convene in the gymnasium.



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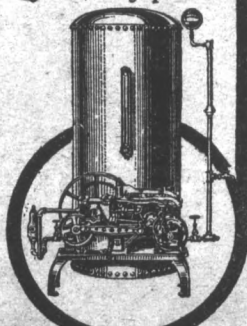
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Our Service Department

ATTEMPT TO DEFRAUD CREDITORS.

I sold a neighbor a cow a little over a year ago, taking a note for \$80 signed by the man and his wife, note bearing interest at six per cent. Now the note was due in November, 1920, and he refuses to pay. Also he bought wheat and other things until the debt amounts to \$129.50. This man is a renter and has two teams, the cows and other stuff, including baled hay, but he has sold the cow, and is selling off everything as fast as he can so he can move out of the county. What steps can I take to get payment on the note before he leaves? I understand he has done the same trick with others.—Subscriber.

Affidavit to the fact that the defendant is disposing of his property to defraud his creditors would entitle the creditor filing the affidavit to an attachment of such property as is not exempt from execution, and hold it till judgment could be explained and execution could be obtained. The debtor would be entitled to two cows, five hogs, a team, tools, and provisions for six months from execution; but the exemption on the team extends only to \$250. Plans and efforts to sell exempt property do not constitute grounds for attachment.—J. R. R.

DRAWING LAND CONTRACT.

Can you give me some idea about drawing up a land contract? I have sold properly in California, the buyer making a down payment of so much, and then a certain amount each year until the last payment, when he is to receive the deed, he to pay the taxes and interest each year.

It would not be safe to draw such a contract without assistance of a lawyer familiar with the law where the land lies. It would be best to have a lawyer in California draw the contract. The little saved in making the contract yourself. The little saved in making the contract yourself is poor economy.

J. R. R.

GROWING ARTICHOKE.

I would like to know how to raise artichokes for market. What kind of soil do they need, and at what depth should they be planted?

Van Buren Co.

J. O. C.

I am not sure from your letter whether you refer to Globe artichokes or Jerusalem artichokes. The Globe variety is grown but little in American gardens. The edible part of this artichoke is a roundish cluster of closely grouped leaves which are called 'chards'. This edible portion is formed at the base of the flower heads and resembles to some extent, a large cone. The flower head scales must be cut when young and tender. They are generally eaten raw, although they may be boiled and served in the form of a salad or pickled.

The Globe artichokes are hardy but require some protection during the winter in some northern sections. It is propagated from seed or suckers, or by the division of the roots. The seeds may be sown under glass in march and young plants pricked into pots before setting in the field. This will enable the grower to cut edible heads the first season. If the seeds are sown in the open they should be sown in beds where they can be left throughout the season and transplanted into the field the following spring. Plants propagated from suckers show much less tendency to vary than those grown from seeds.

This vegetable grows best on a rich moist, but well drained soil. The rows should be, at least, three feet apart.

and the plants spaced two feet in the row. For the best results the plantation should not be retained more than two or three years. In some cases they are kept but one year. When maintained for more than one season the old plants are cut back to the ground in the field and mulched with five or six inches of coarse manure. In the field started from suckers or potted plants edible heads should be produced from early in the spring until frost in the fall.

The Jerusalem artichokes are produced to a very limited extent for the American markets. It is native to the northern part of the United States and to parts of Canada. The tubers which resemble small sweet potatoes, and which constitute the edible part, are rated as equal to potatoes in nutritive value. The taste is not relished by most people. They may be served boiled, pickled or cooked for salads. They are considered valuable for stock feeding, especially for hogs. When grown for this purpose, the hogs usually do the harvesting of the tubers.

This vegetable can be grown in a variety of soils from a rather poor sand to a rich sandy loam, or any loose porous soil. Under favorable conditions the plants often yield five hundred bushels per acre and sometimes more. The tubers may be planted whole or cut into one to three-eye pieces in a similar manner to the way Irish potatoes are cut for planting. The tubers should be planted very early in the spring. The rows should be about three feet apart and the cut pieces from fifteen to eighteen inches apart in the row. As soon as the tops are dead the crop may be dug or it can be left in the ground through the winter without danger of injury from freezing.

C. W. WAID.

SOY BEANS FOR HAY.

Last spring I planted some soy beans. I drilled them in twenty-eight inches apart with a grain drill and cut them for hay, but I found they grew almost too rank and the stalks were so large the cows would not eat them. Would it be advisable to drill them the same as wheat and oats? If so, when should they be sown and how many per acre? What variety will mature and ripen in Michigan?

Hillsdale Co.

L. G. R.

Soy beans can be drilled in broadcast with grain drill, like wheat and oats, and then harvested for hay by cutting them with mowing machine. The only trouble is that on weedy land the weeds are liable to get a start of the beans and make you trouble. Again if the land is clay and inclined to bake after a rain the beans will not do well if we have a cold wet season. This kind of land should be cultivated and loosened up for beans if you want them to grow readily. I think you would get just as good results by adhering to your system in planting in rows twenty-eight inches apart and drill the beans in thicker. If cows once get to eating soy bean hay they will eat the stalks even if they are pretty coarse, they seem to like them; so will sheep and horses.

Any of the early varieties of soy beans, like the early green or early black, will ripen in Michigan. For hay I would prefer the medium green or even the late yellow, as I think you would get a larger yield of hay per acre.—L.

Quality, accompanied by size, is what every hog-grower should be seeking.

RATION DEFICIENT IN PROTEIN.

We are feeding milch cows a ration of corn stover, ear corn on the stalk, and a mixture of rye and clover hay. They have gone wrong on us, that is, three have. The rest are heifers coming in in the spring. Can you advise us what the trouble is with our ration and how we may rectify it? We have no silo up at present, but will have one before another winter. M. G. B.

I don't think it would be possible for cows to give a maximum amount of milk on this ration, for two reasons. It is altogether too bulky and it is quite deficient in protein. When you feed corn on stalks you do not get full value of the corn. I know that many people feed steers in this way, but you must have hogs following or there will be a great loss and it would be permissible to feed the corn on stalks to dairy cows if you had hogs to follow to take care of the undigested corn, otherwise this corn should be run into a silo to soften it up so that the cows can digest it readily, or husk this corn and feed stalks to cows and grind the corn. Corn stover and rye and clover hay are all right for cows if you feed them liberally, so that they can select the best of the cornstalks. You cannot expect them to eat all the stalks. I would suggest in addition to the ration which you are now feeding, that you would feed two pounds of oil meal to each cow per day and enough bran in addition so that each cow would get enough of the bran and oil meal to make one pound of grain for every four pounds of milk they produce.—L.

VARIATION OF BUTTER-FAT IN MILK.

A neighbor claims that milk at the end of the lacteal period is richer than at the beginning of that period. Is this so? We have been using milk from a cow that will freshen March 1. We have been unable to make butter from the cream since October. We have taken good care of the cream. Why will it not churn? I have always understood this was because the particles of butter-fat were smaller and fewer in number at the close of the lacteal period. Am I right? Which breed of cattle holds the world's championship for amount of butter-fat produced in one year? A. E. B.

When a cow freshens she gives richer milk than she does a little later in the flush of the period of lactation. But when the flow of milk begins to lessen it gradually becomes richer in butter-fat. Then at the very close of the period of lactation when she is what is termed a stripper, she gives richer milk than at any other time.

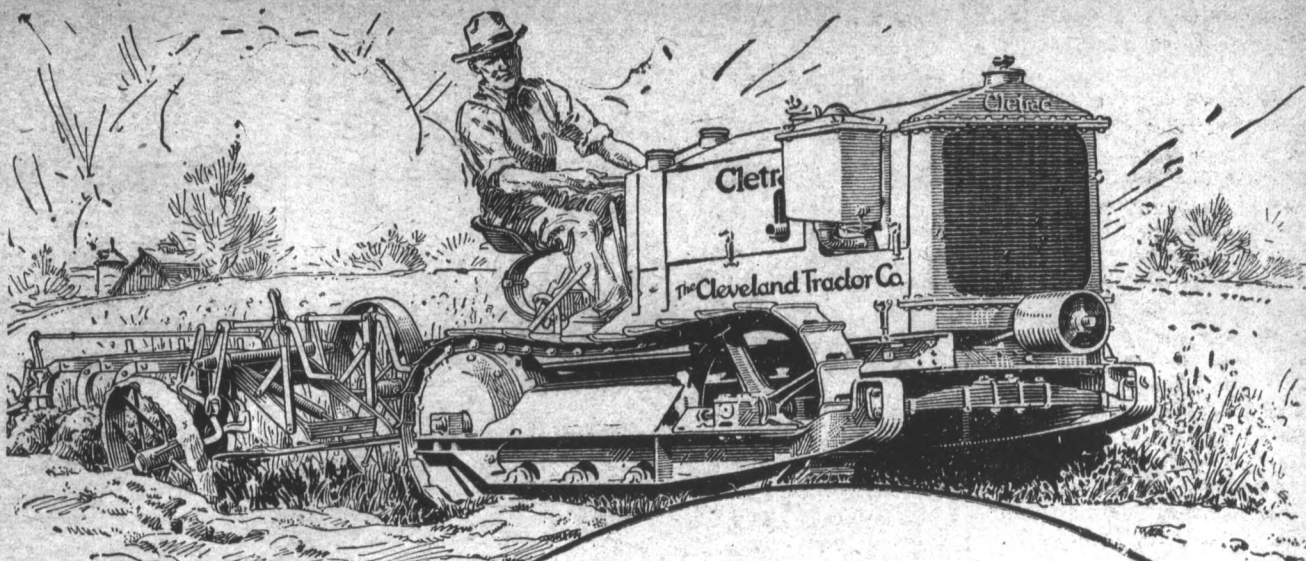
Because your butter will not come I do not think it due to the fact that the cow is due to freshen in March, but rather to the way that you handle your cream. It should be kept sweet if possible till you have enough for a churning, then should be warmed up to seventy degrees for twenty-four hours, or until it is properly ripened, and in winter churn at about sixty-two degrees. If you do this I believe the butter will come.

The Holstein-Friesian breed of cattle have the world record for the largest amount of butter-fat produced in a year.—C. C. L.

PUTTING SHOCK CORN IN SILO.

Do you think it practical to put unhusked corn in silo at this time of year? The corn is a good crop, going about 100 baskets to the acre. I was thinking of putting in silo and wetting while filling. P. H. S.

It is getting to be quite a common practice to put shock corn in silos. Many people fill their silos in the fall and cut and shock the rest of the corn, then when the silage is fed out sufficiently they fill again, with shocked corn. It makes good feed if it is properly wet down, but you must take pains to wet it thoroughly. There is no way as good as running a stream of water in the blower at time of filling. This distributes the moisture evenly.—L.



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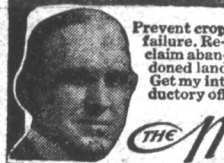
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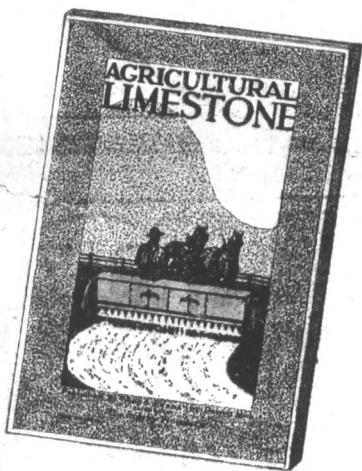


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Lime is, of-course, the cure for this condition. Researches by the Michigan Agricultural College and the U. S. Department of Agriculture prove that the need of lime is much greater than is generally supposed. Over 80% of Michigan farm land is "sour" and needs lime in greater or lesser quantities.

No farmer in Michigan should wait until an actual crop failure announces his farm's lack of lime. You should know the tests for "sour" land—should understand the benefits of limestone applied to sandy soil—to heavy clay soil. You should know whether your land needs lime, how to judge how much to the acre, and should know the probable dollars-and-cents value of limestone for each of the crops you raise on your farm.

You don't have to read a dozen or so technical books and pamphlets to get this information. The subject with especial reference to conditions in *Michigan today*, is thoroughly and interestingly treated in a book we have just published. We have gathered the facts from the most authoritative sources and have supplemented them by investigations as to the actual results obtained by Michigan farmers on all varieties of Michigan land.

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WORLD EVENTS IN PICTURES



The art of self-defense is being taught girls at the University of Cincinnati. These girls who are studying to become physical culture teachers, feel the need of every kind of preparation.



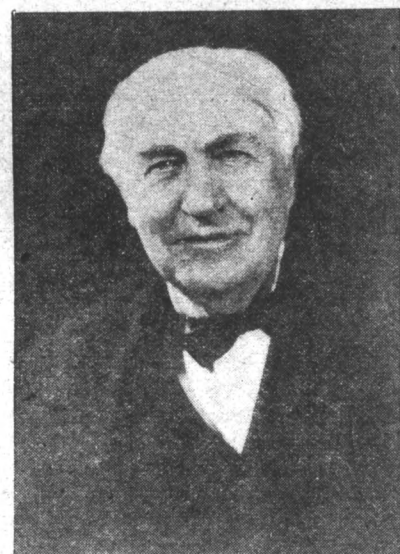
A string of American polo ponies arrive in England to be used in the international polo matches to be held there in June.



This New York reporter is at present wielding as much power over Austria as ever did the Hapsburgs.



Wife of noted explorer will accompany husband on the "missing link" expedition.



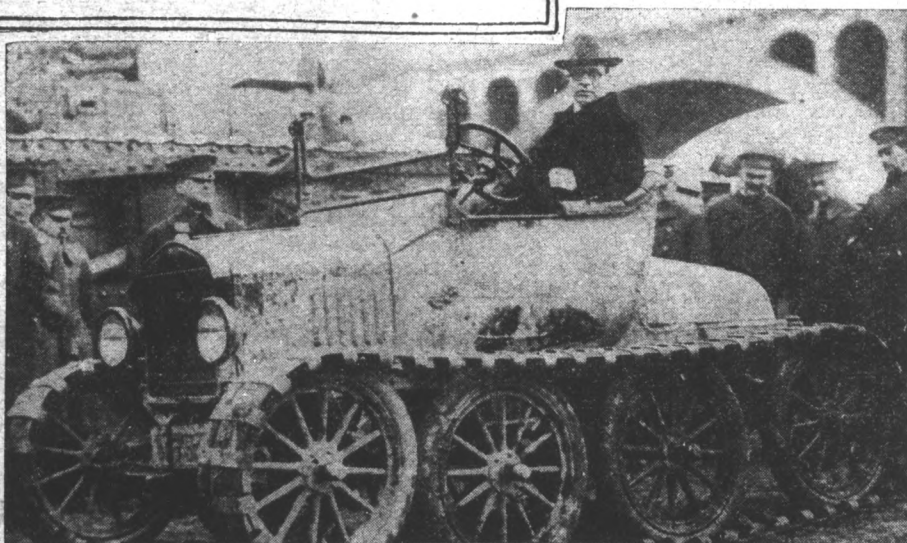
Thomas A. Edison, electrical wizard, enjoys the best of health as he celebrates his seventy-fourth birthday.



Mrs. Christy Mathewson, wife of the famous baseball pitcher, who is nursing her husband through a serious illness, and her son, Christy, Jr., shown watching skating races.



From an oil painting of the first inauguration of Washington as president of the United States in New York City, April 30, 1789.



War engineers are trying out different designs of automobiles equipped to travel over difficult roads.

THE VOICE OF THE PACK

By EDISON MARSHALL

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"You did say that," was Cranston's guttural reply. "But you see I'm here just the same, don't you? And what are you going to do about it?"

"I probably felt that sooner or later you would come to steal—just as you and your crowd stole the supplies from the forest station last winter—and that probably influenced me to give the orders. I didn't want thieves around my house, and I don't want them now. I don't want coyotes, either."

"And I don't want any such remarks out of you, either," Cranston answered him. "You lie still and shut up, and I suspect that sissy boarder of yours will come back, after he's through embracing your daughter in the snow, and find you in one piece. Otherwise not."

"If I were in one piece," Lennox answered him very quietly, "instead of a bundle of broken bones that can't lift its arms, I'd get up off this couch, unarmed as I am, and stamp on your lying lips."

But Cranston only laughed and tied Lennox's feet with a cord from the window shade.

He went to work very systematically. First he rifled Lennox's desk in the living-room. Then he looked on all the mantels and ransacked the cupboards and the drawers. He was taunting and calm at first. But as the moments passed, his passion grew upon him. He no longer smiled. The rodent features became intent; the eyes narrowed to curious, bright slits under the dark lashes. He went to Dan's room, searched his bureau drawer and all the pockets of the clothes hanging in his closet. He upset his trunk and pawed among old letters in the suitcase. Then, stealing like some creature of the wilderness, he came back to the living-room.

Lennox was not on the divan where he had left him. He lay instead on the floor near the fireplace; and he met the passion-drawn face with entire calmness. His motives were perfectly plain. He had just made a desperate effort to procure Dan's rifle that hung on two set of deer horns over the fireplace, and was entirely exhausted from it. He had succeeded in getting down from the couch, though wracked by agony, but had been unable to lift himself up in reach of the gun.

Cranston read his intention in one glance. Lennox knew it, but he simply didn't care. He had passed the point where anything seemed to matter.

"Tell me where it is," Cranston ordered him. Again he pointed his rifle at Lennox's wasted breast.

"Tell you where what is? My money?"

"You know what I want—and it isn't

money. I mean those letters that Failing found on the ridge. I'm through fooling, Lennox. Dan learned that long ago, and it's time you learned it now."

"Dan learned it because he was sick. He isn't sick now. Don't presume too much on that."

Cranston laughed with harsh scorn. "But that isn't the question. I said I've wasted all the time I'm going to. You are an old man and helpless, but I'm not going to let that stand in the way of getting what I came to get. They're hidden somewhere around this house. They wouldn't be out in the snow, because he'd want 'em where he could get them. By no means would he carry them on his person—fearing that some day he'd meet me on the ridge. He's a fool, but he ain't that much of a fool. I've watched, and he's had no chance to take them into town. I'll give you—just five seconds to tell me where they're hidden."

"And I give you," Lennox replied, "one second less than that—to go to blazes!"

Both of them breathed hard in the quiet room. Cranston was trembling now, shivering just a little in his arms and shoulders. "Don't get me wrong, Lennox," he warned.

"And don't have any delusions in regard to me, either," Lennox replied. "I've stood worse pain from this accident, than any man can give me while I yet live, no matter what he does. If you want to get on me and hammer me in the approved Cranston way, I can't defend myself—but you won't get a civil answer out of me. I'm used to pain, and I can stand it. I'm not used to fawning to a coyote like you, and I can't stand it."

But Cranston hardly heard. An idea had flamed in his mind and cast a red glamour over all the scene about him. It was instilling a poison in his nerves and a madness in his blood, and it was searing him, like fire, in his dark brain. Nothing seemed real. He suddenly bent forward, tense.

"That's all right about you," he said. "But you'd be a little more polite if it was Snowbird—and Dan—that would have to pay."

Perhaps the color faded slightly in Lennox's face; but his voice did not change.

"They'll see your footprints before they come in and be ready," Lennox replied evenly. "They always come by the back way. And even with a pistol, Snowbird's a match for you."

"Did you think that was what I meant?" Cranston scorned. "I know a way to destroy those letters, and I'll do it—in the four seconds that I said, unless you tell. I'm not even sure I'm goin' to give you a chance to tell now;

it's too good a scheme. There won't be any witnesses then to yell around in the courts. What if I choose to set fire to this house?"

"It wouldn't surprise me a great deal. It's your own trade," Lennox shuddered once on his place on the floor.

"I wouldn't have to worry about those letters then, would I? They are somewhere in the house, and they'd be burned to ashes. But that isn't all that would be burned. You could maybe crawl out, but you couldn't carry the guns, and you couldn't carry the pantry full of food. You're nearly eighty miles up here from the nearest occupied house, with two pair of snowshoes for the three of you and one dinky pistol. And you can't walk at all. It would be a nice pickle, wouldn't it? Wouldn't you have a fat chance of getting down to civilization?"

The voice no longer held steady. It trembled with passion. This was no idle threat. The brain had already seized upon the scheme with every intention of carrying it out. Outside the snow glittered in the sunlight, and pine limbs bowed with their load; overhung with that curious winter silence that, one felt, returns often in dreams. The wilderness lay stark and bare, stripped of all delusion—not only in the snow world outside but in the hearts of these two men, its sons.

"I have only one hope," Lennox replied. "I hope, unknown to me, that Dan has already dispatched those letters. The arm of the law is long, Cranston. It's easy to forget that fact up here. It will reach you in the end." Cranston turned through the door, into the kitchen. He was gone a long time. Lennox heard him at work: the crinkle of paper and then a pouring sound around the walls. Then he heard the sharp crack of a match. An instant later the first wisp of smoke came curling, pungent with burning oil, through the corridor.

"You crawled from your couch to reach that gun," Cranston told him when he came in. "Let's see you crawl out now."

Lennox's answer was a curse—the last, dread outpouring of an unbroken will. He didn't look again at the glittering eyes. He scarcely watched Cranston's further preparations: the oil poured on the rugs and furniture, the kindling placed at the base of the curtains. Cranston was trained in this work. He was taking no chances on the fire being extinguished. And Lennox began to crawl toward the door.

He managed to grasp the corner of the blanket on the divan as he went, and he dragged it behind him. Pain wracked him, and smoke half-blinded

him. But he made it at last. And by the time he had crawled one hundred feet over the snow crust, the whole structure was in flames. The red tongues spoke with a roar.

Cranston, the fire-madness on his face, hurried to the outbuildings. There he repeated the work. He touched a match to the hay in the barn, and the wind flung the flame through it in an instant. The sheds and other outbuildings were treated with oil. And seeing that his work was done, he called once to the prone body of Lennox on the snow and rushed away in the silences.

Lennox's answer was not a curse this time. Rather it was a prayer, unuttered, and in his long years Lennox had not prayed often. When he prayed at all, the words were burning fire. His prayer was that of Samson—that for a moment his strength might come back to him.

CHAPTER XIV.

TWO miles across the ridges, Dan and Snowbird saw a faint mist blowing between the trees. They didn't recognize it at first. It might be fine snow, blown by the wind, or even one of those mysterious fogs that sometimes sweep over the snow.

"But it looks like smoke," Snowbird said.

"But it couldn't be. The trees are too wet to burn."

But then a sound that at first was just the faintest whisper in which neither of them would let themselves believe, became distinct past all denying. It was that menacing crackle of a great fire, that in the whole world of sounds is perhaps the most terrible. They were trained by the hills, and neither of them tried to mince words. They had learned to face the truth, and they faced it now.

"It's our house," Snowbird told him. "And father can't get out."

She spoke very quietly. Perhaps the most terrible truths of life are always spoken in that same quiet voice. Then both of them started across the snow, fast as their unwieldy snowshoes would permit.

"He can crawl a little," Dan called to her. "Don't give up, Snowbird mine. I think he'll be safe."

They mounted to the top of the ridge; and the long sweep of the forest was revealed to them. The house was a singular tall pillar of flame, already glowing that dreadful red from which firemen, despairing, turn away. Then the girl seized his hands and danced about him in a mad circle.

"He's alive," she cried. "You can see him—just a dot on the snow. He crawled out to safety."

She turned an sped at a breakneck

—By Frank R. Leet

AL ACRES—This is One Time When Al Was Able to Get One Over.



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pace down the ridge. Dan had to race to keep up with her. But it wasn't entirely wise to try to mush so fast. A dead log lay beneath the snow with a broken limb stretched almost to its surface, and it caught her snowshoe. The wood cracked sharply, and she fell forward in the snow. But she was not hurt, and the snowshoe itself, in spite of a small crack in the wood, was still serviceable.

"Haste makes waste," he told her. "Keep your feet on the ground, Snowbird; the house is gone already and your father is safe. Remember what lies before us."

The thought sobered and halted her. She glanced once at the dark face of her companion. Dan couldn't understand the strange light that suddenly leaped to her eyes. Perhaps she herself couldn't have explained the wave of tenderness that swept over her—with no cause except the look in Dan's earnest gray eyes and the lines that cut so deep. Since the world was new, it has been the boast of the boldest of men that they looked their Fate in the face. And this is no mean looking. For fate is a sword from the darkness, a power that reaches out of the mystery, and cannot be classed with sights of human origin. It burns out the eyes of all but the strongest men. Yet Dan was looking at his fate now, and his eyes held straight.

They walked together down to the ruined house, and the three of them sat silent while the fire burned red. Then Lennox turned to them with a half-smile.

"You're wasting time, you two," he said. "Remember all our food is gone. If you start now, and walk hard, maybe you can make it out."

"There are several things to do first," Dan answered simply.

"I don't know what they are. It isn't going to be any picnic, Dan. A man can travel only so far without food to keep up his strength, particularly over such ridges as you have to cross. It will be easy to give up and die. It's the test, man; it's the test."

"And what about you?" his daughter asked.

"Oh, I'll be all right. Besides—it's the only thing that can be done. I can't walk, and you can't carry me on your backs. What else remains? I'll stay here—and I'll scrape together enough wood to keep a fire. Then you can bring help."

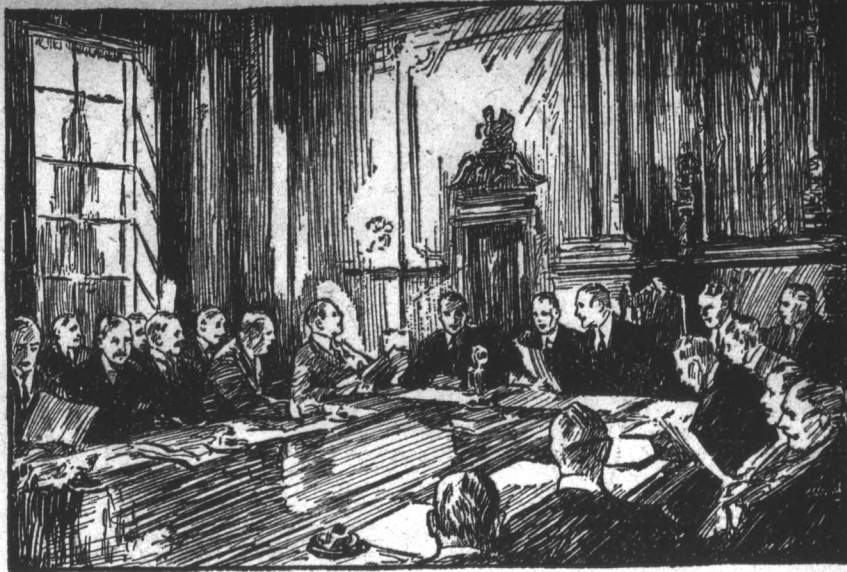
He kept his eyes averted when he talked. He was afraid for Dan to see them, knowing that he could read the lie in them.

"How do you expect to find wood—in this snow?" Dan asked him. "It will take four days to get out; do you think you could lie here and battle with a fire for four days, and then four days more that it will take to come back. You'd have two choices. To burn green wood that I'd cut for you before I left, or the rain-soaked dead wood under the snow. You couldn't keep either one of them burning, and you'd die in a night. Besides—this is no time for an unarmed man to be alone in the hills."

Lennox's voice grew pleading. "Be sensible, Dan!" he cried. "That Cranston's got us, and got us right. I've only one thing more I care about—and that is that you pay the debt! I can't hope to get out myself. I say that I can't even hope to. But if you bring my daughter through—and when the spring comes, pay what we owe to Cranston—I'll be content. Heavens, son—I've lived my life. The old pack leader dies when his time comes, and so does a man."

His daughter crept to him and sheltered his gray head against her breast. "I'll stay with you, then," she cried.

"Don't be a little fool, Snowbird," he urged. "My clothes are wet already from the melted snow. It's too long a way—it will be too hard a fight, and children—I'm old and tired out. I don't



On the Basis of Facts

The life of our country is built around its Public Utilities. Our social, industrial and Government activities could not exist today without the continued operation of their indispensable services.

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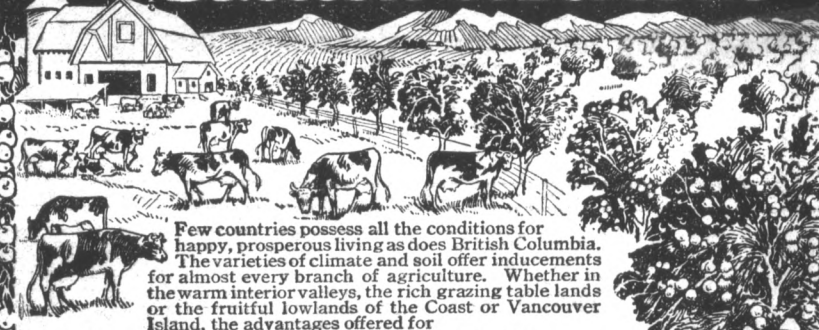
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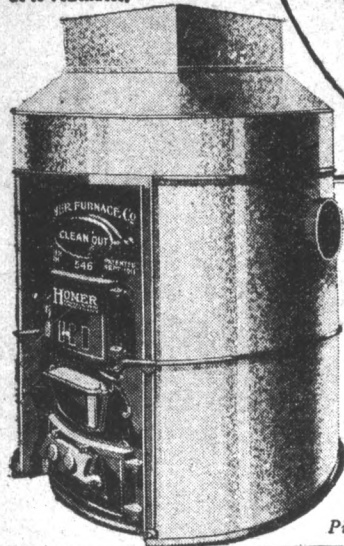
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want to make the try—hunger and cold; and even if you'd stay here and grub wood, Snowbird, they'd find us both dead when they came back in a week. We can't live without food, and work and keep warm—and there isn't a living creature in the hills."

"Except the wolves," Dan reminded him.

"Except the wolves," Lennox echoed. "Remember, we're unarmed—and they

would find it out. You're young, Snowbird, and so is Dan—and you two will be happy. I know how things are, you two—more than you know yourselves—and in the end you'll be happy. But me—I'm too tired to make the try. I don't care about it enough. I'm going to wave you good-by, and smile, and lie here and let the cold come down. You feel warm in a little while—"

But she stopped his lips with her

A Farmers' Week Visitor

Our Weekly Sermon—By N. A. McCune

AS the preacher wandered in and out among the exhibits on Farmers' Week, he was much impressed. There were the apples—dark red McIntoshes, Wolff Rivers, as big as musk melons, piles of Grimes Golden, our good friend the Baldwin, Seek-no-further that our grandmothers loved, and many more. And there was the potato exhibit, worth any man's going to see. The grain show was enough to rejoice the heart of the farmer, or anyone who likes corn meal muffins or oat meal for breakfast. But one exhibit was not there, which would have been an addition to the whole thing. That was an exhibit of the country church.

It would not be easy to assemble such an exhibit, but it could be done. The church exhibit might start off with a photograph gallery, showing the pictures of eminent men who have been the sons of country preachers. At first we might put in the photographs of one hundred heads of corporations, each one of whom is a millionaire, or a multimillionaire, all the sons of country preachers. Next would follow editors of great dailies, literary men like Henry Van Dyke, Richard Watson Gilder, at least three presidents, Arthur, Cleveland and Wilson, such statesmen as Clay, Morton, Beveridge, Dolliver, Hughes, and a long list of notables of the present day, who are listed in "Who's Who in America."

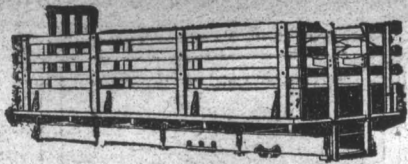
Then it might not be a bad idea to have some models of modern country church architecture, such as are beginning to be found here and there in progressive communities. But before leaving the photograph gallery, I would have a picture of that preacher in the Ozarks who has faced ruffians when they came to break up his meetings, and has arrested mountain bootleggers. It might be well to have a picture of the large city church in Michigan, which said to a young minister, "You go to such a town, where the church is dead and buried. Dig it up, and breathe some life into the corpse. If the people there don't pay your salary, we will." He went. The big church did not have to pay his salary, not a cent of it.

The model of a large "demonstration parish" would be good, also, such as is being tried out in Michigan now, where a large town church has two or three ministers and a lady worker, and with this force five or six rural churches round about are served in a most happy way. There could be more to our country church exhibit, but it would take too much room. However, we might finish up with a chart, that would give city church folks apoplexy. The chart would show that if the rural churches should be closed all over the land, hundreds of city churches would have to close, in a few years, and if ministerial candidates from the country should cease to appear, the shortage of ministers would close many more churches in the great cities. And the cities need them badly enough.

THE preacher was impressed with the sense and science of these professors of agriculture, and these up-to-date farmers. They have made a catalog of their enemies. All their foes

are card indexed, with name, species, habits and street number attached. There are the codling moth, the gypsy moth, the Japanese beetle, the European corn borer, the rat, the crow, the English sparrow, Cooper's hawk, and many more. The descriptions of some of these enemies are almost terrifying. One might almost say to the farmer, "The worst is yet to come." Foreign foes are invading the American farmer's fields. Much was said last summer about the advent of the European corn borer. If he should pay a visit to the corn belt, he would receive more attention than would a visit of the President of the Republic. We are told that the Japanese beetle is just nicely getting under way, and marshalling his forces for efficient destruction. We may hear more of him later. And there is our old friend the rat. On the rat exhibit it stated that one pair, if unhindered, would increase in five years to nine hundred and forty billions. After reading that, the preacher turned around and went back to see if it was millions or billions. Again, this listing and charting and card indexing of your enemies is wise. It is shrewd, scientific and sound. By the time some of these recent arrivals are ready for work they will find the modern farmer armed to the teeth with sprays and poisons and preventives.

And then your preacher asked himself this question: Is the church as wise as the farmer and the agricultural professor? Have we made a chart of the enemies of religion? Do we know who are the foes of the soul, those who hate us, and our children? For that is what it means. Those who oppose God are the enemies of man. What would we list as such enemies? Indifference. The indifferent and stupid farmer is the bane of progress. The indifferent and stupid minister, and church officer, and congregation stand in the way of all advancement of the Kingdom. Another enemy in our list would be the abuse of Sunday. Still another would be the salacious moving picture screen that has sent more than one lad to prison. And then there are particular enemies in one's community. The grasshoppers last summer came to certain counties, but other counties hard by, were not visited. One may have to make a special chart of local enemies. But the idea remains. When one is shooting at a target, he knows what he is shooting at. Too often the church fires off its ammunition into the air, hoping some foe may be brought down, but no enemy in particular. As Roosevelt said, "The only shots that count are the shots that hit." The farmer is fast learning that. The church is also learning it. And the enemies of religion are of greater importance than the enemies of the farm. If the codling moth should carry off the entire apple crop, we could survive. If foot-and-mouth disease slew the last beef animal, humanity could make shift to exist. But if the next generation of youth should be carried off, humanity could not exist. The greatest enemies are the enemies of the soul. Here is a text that will fit: "Fight the good fight of faith, lay hold on eternal life, whereunto thou art also called."



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hand. And he bent and kissed it. "If anybody's going to stay with you," Dan told them in a clear, firm voice, "it's going to be me. But aren't any of the cabins occupied?"

"You know they aren't," Lennox answered. "Not even the house beyond the North Fork, even if we could get across. The nearest help is over seven miles."

"And Snowbird, think! Haven't any supplies been left in the ranger station?"

"Not one thing," the girl told him. "You know Cranston and his crowd robbed the place last winter. And the telephone lines were disconnected when the rangers left."

"Then the only way is for me to stay here. You can take the pistol, and you'll have a fair chance of getting through. I'll grub wood for our camp meanwhile, and you can bring help."

"And if the wolves come, or if help didn't come in time," Lennox whispered, passion-drawn for the first time, "who would pay what we owe to Cranston?"

"But her life counts—first of all."

"I know it does—but mine doesn't count at all. Believe me, you two. I am speaking from my own desires when I say I don't want to make the fight. Snowbird would never make it through alone. There are the doves, and maybe Cranston too—the worst wolf of all. A woman can't mush across those ridges four days without food, without someone who loves her and forces her on! Neither can she stay here with me and try to make green branches burn in a fire. She's got three little pistol balls—and we'd all die for a whim. Oh, please, please—"

But Dan leaped for his hand with glowing eyes. "Listen, man!" he cried. "I know another way yet. I know more than one way; but one, if we've got the strength, is almost sure. There is an ax in the kitchen, and the blade will still be good."

"Likely dulled with the fire—"

"I'll cut a limb with my jackknife for the handle. There will be nails in the ashes, plenty of them. We'll make a rude sledge, and we'll get you out too."

Lennox seemed to be studying his wasted hands. "It's a chance, but it isn't worth it," he said at last. "You'll have fight enough, without tugging at a heavy sled. It will take all night to build it, and it would cut down your chances of getting out by pretty near half. Remember the ridges, Dan—"

"But we'll climb every ridge—besides, it's a slow, down grade most of the way. Snowbird—tell him he must do it."

(Continued next week.)

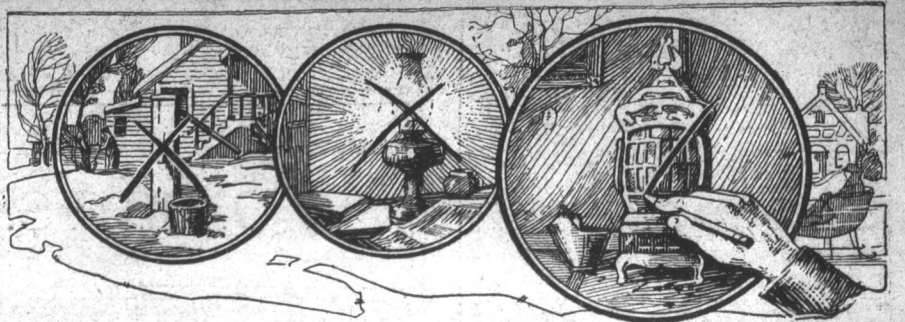
Sunshine Hollow Items

By Rube Rubicon

John Munday and Stella Friday were married last Saturday by Rev. Sunday. They will leave Tuesday for Eaton Rapids and be back Wednesday or Thursday.

Melvin Hogan says that its fortunate we can still get quite a parcel of education after leaving school. Melvin went to a university but says it isn't his fault because his folks sent him there. But Melvin got right out after graduation and learned a business from the basement to the attic. He wasn't afraid of getting his hands chapped. So he makes a good living in spite of the folks that said he was wasting time buying book learning.

Automobiles have spoiled the bathroom over to the Jones farm. Bruce Jones drove nail holes in an old milk pail and hung it on an apple tree limb. Then he poured a pail of warm water in it after dark and stood under and had a shower bath. Now they have repaired the road and so many big headlights are flashing along every night that it isn't safe to use the bathroom any more.



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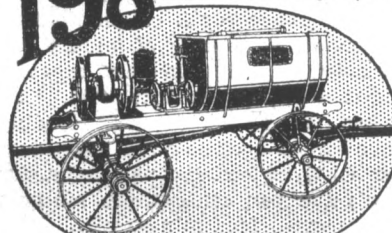
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Woman's Interests

Score One for the New Girl

ONE of the most encouraging signs of the times to forward looking women is the step in the right direction towards educating girls. We women, for instance, who sat down with the first baby and wrung our hands in hopeless ignorance, why were we taught everything except the one thing a girl should know, how to feed the baby? What difference did it make to us whether the sum of the angles of a triangle equalled two right angles, whether Caesar conquered Gaul or Gaul conquered Caesar, when the baby was dying because we could not furnish nature's food, and none of the artificial foods we blindly offered were of any use?

Yet if we had demanded from the schools—or from our mothers—in those good old days, that girls be taught the science of motherhood if the science of mathematics had to go neglected, we would have been considered quite beyond the pale. For a girl to even think she might be a mother some day was so immodest, it wasn't even decent.

But the world surely do move. If the modern girl with her abbreviated skirts and silken hose and no underwear, who is quite beyond the understanding of us mothers, has succeeded in shaking off the shell of false modesty that hampered us, and has made sages and savants sit up and take notice of what women really want and need, more power to her.

All this is a long ways from what I started out to say, however, that the board of agriculture in deciding to request the funds for a building where experiments in feeding of infants can be carried on, has asked the greatest thing they could do for the state. The day has gone by when correct feeding can be looked upon as a fad. We must know what to feed the new baby, for seventy-five per cent of the mothers simply cannot feed it naturally. It is not a question of refusing, it is absolute inability. That in itself is an alarming situation, and its cause should take up the time of another set of specialists.

But the main thing is to find out what to feed the baby. Modified cow's milk is, so far, the best substitute, but scores of babies are unable to take cow's milk no matter how it is modified. Then begins a search for something that will turn the trick. If you are lucky and find it right away, all is well. If the baby proves hard to suit, there follow weeks of wretchedness for mother and child, physical suffering for baby, mental suffering for the mother.

I don't know how it struck other mothers, but when I went through the ordeal with my first baby, I was impressed with the fact that the doctor was just as ignorant as I was. In fact, he was even more ignorant. For while I had learned in a home economics course something about the chemical analysis of foods, the doctor didn't seem to have heard that there was such a thing as sugar, fat, or protein, that foods might be analyzed, and that you might go about the problem of finding the right thing in a scientific manner. With the doctor it was a matter of trying this thing today and that tomorrow, while the baby grew feeble and feeble.

If the new building becomes a real-

ity instead of a dream, we can all know what to do some day. For experts will carry on studies and experiments in the new laboratories, and eventually they must reduce the thing to an exact science. Girls going out from the school will spread the knowledge, and the extension department, with its workers and by bulletins, will place the formulas in the hands of every mother.

Only the mothers who have gone

through the hell of caring for a baby suffering from mal-nutrition can understand what this means. But the number of such mothers has grown so alarmingly in the past fifteen years that their united voice must surely be strong enough to carry the day. We want to know what to feed the baby. And if a new building at M. A. C. is needed to furnish us this knowledge, let us by all means have the building.

DEBORAH.

Patchwork—Old But New

THE aprons here shown illustrate an easy and attractive form of decorative work which can be applied to all sorts of garments and household draperies.

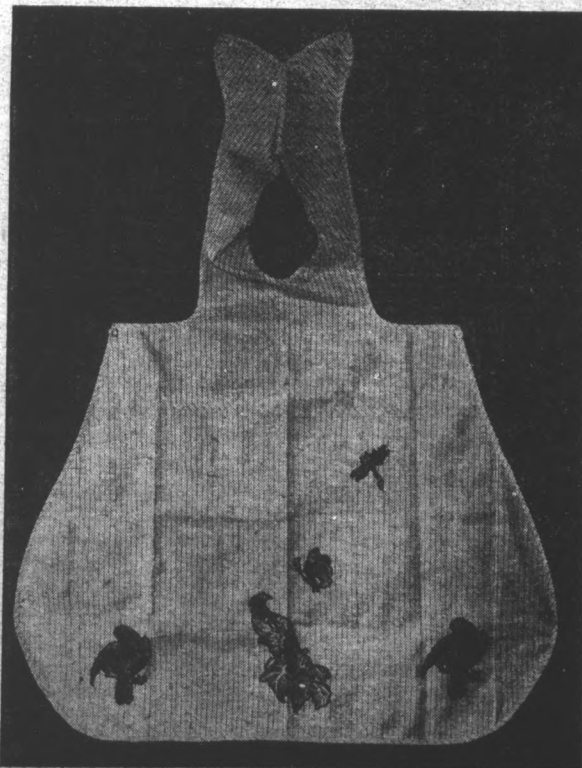
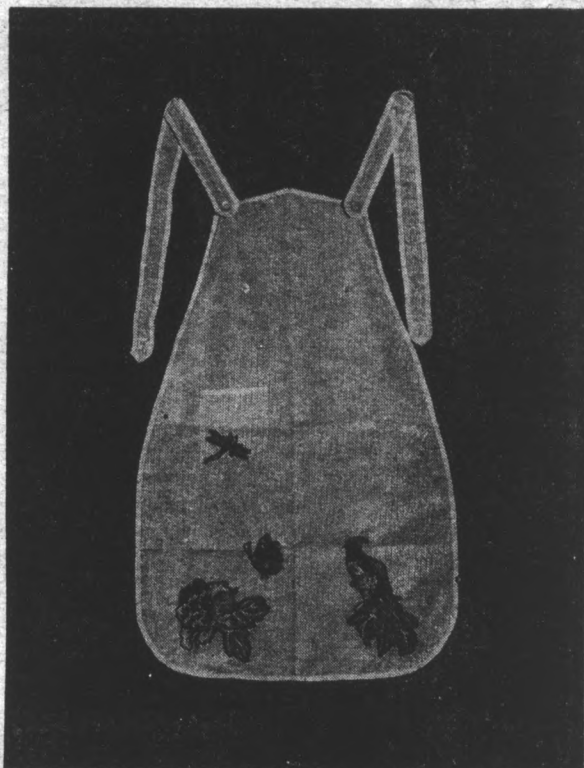
These aprons are of black and white striped percale, the appliques cut out of cretonne and buttonholed on in black. The result is two smart aprons which otherwise would have been plain utility "pinnies." Children's bibs and little girls' aprons may be brightened with cut-out animals.

Unbleached muslin with cut-outs of pink roses, yellow chrysanthemums—or even the gay parrot on the apron—make cheap curtain material and give the room a dressed-up air. Cushions, buffet

scarfs and table runners are quickly same material, decorated with such de-made with this "patch work" applique. signs and colors as may suit her fancy. Any girl who is contemplating a change in the color scheme of her bedroom this spring may achieve pleasing results with curtains, dresser scarf and cushions and even a bed-spread of the

same material, decorated with such de-made with this "patch work" applique. signs and colors as may suit her fancy. Where several articles are for the one room it will be found that the best results are obtained if the cretonne selected is composed of small, dainty decorations rather than the larger patterns. One store is asking fifteen dollars for a bed spread of unbleached sheeting, with center and corners decorated in this simple fashion. All that is needed for the work is a pair of sharp scissors, artistic sense to pick out appropriate patterns, mercerized cotton in fast colors, good needles, and patience.

But the patchwork idea is by no means confined to bedroom furnishings and kiddies' clothes. Shops specializing in garments for grown-ups show this quaint trimming. Bright hued butterflies cut from cretonne served as pockets on one cream-colored smock, while cretonne blue birds decorated another smock of deep rose color.



An Aid to the Home Dressmaker

PROBABLY the most difficult problem confronting the home dressmaker is that of designing and fitting dresses for herself. The excellent patterns furnished by pattern manufacturers are necessarily made for average proportions. Individual women, however, are not all built according to these average measurements. It is often found that a pattern bought according to bust or waist measurement may not fit at neck or hip.

When copying a design from the fashion book, trimmings are hard to adjust, drapery may not look as it did in the picture, and skirts are difficult to hang. A long mirror is a great help, and will be found useful to the home dressmaker, but it does not entirely fill the bill. The dress form really solves the problem many times and makes sewing for oneself much more satisfactory.

There are various types of dress forms on the market. It is not at all necessary to buy the highest priced one, in fact, many prefer the least expensive ones. A tight lining, carefully fitted to the individual, should be used with any form. There are inexpensive bust forms which sell for a few dollars, which may be made into a satisfactory model with comparatively little work.

The form should be bought two inches smaller than the bust measure. If the bust measures thirty-six inches, buy a thirty-four-inch form, thus giving leeway for variation from average measurements. Hips and waist too small may be padded out, but if too large, the form is of little use. Take a snug bust measure, keeping the tape well up across the back and over the fullest part of the bust in front.

A standard on which to mount the form may be bought for a small sum, or the handy man around the house can mount it on a broomstick or a piece of wood of sufficient strength, securely fastened to a base on which it may stand firmly. See that the height of the form, from waist to floor is just that of the individual.

The fitted lining is best made of

heavy unbleached muslin, as it will not stretch. A fitted waist pattern with side front and back seams, with the pieces coming well down over the hips, should be used. Baste the seams securely, fit with seams turned towards the wearer, or fit with seams out and then turn and try on again for any changes needed. Few persons are just alike on both sides.

The lining should be very tightly fitted from neck well down over the hips. It should be sewed up the center of the front and left open down the center of the back. A tight-fitting collar should be sewed to the neck. Fit all seams carefully, trim to about a half-inch wide, and notch on curves to allow stretching. Try on again to be sure the fit is right. Mark the waist line, the line for fastening in back, and a line for the armhole, later stitching with colored thread for a permanent marking.

When the lining is ready, slip it on the form, noting the points where the form does not fill it out. Pad out the form where it fails to fit the lining, making it fit snugly. Cotton batting may be used satisfactorily for padding, and when this is completed, baste or carefully pin the lining in the back, and the form is ready for use.

One complete sleeve may be made, fitted and then stuffed with the cotton, and enclosed at top and bottom with a circle of the muslin. When it is desired to fit a sleeve, this arm may be pinned into place on the form, after which it can be removed and out of the way when not in use. This sleeve form is especially useful in fitting a coat sleeve.

If there are two or more women in the family, lining may be made for each, and providing there is not too great a difference in size, the form may be used for all, though the padding will probably have to be changed.

The woman who has had many discouraging hours trying to make her dresses look well, once she has used a form, will never try to sew again without one.

Michigan Farmer Pattern Service

Send 15c in silver or stamps for our up to date fall and winter 1920-1921 catalog, containing over 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating thirty of the various simple stitches) all valuable to the home dressmaker.

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No. 3368.—Girl's Dress. Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size will require 4 1/4 yards of 36-inch material. Price 12c.



No. 2932.—Girl's Dress. Cut in four sizes, 6, 8, 10 and 12 years. Size 10 requires 3 1/4 yards of 38-inch material. Price 12c.

No. 3506.—Girl's Dress. Cut in four sizes, 6, 8, 10 and 12 years. An eight-year size will require 1 1/2 yards of 36-inch material for the gimpes, and 2 1/2 yards for the dress. Price 12c.



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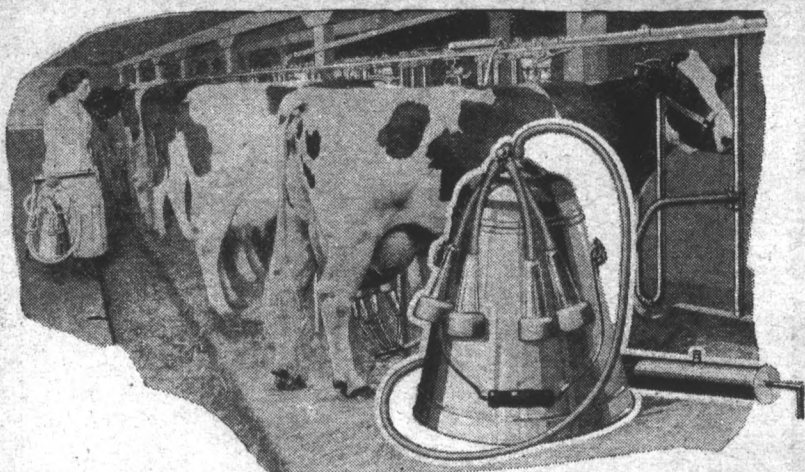
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Our Boys' and Girls' Page

Getting the Right Start

By Uncle Ed

A GOOD story comes to me from bought a lamb he had. The way it
'way out in California and I will came about will interest you. The
pass it on to our boys and girls, boy's grandfather kept a good many
because I am sure it will be helpful to sheep, and he had seven boys and girls
everybody. of his own. As these children one af-
ter another married and came to have
boys and girls, as soon as the boys

There is a little town out there of perhaps six hundred people in the vil-
lage and the surrounding community. It used to be until quite recently a very
dull, slow-going place. Then some boys and girls thought up the plan of hav-
ing a pig club. The girls were just as much interested as the boys in the
plan, and they took just as good care as the boys did of their little porkers.
And because the young folks were in-
terested, the old folks were, too. New life came into the homes all round that
village. Not long ago they had a great day for the boys and girls. The pigs
were brought in and all the folks in the town gathered together to look at
them and see which was the best. The result was that a spirit of enthusiasm
has taken possession of everybody. Even the people in the churches seem
to feel the difference and are working together unitedly for the best good of
the people. And it all came about through the Boys' and Girls' Pig Club.
I wonder if the pigs do not know the difference, too, and feel like doing their
best for their little masters?

Better Than a Pig Club.

In speaking of the Boys' and Girls' Pig Club in the California town, we



Theodore Stenson, of Covington, Bar-
aga County, wins the cup offered by
the Michigan Potato Growers' Asso-
ciation for the second year.

were old enough to care for it, the grandfather gave them a nice ewe lamb
for their own. This boy whose lamb brought him the five dollars took fine
care of his lamb and finally it had a lamb of its own. That was the one
that was sold. Since then lambs have sold for a good many dollars more than
he got for his. But this gave the boy his start. He opened up a savings
bank account and put the shining gold piece in as his first deposit. In after
days he had quite a nest egg, all gained from the lambs the first ewe raised
and the wool which was sheared from them. But the money was not the chief
thing. The boy had a great deal of joy caring for his sheep. I am sure it gave
him a better outlook on life to have this interest in sheep.

A Little Dog and a Shop.

The principal of the academy where I used to go to school when a young
man had a story he liked to tell us about two boys, one of whom spent all
his spare time training a little dog to do tricks. The dog got so it would do
a good many pleasing things, but the boy never did anything very wonder-
ful in later life. He wasted his time

Cup presented by the Michigan Bank-
ers' Association for the state corn
club champion, which was won for
1920 by Forest Beddell, of Flint, Gen-
esee County.

have not spoken of the best part of it
all. The young folks took a great deal
of comfort growing their pigs, and sure-
ly the pigs must have felt more com-
fortable, being fed and washed and
groomed so well. The club brought
some more money into the homes of
those who had them to sell; but the
fire in the hearts of the boys and girls
awakened by this new enterprise was
the best of all. You cannot tell how
much better farmers the boys will be,
and surely the girls will be better
home-makers than they would if they
never had been members of the pig
club; for you cannot do any one thing
well, without being affected for the bet-
ter in every other way. Some of the
boys who raised the pigs may not be
farmers; they may go into other lines
of business, but whatever they do, they
will do it more successfully because of
their experience growing fine pigs. And
this is the way the world gets to be
better.

A Boy's Lamb.

The first money a boy I know of
ever had was a five-dollar gold piece,
and he received it from a man who



The Michigan Bean Jobbers' Associa-
tion provided this cup for the club
member who succeeds best with
beans. For 1920 the cup goes to
Lester Weaver, of Chesaning.

playing with his dog and lost many a chance to do things that were really worth while.

The other boy spent his spare moments working in a shop and he got so he could use all kinds of tools, so that when his course in the academy was done he was able to go out and get a place as a mechanic. Little by little he advanced until he finally became a master workman in his chosen field. The professor's lesson for us boys was the value of time well spent as compared with hours frittered away.

All Work—No Play.

But shall it be all work and no play with the young folks on the farm? Oh, no! To make the life the best possible there must be a combination of fun and business. A good many things we do have the quality of interesting us while they have something of profit about them. There is a public market not far from where Uncle Ed lives. Three times a week the farmers from the surrounding country bring in all sorts of things for the folks of the town of eleven thousand to buy. One day this week a couple of boys came bringing two raccoons and sold them for five dollars each. That started other boys, and they say they will have raccoon on the market next time they come. The boy will have plenty of fun hunting their raccoons, and there will be some money in it for them after all. Boys and girls who have belonged to a pig club or a calf club or anything of the sort know that it affords them a great deal of pleasure, besides adding something to their treasure of money. The best kind of life is the all-round life, some work, some study, some sport.

You Be the One to Start.

"There are no clubs of any kind near my home." It may be some of our young people say that. Why not, then, be the one to start something along this line? Think it over, talk with father and mother and see what they think would be most apt to win out. Then go round and interest your chums in it and push it with all your might.

STRONG CHICKS THRIVE.

IN raising chicks it is very discouraging to start out with a flock containing many puny specimens. They do not thrive under the best of care and a high mortality rate is apt to result. Thrifty chickens have bright beady eyes. They are alert and stand in a sturdy manner. The shanks and toes are not weak and spindly but well built and suggest vigor. The beak of the vigorous chick appears short and stout.

Good quality chicks have medium long and broad backs and the fluff is clean and rounded. They are the kind of birds that scratch and sing and immediately show the results of good food by growing rapidly. The wings stay close to the body as if the bird had the strength to keep them neatly folded. Weak chicks are apt to lag about the brood coop and try to stay under the hen at all times. If artificially brooded they are the type that hugs the source of heat.

When once obtaining a flock of strong chicks a very high per cent of them can be raised if proper methods are followed. In buying day-old chicks it pays to try and obtain stock that correspond to the vigorous type. Some men who run incubators seem more skillful than others in obtaining plump vigorous chicks. Much of their success is due to the quality of the breeding stock. We find that eggs from year-old and two-year-old hens produce plumper and stronger chicks than eggs from pullets. Hens that have been heavily fed for winter eggs do not produce as thrifty chicks as the hens which have had their vigor saved for the production of hatching eggs.

HOME-MADE OAT SPROUTER.

I would like to know how to make a home-made oat sprouter.

Missaukee Co.

E. B.

An oat-sprouter can be made by building a rack and several wooden trays which will slide into the rack. The oats should be soaked two days in pails of warm water and then spread out on the trays to the depth of an inch. The oats will sometimes mould but this can be prevented by placing ten drops of formalin in each pail of water in which oats are soaked. The wooden trays in the oat sprouter can also be sprayed to destroy mould.

The oats must be sprouted in a room that is sufficiently warm for plant growth at all times. Poultry keepers who do not have such a room conveniently situated often buy the commercial oat sprouters which are heated with a lamp. There are many styles of them advertised in the poultry journals. Oat sprouters can be made of any size, depending upon the needs of the flock, by simply making the rack to hold the necessary trays.

One commonly used sprouting rack is made seven feet high and two feet square. It can contain seven trays. The temperature in the room should not be less than sixty degrees F., and the oats should be about ready to feed on the seventh day. A square inch of the growth per bird per day is commonly advised. Oats that are sprouting must be thoroughly sprinkled twice a day as they require much moisture.

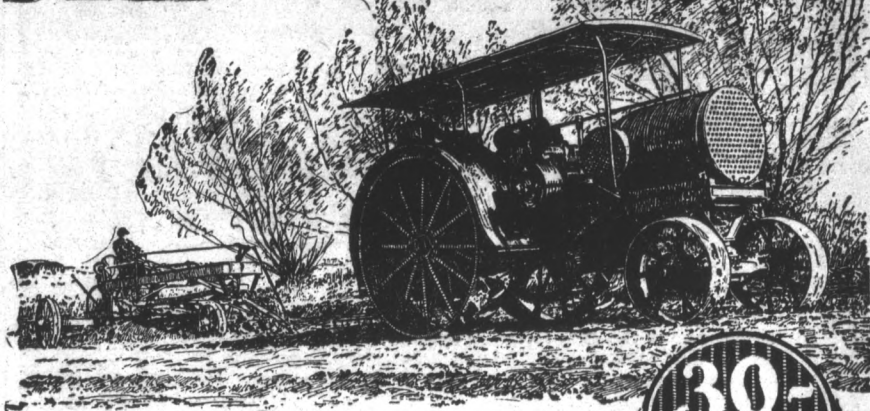
THE WORLD'S GREATEST CANAL TRAFFIC.

The annual report of the Lake Carriers' Association, just received from their Cleveland office, makes possible an interesting comparison of the traffic passing through the Panama, the Suez, and our own St. Mary's Ship Canal. We pride ourselves very much on the Panama Canal—and its great work. But here are the figures: The freight passing through the St. Mary's Ship Canals, in 1920, was 79,282,496 short tons, most of which went through the American Canal. The 1920 figures for the Panama Canal are 9,374,499. The 1919 figures for the Suez Canal—the latest at hand—are 16,013,802 tons. That indicates the relative importance of the three canals in the world's commerce. And yet when the question of making a land grant in aid of the Michigan big ditch was up before congress, just after the Mexican War, there were some who doubted that there would ever be enough traffic to make it pay; but from the time the St. Mary's Ship Canal was opened in 1855 it has been enormously important in the development of northern Michigan and the great northwest. In aid of its construction the United States granted to the state of Michigan in 1852, 750,000 acres of land, which, in turn, was turned over to the company which built the canal as payment for the work. Of this land grant, the company selected 252,000 acres in the upper peninsula, of which a substantial amount is still held.

PLANTING FISH.

The official bulletin of the Stambaugh Township Development Bureau, Iron county, announces a project for stocking local lakes with fish. Through the cooperation of the Development Bureau and the Bureau of Fisheries of Washington, D. C., a consignment of pike, brook trout, pickerel, and lake trout is to be received in the early spring at Stambaugh. Lakes Chicagoan, Indian, Hagerman, Brule, Camp and Golden will be planted, and also some streams. The Stambaugh Township Development Bureau is publishing a periodical bulletin which, among other things, lists farmers with live stock and produce to sell.

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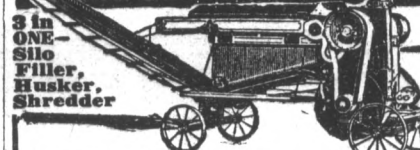
and 22-45's are being used by township trustees, highway commissioners and other road officials with unvarying success in practically every state in the Union.

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(13) Find out why STOVER SILAGE will winter cattle at half the cost of corn silage, thus saving the ears to feed or sell. A postal today brings them.

The Hall Mfg Co.
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Cedar Rapids, Ia.



ONE MAN SAWS 40 CORDS A DAY!
The OTTAWA Log Saw does 10 to 15 men's work. Strictly a One-Man Outfit. Runs belt machinery. Over 4 ft. 10 in. Saw Cuts a Minute! 30 Days Trial. Cash or Easy Payments. 10-Year Guarantee. Special Offer Now! Free Book! Send Now!
OTTAWA MFG. CO., 1501 Wood St., Ottawa, Kans.

\$650 Secures 62 A. With Horse, Cow and
Fodder, etc., near large RR. town. Rich dark loam soil, wire fenced pasture; 1,000 cords wood, variety fruit, snug house, 2 barns, pigery, all \$1300 easy terms. See page 48. Illus. Catalog. Bargains, 33 states. STROUT AGENCY, 814 BO Ford Bldg., Detroit, Mich.

Farms and Farm Lands

McClure-Stevens Land Co.

We have for sale: 15,000 acres of fine unimproved lands, well located, joining well settled locality, on easy terms. A tract of 160 acres, 5 miles from Gladwin, on daily mail route, all fenced with woven wire, 20 acres under fine state of cultivation, 6 acres in fruit. A Sheep Ranch of 310 acres, all fenced, well grassed over, living water, 70 acres cleared, 30 acres under fine state of cultivation with fruit, good buildings, 250 head of sheep, 4 stock ranches well grassed, fenced and watered with living water.
McCLURE-STEVENS LAND CO., Gladwin, Mich.

High Class Dairy Farm For Rent

160 acres fertile land within one mile of town. Good buildings, barns to house, 100 head of stock and feed for same. Will rent on share for term of years to good dairyman or stock man who can finance one-half of herd of 20 to 30 cows and furnish teams and tools. Address Box J115, care of Michigan Farmer, stating experience and financial ability in first letter.

\$250 Secures Farm With Cozy Dwelling

Overlooking beautiful bay; 10 acres in famous resort section; on good road, near beach, convenient city; 8 acres tillage, ideal vegetables and tropical fruits; oranges, guavas, etc.; artesian well; owner unable occupy; makes low price \$1,000, easy terms. Details page 50 Catalog FREE. **STROUT AGENCY, 1210 E. T. Graham Bldg., Jacksonville, Fla.**

FARM BARGAIN

120 acre Farm sandy loam clay bottom good soil to raise any kind of crops. Large house with basement, good well, large barn, metal lined granary, silo. Will sell with or without stock and machinery, \$5 dollars per acre. Requires down payment of three thousand dollars. Edward Hesse, 1996 Gratiot Ave., Detroit.

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FREE CATALOGUE OF SPLENDID BARGAINS.
R. B. CHAFFIN & CO., Inc., Richmond, Va.

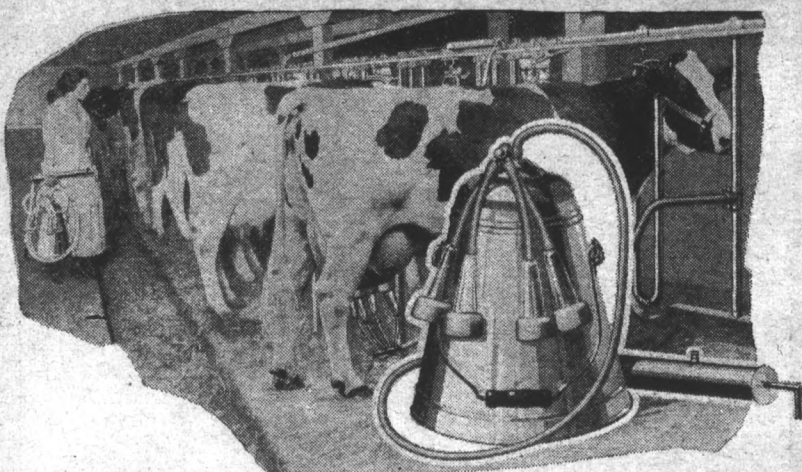
For Rent. 350 Acre farm on shares at Port Hope, Mich. Good house, hog house, two large barns with basement and running water, large silo, level heavy soil. Write C. R. SMITH, Niles, Mich.

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For Sale 40 acres all under plow, 2 horses, 1 cow, 3 hogs, flock of chickens, all farm tools. Good buildings. Orchard. A bargain at \$2300. Easy terms. Write **JOHN CONANT, Grand Haven, Michigan**

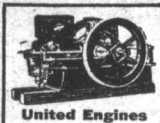
WANTED To hear from owner of farm or unimproved land for sale.
O. K. HAWLEY, Baldwin, Wisconsin.

Small Farm For Sale or Trade
near town. Willis Bradley, Bedford, Va.

America's Greatest Value in Farm Machines



United Milker Will Double Your Dairy Dollars



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United Feed Mills

The United Milker, the simplest, most practical, most sanitary, efficient milker made, will increase your dairy profits. You can keep more cows, and do the work with the same labor or less. Double your herd, if you wish, and make more money accordingly. A boy or girl can operate it. Big time and labor saver.

Has the Famous "See-Thru" Teat Cup

An exclusive feature of all United Milkers. One piece, transparent, clear as a crystal. Tell at a glance what each teat is doing. Rubber top and pump pulsator action, giving complete vacuum release on teat—imitates nose action of calf. Cows like it and let down their milk freely.

Ask Your Dealer or Write to Us

Uniteds are furnished in units for five cows or more. Your dealer will give you complete information or write to us. All United products are guaranteed. They must make good or we will investigate now.

UNITED ENGINE COMPANY
Dept. 37 Lansing, Mich.



(30)



RAW FURS
WE pay the Market's Highest Mark.
Are absolutely reliable—established
1853—capital, \$1,100,000. Write at once
for FREE Price List and Booklet,
"Successful Trapping." Postal will do.
TRAUGOTT, SCHMIDT & SONS
153 Monroe Ave. Detroit, Mich.



Learn Auto

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Earn \$150 to \$400 a Month
Thousands have learned here in 6 to 8
weeks and are making big money as
repair men, drivers, and superin-
tendents. Many own garages making
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BOOK ON DOG DISEASES And How to Feed

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H. CLAY GLOVER CO., Inc.,
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LANDOLOGY

Special Number just
out containing 121
facts of Clover Land
in Marinette County,
Wisconsin. If for a
home or as an investment you are thinking of buying good
farm lands where farmers grow rich, send at once for this special
number of LANDOLOGY. It is free on request. Address
SKIDMORE-RIEHL LAND COMPANY
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FARM WAGONS

High or low wheels—
steel or wood—wide
or narrow tires.
Wagon parts of all
kinds. Wheels to fit
any running gear.
Catalog illustrated in colors free.
Electric Wheel Co., 35 Elm St., Quincy, Ill.

Hounds

Trial. Photos. Testimonials.
Prices. Write
Kaskasko Kennels, Herrick, Ill.
Trained American Fox Hounds Rabbit and Skunk
dogs all ages. Send stamp.
W. E. LECKY, Holmesville, Ohio

Security

Security in buying a horse comes
from your long experience with
horses.

Security in buying a suit is as-
sured if you take advantage of our
75 years of experience in making
clothes.

You will know the most de-
pendable fabric for your clothes—
year in and year out.

You will know the styles that
are right—safe and sane—that will
be right as long as you wear the
suit.

For wear—service—looks—
most-for-dollar—you can't beat
guaranteed Clothcraft Serge
Specials—tested by over a half
million wearers.

These common-sense clothes
are made in the largest single
clothing plant in the world—
where we make the greatest
number of Serge Specials—and
sell them for less.



Actual samples of these serges—
free to you—in a little folder with
a big message—facts that will
give security to your clothes
buying—just write "Send Serge
Folder"—address:

THE JOSEPH & FEISS CO.
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Factory to Rider

Saves \$15 to \$25 on the mod-
el you select from 44 Styles,
colors and sizes of Ranger bicycles.
Delivered free on approval express pre-
paid direct from the Makers for 30
Days Free Trial. We pay return charges
if not satisfactory in every way.

12 Months to Pay Possession
once on our liberal year to pay
plan. Any boy or girl can save the
small monthly payments.

Tires wheels, chains, parts
and equipment at half
usual prices. **BIG RANGER CATALOG FREE**,
with marvelous new prices, 30 day trial offer and
terms. Ask for special Rider Agent plan to earn
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BUY FENCE POSTS direct from for-
est. Prices deliv-
ered your station. M. M. care of Michigan Farmer

Our Boys' and Girls' Page

Getting the Right Start

By Uncle Ed

A GOOD story comes to me from bought a lamb he had. The way it
'way out in California and I will came about will interest you. The
pass it on to our boys and girls, boy's grandfather kept a good many
because I am sure it will be helpful to sheep, and he had seven boys and girls
everybody. of his own. As these children one af-
ter another married and came to have
boys and girls, as soon as the boys

There is a little town out there of perhaps six hundred people in the vil-
lage and the surrounding community. It used to be until quite recently a very
dull, slow-going place. Then some boys and girls thought up the plan of hav-
ing a pig club. The girls were just as much interested as the boys in the
plan, and they took just as good care as the boys did of their little porkers.
And because the young folks were in-
terested, the old folks were, too. New life came into the homes all round that
village. Not long ago they had a great day for the boys and girls. The pigs
were brought in and all the folks in the town gathered together to look at
them and see which was the best. The result was that a spirit of enthusiasm
has taken possession of everybody. Even the people in the churches seem
to feel the difference and are working together unitedly for the best good of
the people. And it all came about through the Boys' and Girls' Pig Club.
I wonder if the pigs do not know the difference, too, and feel like doing their
best for their little masters?

Better Than a Pig Club.

In speaking of the Boys' and Girls' Pig Club in the California town, we



Theodore Stenson, of Covington, Bar-
aga County, wins the cup offered by
the Michigan Potato Growers' Asso-
ciation for the second year.

were old enough to care for it, the grandfather gave them a nice ewe lamb
for their own. This boy whose lamb
brought him the five dollars took fine
care of his lamb and finally it had a
lamb of its own. That was the one
that was sold. Since then lambs have
sold for a good many dollars more than
he got for his. But this gave the boy
his start. He opened up a savings
bank account and put the shining gold
piece in as his first deposit. In after
days he had quite a nest egg, all gain-
ed from the lambs the first ewe raised
and the wool which was sheared from
them. But the money was not the chief
thing. The boy had a great deal of joy
caring for his sheep. I am sure it gave
him a better outlook on life to have
this interest in sheep.

A Little Dog and a Shop.

The principal of the academy where
I used to go to school when a young
man had a story he liked to tell us
about two boys, one of whom spent all
his spare time training a little dog to
do tricks. The dog got so it would do
a good many pleasing things, but the
boy never did anything very wonder-
ful in later life. He wasted his time

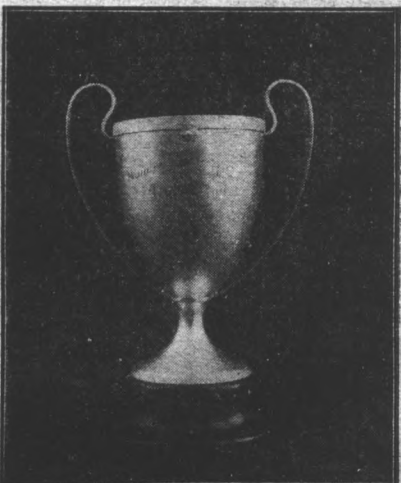


Cup presented by the Michigan Bank-
ers' Association for the state corn
club champion, which was won for
1920 by Forest Beddell, of Flint, Gen-
esee County.

have not spoken of the best part of it
all. The young folks took a great deal
of comfort growing their pigs, and sure-
ly the pigs must have felt more com-
fortable, being fed and washed and
groomed so well. The club brought
some more money into the homes of
those who had them to sell; but the
fire in the hearts of the boys and girls
awakened by this new enterprise was
the best of all. You cannot tell how
much better farmers the boys will be,
and surely the girls will be better
home-makers than they would if they
never had been members of the pig
club; for you cannot do any one thing
well, without being affected for the bet-
ter in every other way. Some of the
boys who raised the pigs may not be
farmers; they may go into other lines
of business, but whatever they do, they
will do it more successfully because of
their experience growing fine pigs. And
this is the way the world gets to be
better.

A Boy's Lamb.

The first money a boy I know of
ever had was a five-dollar gold piece,
and he received it from a man who



The Michigan Bean Jobbers' Associa-
tion provided this cup for the club
member who succeeds best with
beans. For 1920 the cup goes to
Lester Weaver, of Chesaning.

playing with his dog and lost many a chance to do things that were really worth while.

The other boy spent his spare moments working in a shop and he got so he could use all kinds of tools, so that when his course in the academy was done he was able to go out and get a place as a mechanic. Little by little he advanced until he finally became a master workman in his chosen field. The professor's lesson for us boys was the value of time well spent as compared with hours frittered away.

All Work—No Play.

But shall it be all work and no play with the young folks on the farm? Oh, no! To make the life the best possible there must be a combination of fun and business. A good many things we do have the quality of interesting us while they have something of profit about them. There is a public market not far from where Uncle Ed lives. Three times a week the farmers from the surrounding country bring in all sorts of things for the folks of the town of eleven thousand to buy. One day this week a couple of boys came bringing two raccoons and sold them for five dollars each. That started other boys, and they say they will have raccoon on the market next time they come. The boy will have plenty of fun hunting their raccoons, and there will be some money in it for them after all. Boys and girls who have belonged to a pig club or a calf club or anything of the sort know that it affords them a great deal of pleasure, besides adding something to their treasure of money. The best kind of life is the all-round life, some work, some study, some sport.

You Be the One to Start.

"There are no clubs of any kind near my home." It may be some of our young people say that. Why not, then, be the one to start something along this line? Think it over, talk with father and mother and see what they think would be most apt to win out. Then go round and interest your chums in it and push it with all your might.

STRONG CHICKS THRIVE.

IN raising chicks it is very discouraging to start out with a flock containing many puny specimens. They do not thrive under the best of care and a high mortality rate is apt to result. Thrifty chickens have bright beady eyes. They are alert and stand in a sturdy manner. The shanks and toes are not weak and spindly but well built and suggest vigor. The beak of the vigorous chick appears short and stout.

Good quality chicks have medium long and broad backs and the fluff is clean and rounded. They are the kind of birds that scratch and sing and immediately show the results of good food by growing rapidly. The wings stay close to the body as if the bird had the strength to keep them neatly folded. Weak chicks are apt to lag about the brood coop and try to stay under the hen at all times. If artificially brooded they are the type that hugs the source of heat.

When once obtaining a flock of strong chicks a very high per cent of them can be raised if proper methods are followed. In buying day-old chicks it pays to try and obtain stock that correspond to the vigorous type. Some men who run incubators seem more skillful than others in obtaining plump vigorous chicks. Much of their success is due to the quality of the breeding stock. We find that eggs from year-old and two-year-old hens produce plumper and stronger chicks than eggs from pullets. Hens that have been heavily fed for winter eggs do not produce as thrifty chicks as the hens which have had their vigor saved for the production of hatching eggs.

HOME-MADE OAT SPROUTER.

I would like to know how to make a home-made oat sprouter. E. B. Missaukee Co.

An oat-sprouter can be made by building a rack and several wooden trays which will slide into the rack. The oats should be soaked two days in pails of warm water and then spread out on the trays to the depth of an inch. The oats will sometimes mould but this can be prevented by placing ten drops of formalin in each pail of water in which oats are soaked. The wooden trays in the oat sprouter can also be sprayed to destroy mould.

The oats must be sprouted in a room that is sufficiently warm for plant growth at all times. Poultry keepers who do not have such a room conveniently situated often buy the commercial oat sprouters which are heated with a lamp. There are many styles of them advertised in the poultry journals. Oat sprouters can be made of any size, depending upon the needs of the flock, by simply making the rack to hold the necessary trays.

One commonly used sprouting rack is made seven feet high and two feet square. It can contain seven trays. The temperature in the room should not be less than sixty degrees F., and the oats should be about ready to feed on the seventh day. A square inch of the growth per bird per day is commonly advised. Oats that are sprouting must be thoroughly sprinkled twice a day as they require much moisture.

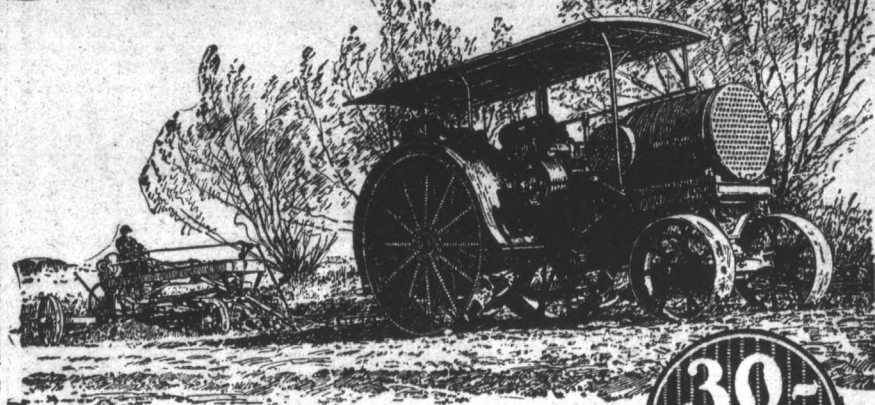
THE WORLD'S GREATEST CANAL TRAFFIC.

The annual report of the Lake Carriers' Association, just received from their Cleveland office, makes possible an interesting comparison of the traffic passing through the Panama, the Suez, and our own St. Mary's Ship Canal. We pride ourselves very much on the Panama Canal—and its great work. But here are the figures: The freight passing through the St. Mary's Ship Canals, in 1920, was 79,282,496 short tons, most of which went through the American Canal. The 1920 figures for the Panama Canal are 9,374,499. The 1919 figures for the Suez Canal—the latest at hand—are 16,013,802 tons. That indicates the relative importance of the three canals in the world's commerce. And yet when the question of making a land grant in aid of the Michigan big ditch was up before congress, just after the Mexican War, there were some who doubted that there would ever be enough traffic to make it pay; but from the time the St. Mary's Ship Canal was opened in 1855 it has been enormously important in the development of northern Michigan and the great northwest. In aid of its construction the United States granted to the state of Michigan in 1852, 750,000 acres of land, which, in turn, was turned over to the company which built the canal as payment for the work. Of this land grant, the company selected 252,000 acres in the upper peninsula, of which a substantial amount is still held.

PLANTING FISH.

The official bulletin of the Stambaugh Township Development Bureau, Iron county, announces a project for stocking local lakes with fish. Through the cooperation of the Development Bureau and the Bureau of Fisheries of Washington, D. C., a consignment of pike, brook trout, pickerel, and lake trout is to be received in the early spring at Stambaugh. Lakes Chicagoan, Indian, Hagerman, Brule, Camp and Golden will be planted, and also some streams. The Stambaugh Township Development Bureau is publishing a periodical bulletin which, among other things, lists farmers with live stock and produce to sell.

Aultman-Taylor



30-60

Road Building Tractors

THE Aultman-Taylor 30-60 is a huge, rugged machine built with the brute strength to handle the biggest power jobs. Road building is one of them.

The 30-60 is the acknowledged "King of Road Builders." It has hammered down road building costs to the very last cent all over the country. This powerful tractor and its smaller brother, the 22-45, will build more miles of road in a given time than any other power—and at an astonishingly low operating cost.

Build More and Better Roads

Compared to horse labor, you can save 50% and in some cases 75% in road building costs, build double the amount of road and build it better by using Aultman-Taylor Road Building Tractors.

Thousands of Aultman-Taylor 30-60's

and 22-45's are being used by township trustees, highway commissioners and other road officials with unvarying success in practically every state in the Union.

Decide now to order an Aultman-Taylor Road Building Tractor and build more—and better roads.



The Aultman & Taylor Machinery Co.
Mansfield, Ohio

Fills Your Silo—Husks Your Corn—At Same Time



Save Your Ear Corn
Think of the time and labor this machine saves. No hand husking—fill your silo as you have time. Save your ear corn to feed or sell as you like. You save enough in a year to more than pay for a

Jenney Silo-Filler-Husker

Just send for these two FREE BOOKS and see what other farmers say. Many have saved from \$700 to \$3000 in a single crop. This new way of handling the corn crop not only saves money, but is a big labor and time saver.

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WANTED To hear from owner of farm or unimproved land for sale.
O. K. HAWLEY, Baldwin, Wisconsin.

Small Farm For Sale or Trade
near town. Willis Bradley, Bedford, Va.



An Egg in February Worth Two in May

Egg prices are still high—and will remain high until the usual spring lowering of prices. So help your hens lay NOW as steadily as they do in springtime—have lots of eggs to sell at winter prices. It's easy! Add

Pratts Poultry Regulator

to any good ration. Then watch your birds start filling the empty nests.

One egg now is worth two in May. And Pratts Poultry Regulator surely coaxes the eggs along. Thousands of poultrymen have proved that during the 50 years this wonderful egg-tonic has been on the market. Test it on your flock. Do it now. The longer you delay, the more you lose. You risk nothing because—

"Your Money Back If YOU Are Not Satisfied"

Be sure to use the genuine Pratts. There's a Pratt dealer near you.

PRATT FOOD CO. Philadelphia
Chicago
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Michigan's Largest Pedigree Poultry Farm

Lakewood's Peerless Layers

The quality of chicks depend upon the records of their ancestors. Official records from 200 in 9 months to 310 eggs in one year. Write for Catalogue.

Leghorns, Rocks, Reds, Wyandottes
Lakewood, Farm, Box B, Holland, Mich.

Hubers Reliable Chicks—700,000 For 1921.

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



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

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

\$12.75 FOR A BADGER 140 EGG INCUBATOR

140 CHICK BROODER \$6.75
Built of California Redwood with double walls. East of Rockies. Insulated top covered with wall board gives double protection. Hot water—Copper Tank—Self Regulating—Thermometer—Deep Nursery. Set up and shipped COMPLETE with all fixtures. Order DIRECT or send for descriptive circular.

BADGER INCUBATOR CO. BOX 136 RACINE, WIS.

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Our 29th Year. 3 Months' Trial, 25c. \$1.00 a Year. Interesting Copyrighted Articles Each Month on the Breeding, Care and Management of Poultry and Rabbits, by Leading Writers. SAMPLE COPY and Book list FREE. **AMERICAN POULTRY ADVOCATE,** Dept. 6 Syracuse, N. Y.

POULTRY

Chicks Baby Chicks

Sing'e Comb White Leghorns a Specialty

We are not running a hatchery but have the largest most up-to-date poultry plant in Michigan. All the eggs that go into our incubators are produced on our own farm from our high producing winter layers.

We cull our flocks 3 times, 1st in early fall, 2nd just before winter sets in and again before the breeding season.

The regular hatchery man can not do this as he does not own the flocks but buys the eggs.

Our supply is limited therefore place your orders early. Prices quoted on application.

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



BABY CHICKS

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

J. W. OSERGE HATCHERY, Glandorf, Ohio.

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

Both Freight Paid \$18.25 East of Rockies Only 18.25

Wisconsin Incubator Co. Box 82, Racine, Wis.

Both 130 Eggs 130 Chicks

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Wisconsin Incubator Co. Box 82, Racine, Wis.

Both 130 Eggs 130 Chicks

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Handling the Incubator

By R. G. Kirby

REGARDLESS of how long he may be in the business the poultryman can never forget the pleasure and satisfaction of watching his first hatch of downy chicks come from an incubator. And incubators are being made so efficient that it is not difficult to obtain good results. Farmers who do not own incubators will find more satisfaction in raising poultry by artificial hatching than with a large number of old hens. This is a fact, because brooders have been improved to care for the chicks.

The writer believes that brooders have been improved more than incubators. In past years many failures with artificial incubation were due to poor brooders. Poultrymen could hatch chicks which they could not raise. But now that good brooding equipment is available the incubators are having little trouble in proving their worth.

It pays to follow the directions of the maker of the machine. For the first hatch, mark on a calendar or make a chart showing the work that should be done each day. The routine of managing a machine will be learned during the process of one hatch.

The eggs for the incubator should be gathered often and stored where the temperature is between fifty and sixty degrees. When eggs reach sixty-eight to seventy degrees a slow growth will start. Then the temperature may be reduced, causing the germ to die. Eggs that are chilled will also fail to hatch. Eggs should not be held longer than two weeks and the fresher they are, the better the chances of producing a large per cent of livable chicks.

The best location for an incubator is in a cellar but a room where the temperature is around fifty to sixty degrees will be all right. The temperature inside the machine is constantly influenced by the outside air and if that is frequently changing in temperature it will be difficult to regulate the incubator. There is less vibration on a cellar floor than in an upstairs room. When the machine is upstairs much care is necessary to keep the temperature as uniform as possible and avoid heavy walking and banging of doors. Care should be taken to level the incubator before starting.

EGGS must be taken out and turned every twelve hours from the morning of the third day to the night of the eighteenth day. The time of cooling can gradually increase as more animal heat is produced in the eggs. Return them to the machine as soon as touching an egg to the eye proves it is cool. It is not necessary to turn each egg separately. Remove a few from the middle of the tray and roll the others toward the center. Then replace the eggs in the ends. This procedure causes

the eggs to be constantly changing their place in the machine.

When the lamp wick is first trimmed cut it straight across and slightly round the corners. After that do not trim the wick with shears but rub off the burned portion each day with a match. A pointed flame is not desirable, so have one that burns at an even height from one end of the wick to the other. The best grade of kerosene obtainable will be the best investment. This gives the most heat and the least soot and odor. A reserve supply should always be at hand to avoid the risk of running out of fuel.

When the machine is closed the night of the eighteenth day it must not be opened until the hatch is completed. When all hatching appears finished and the chicks are dry the machine can be opened. Take out the chicks and remove all broken shells, eggs that failed to hatch, and crippled chicks.

Return the good chicks to the machine and hang a piece of paper in front of the glass door, if there is one, so that the chicks will not peck at each other but rest comfortably while spread out over the egg tray or the nursery. They do not need any feed until forty-eight to sixty hours old. If fed before that time bowel trouble is more apt to result. If it is hard to keep down the temperature in the machine, open the door slightly. Do not let the chicks overheat. We like to let the temperature drop to about ninety degrees soon after the hatching is completed and while the chicks are waiting to be removed to a brooder.

After each hatch, incubators should be thoroughly scrubbed with one of the commercial disinfectants or with hot soda water. After a careful washing it pays to dry the trays in the sunshine. The old wick can be removed and the burner boiled in soda water to remove gummy accumulations. A clean burner is easy to regulate. Some risk is avoided by placing a new wick in the burner for each hatch. Sometimes hatches have been injured when short wicks failed to reach the oil, causing the lamps to go out at night.

THERE are three ways of running the temperature of an incubator and we have had about equal success with each one. The first plan is to use 102 degrees the first week, 103 degrees the second week and 104 degrees the third week. Another plan is to use 102½ degrees the first week, 103 degrees the second week and 103½ degrees the third week. The other plan is to try and keep the thermometer at 103 degrees throughout the hatch and let it go at that. The results will be good if other conditions are right and the machine stays at 103 degrees throughout the hatch.

If the machine goes a few degrees below one hundred for a few hours it



White Holland Turkeys, Owned by Mrs. Edward Colling.

Biggest Hatches Strongest Chicks

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

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

**\$15⁹⁵ 140-Egg
Champion
Belle City Incubator**

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

Express Prepaid East of Rockies

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

With this Guaranteed Hatching Outfit and my Guide Book for setting up and operating, you can make a big income. You can also share in my Personal Prize Offers of **\$1000 in Gold**

without cost or obligation. Get an early start—Save Valuable Time—Order Now, or write today for my Free Book, "Hatching Facts," a complete guide to success raising poultry. Jim Rohan, Pres. Belle City Incubator Co., Box 14 Racine, Wis.



103 DEGREE INCUBATOR

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

**30 DAYS
FREE TRIAL**

103 Degree Incubator Company
0-55 East St. Crown Point, Indiana.

POULTRY

Chicks

White Leg.	15c
Eng. Leg.	16c
Brown Leg.	16c
Anconas	17c

Sent Prepaid by Parcel Post

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

WE GUARANTEE SAFE DELIVERY

WYNGARDEN'S HATCHERY

Box M. ZEELAND, MICH.

Stop! Look! Listen! Chicks, Quality Chicks

S. C. W. Leghorns, \$15.00 per 100; S. C. B. Leghorns, \$17.00 per 100; English S. C. W. Leghorns \$17.00 per 100; S. C. Anconas \$17.00 per 100; S. C. Barred Rocks \$18.00.

Send Your Order to the

City Limits Hatchery and Poultry Yard,

R. 5,

Holland, Mich.

OVIE'S BABY CHICKS

High Quality—Moderate Prices

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

25,000 Husky Chix Weekly

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

OVIE'S POULTRY FARM & HATCHERY

34 State Street

Marion, Ind.

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

need cause no alarm. Simply bring it back as soon as possible. But if it goes up to 106 degrees or more it may cause serious trouble. Our plan is to adjust our machines so they will never overheat and take a chance on the danger of cooling down. This is better than insuring plenty of heat and running a risk of far too much. We do this because the eggs that cool down for a short time do not seem to suffer injury. But the eggs that overheat are quite certain to produce a lot of weakly chicks or not hatch at all. Near the end of a hatch the machine may often run up to about 104 or 105 degrees because of the large amount of animal heat in the eggs but this causes no trouble. Never open the machine to cool it down even if it does seem several degrees too warm while the chicks are hatching.

We do not know which is the best incubator. A lot of them work nicely. The more expensive makes can naturally be expected to last longer. Some of them have fireproof features which are practical. Sometimes second-hand incubators can be purchased at low prices and if they are in good condition they give good results. Some breeders have made their own incubators. We do not advise this if time is very valuable, as then good machines can be purchased for less than they can be made. Even then the home-made machines may not be properly insulated and protected from fire risks. An incubator is not a complicated machine. It is built on the principal of a box which can be heated and ventilated. The eggs are placed in the box and the operator tries to successfully imitate the old hen. Even one small incubator can be made a profitable farm flock builder and made to pay large interest on the investment.

CURING SCALY LEG.

I have several spring chickens that have heavy scales on their legs. Would you please tell me what treatment should be used? What is the cause of these scales?

Menominee Co.

H. E.

The scales on the legs of your poultry are caused by the scaly leg parasite which burrows under the scales of the legs and causes the rough appearance. The legs can be washed with warm soapy water. This will loosen up the encrustations. Then remove as much as possible and rub the legs with kerosene oil to kill the parasites. This condition occurs most often among old hens and some cases may prove obstinate, but it is usually easy to cure.

ELIMINATING TUBERCULOSIS.

Please tell me what to do to get rid of tuberculosis among chickens, and what is the best disinfectant to use?

Hillsdale Co.

B. C.

Any of the commercial coal-tar disinfectants are good for spraying poultry houses to help in keeping down disease. Chickens with tuberculosis cannot be cured and must be killed and burned immediately to help prevent the disease from spreading. It is a disease that can only be prevented by breeding from healthy vigorous stock and giving them the best of care in clean, dry and well-ventilated poultry houses. Any hen suspected of having tuberculosis must be removed from the flock at once. If hens are constantly dying from the disease it may be best to have a veterinarian inspect the flock and decide which are good for food. Then the flock can all be disposed of and the premises thoroughly disinfected and given a chance to rest a while before being used by poultry.

Plants build up the dead matter in the earth into higher forms, in which process they store up the heat and energy of the sun. Animals eat plants, and set free the heat and energy which the plants have stored up. Plants grow that animals may live.

Dr. LeGear says

"You must have vigorous breeding stock at mating time to raise strong healthy chicks. You can put your breeders in proper condition with Dr. LeGear's Poultry Prescription and thus be assured of a flock of chicks that will quickly develop into fine fliers, and early fall layers." Dr. LeGear's Poultry Prescription tones up the system, aids digestion, keeps poultry healthy and stimulates egg production.

Get it from your dealer today. Satisfaction guaranteed or money back

30c, 60c, \$1.20 packages 25 lb. Pail \$3.00

Except Rocky Mountain States and West

There is a Dr. LeGear Remedy for every curable ailment of stock and poultry. All guaranteed

Dr. L. D. LeGear Medicine Co., St. Louis, Mo.

Keep setting hens free from lice with Dr. LeGear's Lice Killer.

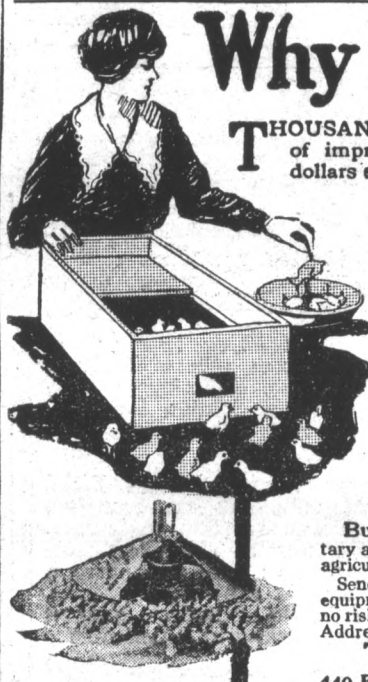


DR. LEGEAR, V.S.
10 years' experience
Graduate Ontario Veterinary College, 1902
25 years' Veterinary practice. Noted authority on ailments of stock and poultry.

GET FERTILE EGGS — WITH

DR. LEGEAR'S POULTRY PRESCRIPTION

GUARANTEED



Why Let Them Die?

THOUSANDS upon thousands of baby chicks die because of improper brooding. Why should you let these dollars slip through your hands when you can obtain

BUCKEYE COLONY BROODERS

These brooders have made three chicks grow where one grew before, have reduced the labor to a fourth and the cost to a third; have turned chicken raising from an unprofitable venture to a certain industry.

Wherever poultry raisers talk about their success, there you will find Buckeye users. Buckeye Colony Brooders have taken the risk out of the business, and a hundred thousand users proclaim their merit.

Ask the Buckeye User—He Knows!

Burn coal or kerosene. Self-regulating, sanitary and economical. Endorsed by experimental stations, agricultural colleges and county agents everywhere.

Send a postal for a Buckeye catalog that tells why Buckeye equipment makes poultry raising profitable. why you run no risks in its use and why it is universally recommended. Address the factory.

The Buckeye Incubator Co.

440 Euclid Avenue

Springfield, Ohio

Baby Chicks Pure Bred 800,000 in 1921

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

ORDER and Maturity of your flock. Circular FREE.

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

B-A-B-Y—C-H-I-X

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

CHICKS THAT PAY!

Insure your success this year with Mid-West Chicks. Reds, Wyandottes, Leghorns, Anconas, Minorcas, Orpingtons. Live arrival guaranteed anywhere East of the Rockies. Write now for catalog. Frank B. White, Pres.

MID-WEST HATCHERIES
Head Office: 655 Ft. Dearborn Bank Bldg., Chicago, Ill.



**LOOK! 1,000,000
for 1921.**

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

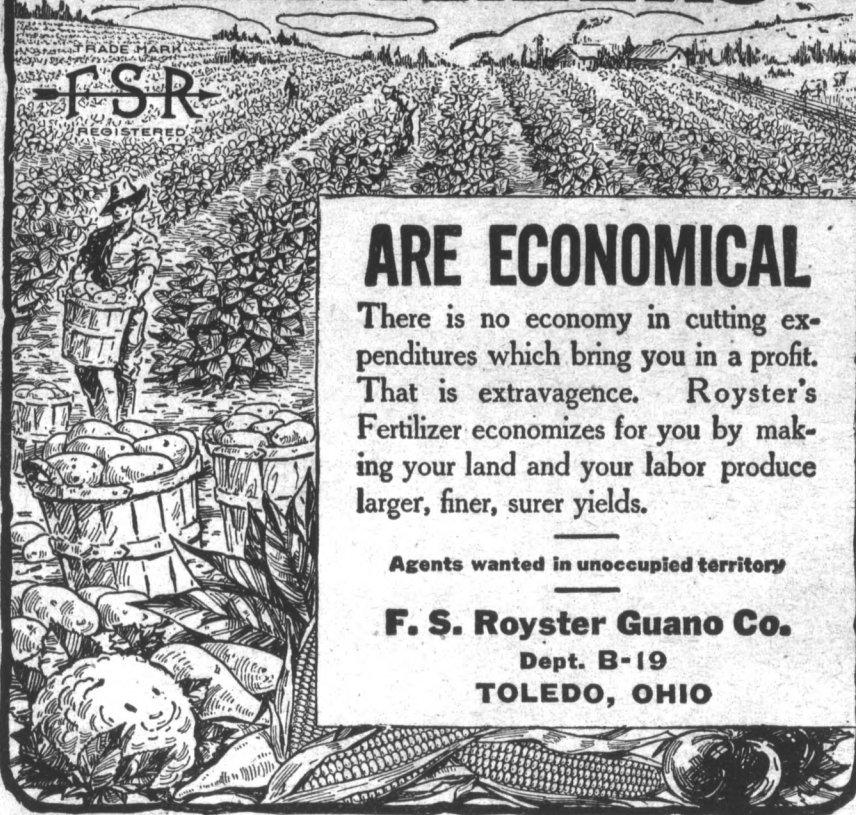
NABOB HATCHERIES, Gambier, Ohio

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

FRED ASTLING, Constantine, Mich.

Additional Poultry Ads on Page 283

ROYSTER'S FERTILIZERS



ARE ECONOMICAL

There is no economy in cutting expenditures which bring you in a profit. That is extravagance. Royster's Fertilizer economizes for you by making your land and your labor produce larger, finer, surer yields.

Agents wanted in unoccupied territory

F. S. Royster Guano Co.

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\$39.95
F.O.B. K.C. 2 H.P. PULLS 23
Direct from Factory to You

ALL SIZES AND STYLES
2, 3, 4, 6, 8, 12, 16, 22 and 30 H.P.
at proportionately Low Prices. Above price for 2 H.P. is for engine complete on skids ready to use. From Pittsburgh add \$6. Quick shipment. Write or wire for Big New Engine Catalog FREE.

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SAW MILL MACHINERY

MADE FOR YOU IN KALAMAZOO

WE MAKE EVERY MACHINE REQUIRED FOR TURNING TIMBER INTO LUMBER AND ITS VARIOUS PRODUCTS
HILL-CURTIS Co.
KALAMAZOO, MICH.

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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 \$28.65 on my \$75.00 order."
You will never know how much you can save thru our DIRECT FROM FACTORY TO FARM selling plan until you get our free catalog. Write today
KITSELMAN BROS. Dept. 278 MUNCIE, IND.

PRICES REDUCED!
on Wire Fencing

Farm, Stock and Poultry Fencing direct from our factory to you. Our new reduced prices will save you money. Write for our Farm Fencing Catalog 75M46.

Sears, Roebuck and Co.
Chicago, Philadelphia

GOMBAULT'S CAUSTIC BALSAM

The Perfect Liniment

For External Use on

The Human Body

It is astonishing how quickly Caustic Balsam relieves Stiffness and Lameness, Rheumatism, Neuralgia, Strains, Sprains, Lumbago, Backache, Sore Throat, Chest Cold, Stiff Joints, etc.

Serious results through Blood Poisoning are liable from scratches, cuts or wounds from rusty nails or other metal. This great remedy applied at once will prove a preventive, is a perfect antiseptic, soothes while it heals. *What it has done for others it will do for you.*

Write us for any information desired. \$1.75 per bottle at druggists or sent parcel post on receipt of price.

THE LAWRENCE-WILLIAMS CO.
Cleveland, Ohio

Fence Prices Cut
BROWN'S BARGAIN FENCE BOOK
Direct From Factory FREIGHT PREPAID

Get This Bargain Book Free

In my new Bargain Fence Book you'll find prices cut to the bone—prices you have been waiting for a good long time—and, as usual, Jim Brown's prices are way below all other fence prices.

Now Is the Time to Buy Fence
Send for this Bargain Fence Book today. See the big money-saving prices on 150 different styles of my famous double galvanized fence, also steel posts, roofing, etc. I'll save you money and I'll pay the freight, too—Jim Brown.
THE BROWN FENCE & WIRE CO. Dept. 449 Cleveland, O.

Ky. Tobacco Fine long leaf; 1919 crop, 3 lb. sample \$1 postpaid. Write for prices.
Hancock Leaf Tobacco Assn., Dept. X, Hawesville, Ky.

A Farm Workshop

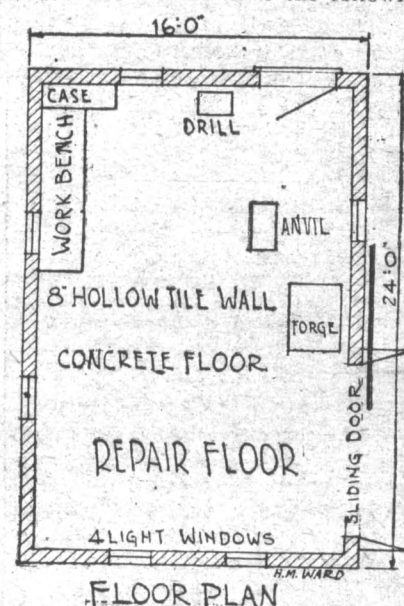
By Harley M. Ward

A GOOD workshop is, without any few hours' time we generally have the doubt whatever, a valuable asset broken part mended and oftentimes to any farm, and in consideration are at work before we could make a of the slight cost of putting up such a trip to the village blacksmith shop. building and equipping it with a few Aside from this we perhaps save a tools, no farmer can profitably do with- day's wages, which is just that much out one. In a great many instances more earned, to say nothing of saving we can convert an old building, other- a lot of hay or some other valuable wise of very little value, into a modern farm crop which otherwise would suf- workshop which will hold all necessary fer if not attended to when conditions tools and equipment and the cost will were favorable.

The proper size of such a building, of course, will vary, this depending greatly on the amount of work to be done and the equipment. Our work- shop is 16x24 feet and contains over- head storage room where we keep lum- ber and other necessary supplies. By this arrangement much valuable space is saved and gives us plenty of room to do our work on the lower floor, where we have a work-bench, forge, and other necessary equipment.

The walls are constructed of hollow tile, which we have found to be ideal for the purpose. It possesses distinct advantages, such as permanence, fire- resisting, non-conducting cellular walls, and immunity from the deteriorating influences of decay.

It is not necessary to have a full equipment of tools in a farm work- shop, but we must have the following



at least: A good hatchet, hand saw, rip saw, steel square, a good plane or two, set of chisels, a good brace and set of bits, set of taps and dies, a good ax, some tongs, and a good black- smith's hammer. The above will do to start with and other tools can be bought from time to time as the need arises.

A great many farmers have special talent along this line. Some have been mechanics at some time or another, while others are quite handy with tools and in this way a great many dollars can be saved in the course of a year which otherwise would be paid out of the farm profits for the different re- pairs arising from the constant use of the farming equipment. A farm work- shop is a good investment because, on the average farm, it will pay back to the owner the price of its construction and equipment in the course of a year.

We keep on hand a stock of bolts of different sizes and lengths, as they are sure to come in handy at some time of the year. In our shop we are able to mend harness, sharpen harrow teeth, mattocks, replace mower knives and broken parts, make singletrees, fix horseshoes, and many other small jobs that often run up in many dollars in the course of a year. This work is usually done on rainy days or during the winter when our work is not rush- ing. However, it is in the busy season that the workshop is appreciated, es- pecially when something breaks. In a

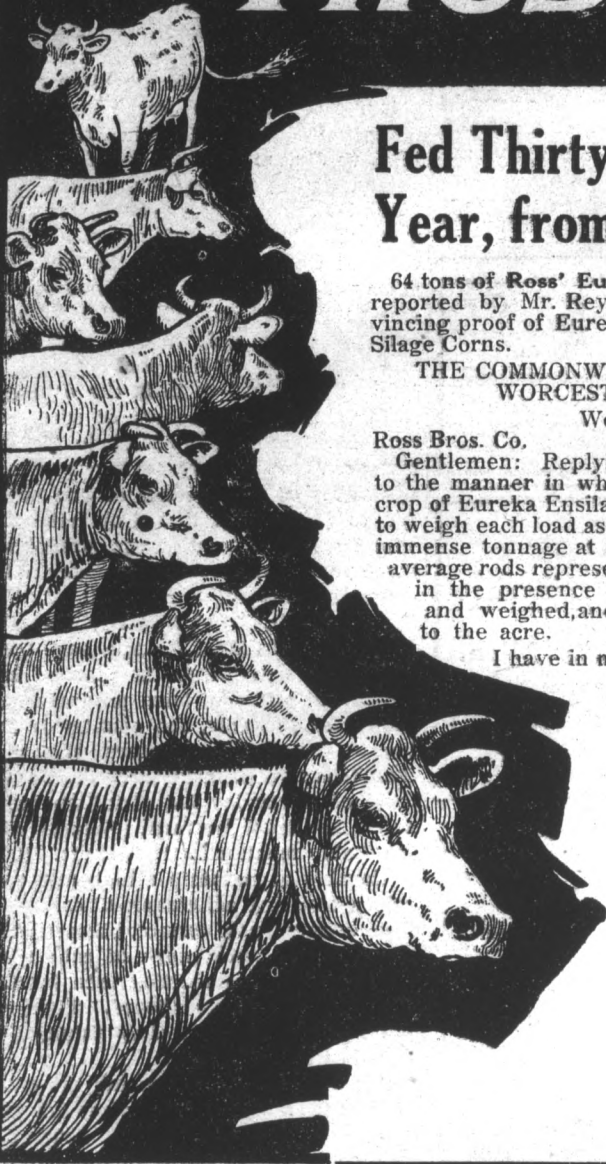
WANT GAME PROTECTED.

N UMEROUS recommendations have been made to proper officials in relation to game in the upper penin- sula. These include a recommendation that the Public Domain Commission co- operate with the United States De- partment of Agriculture in the exter- mination of the timber wolf and other predacious animals; that bounties for the destruction of predacious animals be abolished in favor of the employ- ment of salaried trappers and patrol- men; that firearms carried in automo- biles be unloaded and, if possible, tak- en down or closed; that there be a five- year closed season on otter, fisher, marten and mink; that the protection of spruce hen and prairie chicken be extended four years; that the last fif- teen days of October be opened for moose hunting on Isle Royale in Lake Superior; that a license of \$1.00 for rod fishermen be required, with an ex- emption for fishermen under sixteen years of age; that a limit of twenty- five fish be required for one day's fish- ing; that the fees accruing from this tax be used by the Michigan Fish Com- mission in its work of propagation; that unless the Michigan Fish Commis- sion erect a hatchery on the Otter riv- er, the catching of grayling there should be permitted; that a one-buck deer law be enacted; that the kill of rabbits be limited to five in one day and fifty during the season; that the partridge season for 1921 be closed and then opened in alternate years. The Tribune-Gazette of Iron Mountain, urges its readers to cooperate with Game Commissioner Baird, of Lansing, in providing information in regard to the present game situation in the up- per peninsula and recommendations for state action hereafter.—CHASE.

HILLSDALE COUNTY BREEDERS ORGANIZE.

A MEETING of the Holstein breed- ers of Hillsdale county was held in the city hall at Hillsdale on January 14, and the Hillsdale County Holstein-Friesian Association was organized, with Mr. J. Hagaman, of Hillsdale, as president, and Mrs. Kurt W. Rhead, of Pittsford, as secretary. Mrs. Rhead is intensely interested in the Holstein business and is thoroughly conversant with pedigrees, as well as a good judge of type, and we look for some very substantial progress as the result of her selection as secretary. She will be willing to devote considerable time to the association work and this is the one thing which is essential to success. Many of our local organizations fail to accomplish anything really worth while because the officers do not devote suf- ficient time to the work and this is no fault of theirs either, as they are al- ready overloaded with work at home. However, this is a matter which should be taken into consideration in choos- ing officers for the county associations, and especially in the selection of the secretary, upon whom the most of the work falls. Forty breeders have al- ready joined the organization, and if the plans work out according to sched- ule, the Hillsdale association will in- clude all the breeders of the county be- fore the year passes and much will be accomplished for the advancement of the breed.

These Seven Cows



Fed Thirty Pounds Each of Silage, Every Day, for Over One Year, from the Product of One Acre of Ross' Eureka Corn

64 tons of Ross' Eureka Corn to the acre is the yield reported by Mr. Reynolds. Read his letter—it is convincing proof of Eureka Corn's superiority over all other Silage Corns.

THE COMMONWEALTH OF MASSACHUSETTS WORCESTER STATE HOSPITAL

Worcester, Mass., December 18, 1920.

Ross Bros. Co.

Gentlemen: Replying to yours of Dec. 16th, relative to the manner in which we arrived at the weight of the crop of Eureka Ensilage Corn, will say it is our custom to weigh each load as it is delivered at the cutter. The immense tonnage at this time caused some question, so average rods representative of the best acre were taken in the presence of reliable witnesses, were cut and weighed, and the result was as reported 64 tons to the acre.

I have in my possession some photographs of our field of Eureka Corn showing Corn 18 to 20 feet high, which would convince the most skeptical that astonishing results are possible with this variety.

Yours truly,
(Signed) J. F. Reynolds,
Farm Supt.
Worcester State Hospital.

The product from one acre of Mr. Reynolds' crop would nearly fill a silo 24 feet high and 14 feet in diameter. Two acres would fill a silo 30 feet by 14 feet, and three acres would furnish enough silage to fill a silo 40 feet by 16 feet.

Ross' Eureka Corn is being planted in nearly every section of the United States and Canada, and in several foreign countries. Under any climatic conditions its yields are big, and the quality is always the best.

Ross' Eureka Corn is very short jointed and does not blow down easily—it grows taller—has more leaves—and produces more tons of good, sweet silage than any other variety. Palatable and nutritious, it is a valuable feed for fattening cattle—and one of the greatest factors in reducing the cost of milk production.

Every bushel of genuine Eureka is put up in Ross' trade-mark bags. All seed is from selected ears, butts and tips removed and well fanned to remove any hull or waste material. Look carefully for the Ross trade-mark. Make sure it is on the bag before you buy your supply of Eureka Corn.

Buy Ross' Farm Seeds

Oats, Barley, Potatoes, Rye, Wheat, Buckwheat, Cowpeas, Vetch, Soy Beans, Essex Rape, and Field Corn, Grass Seed and Alfalfa. Early Fairmount Potatoes make extra heavy, high quality yields. Full line of agricultural tools, dairy goods, insecticides, etc.

Special offer, Betsy Ross Garden—17 large packages of highest quality vegetables, enough for the home garden, postpaid, for only \$1.00

Our 120-page catalogue will be mailed free if you ask for it.

ROSS BROTHERS COMPANY

37 Front Street

Worcester, Mass.

Every bag of Ross' Eureka Corn bears this trade-mark. Adopted for your protection.



BREEDERS' DIRECTORY

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

THE HOME OF

Imp. Edgar of Dalmeny

Probably

**The World's Greatest
Breeding Bull**

Blue Bell, Supreme Champion at the Smithfield Show 1919, and the Birmingham Show 1920, is a daughter of Edgar of Dalmeny.

The Junior Champion Bull, Junior Champion Female, Champion Calf Herd and First Prize Junior Heifer Calf, Michigan State Fair, 1920, were also the get of Edgar of Dalmeny.

A very choice lot of young bulls—sired by Edgar of Dalmeny—are, at this time, offered for sale.

Send for Illustrated Catalogue.

**WILDWOOD FARMS
ORION, MICHIGAN**

W. E. SCRIPPS, Prop.

Sidney Smith, Supt.

For Sale

Woodcote Trojan-Ericas

We are offering ten cows bred to either IMP. ELCHO OF HARVESTOWN, or IMP. EDGAR OF DALMENY.
Write for our 1921 BULL SALE LIST

Woodcote Stock Farm,

Ionia, Mich.

REGISTERED Aberdeen-Angus. Ten heifers—six bulls from eight to fourteen months. Best of breeding, the growthy kind that make good. Reasonable. Inquire F. J. WILBER, Clio, Mich.

CLOVERLY ANGUS

Cows and Heifers Bred to Blackcap Brandon of Woodcote 2nd For Sale
GEO. HATHAWAY & SON, Ovid, Mich.

Reg. Aberdeen Ang 3 bulls and heifers from 5 to 16 mos. old of the very best of breeding, also Berkshire Swine, boars ready for service and pigs both sex singles, pairs or trios, will accept Liberty Bonds.
RUSSELL BROTHERS, Merrill, Mich.

Registered Guernseys

A bull calf, nearly ready for light service, at a price you will pay, don't wait long on this fellow.
J. M. WILLIAM, No. Adams, Mich.

The Village Farm Guernseys—offer for sale: The 1st Prize of Sweet Orchard Farms No. 65057. Dropped Dec. 3 1919 ready to head your herd, his full sister now on A. R. test has milked over 2800 lbs. 30 lbs. fat in 50 days. Sire Langwater Wilchester (28658), dam Governor's Minnawaska 24 milking 45 lbs. daily (28358). Sire Langwater Advocate (2044), dam Imp. Gov's Minnawaska (28224). First check of \$250 takes him. Rex Griffin, Herdsman. O. J. Winter, Owner, Sebawaing, Mich.

Guernsey Foundation

Two young cows and bull not related. All out of Adv. Reg. dams. Other cows with A. R. records up to 600 lbs. fat. Inspection invited.
PAUL LOVE, St. Austell Farms, Jackson, Mich.

GUERNSEYS

Bull calves for sale. Sired by Anton's May King that sold for \$1,000. Farmers prices and guaranteed to please.
GILMORE BROTHERS, Camden, Mich.

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

Guernsey Bulls of May Rose Breeding. Their dams have records 430 to 650 lbs. fat also a few cows and heifers are offered.
H. W. Wigman, Lansing, Mich.

GUERNSEY BULL CALVES whose sire's dam made 12,460.30 milk, 999.05 fat. Their mother's sire's dam made 15,109.10 milk, 778.80 fat.
I. V. HICKS, Battle Creek, Mich.

FEDERAL Inspected Guernsey Bulls. Priced to sell. Nine sold in 10 mos. A fine Masher Sequel 3 yrs. old, pure sound and right \$175.00. Four grandsons of Ex-Champion A. A. cow under 8 mos. old from cows on test.
G. W. & H. G. RAY, Albion, Mich.



Indiana School for Feeble-Minded Youth, Fort Wayne, Ind., G. W. Bliss, Supt., writes:

"We engaged in breeding Holsteins to secure a more sure foundation for breeding, increase our milk production, make a better farm profit, secure better milk for food and have a better sale of surplus stock."

Send for Free Booklets

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

For Sale Six registered Guernsey bulls May Rose breeding ready for service. Cheap if taken soon.
John Ebel, R. 2, Holland, Mich.

Registered Guernsey yearling bulls Dolly Dimple's May King of Langwater Backing. Priced to sell. Geo. W. Reeves, R. 7, Grand Rapids, Mich.

The Traverse Herd

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

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

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.

Here Is A Good One.

Born June 2nd, by Maplecrest De Kol Heugerveld. A sire having three sisters each with records of over 1200 pounds of butter in a year, two of them former world champions.
Calf's dam by an own brother to Highland Hartog De Kol with a yearly record of 1247.65. This combination of breeding has produced many 1000 to 1200 cows. If progeny counts, where can you equal it?
Priced \$100.00 for quick sale.
Hillcrest Farm, Mgr. F. B. Lay, Kalamazoo, Mich.

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

For Sale \$450.00

Cash or Terms
A show bull from A. R. O. Dam born December 15, 1918. Sired by our Show Bull.
MODEL KING SEGIS GLISTA
Whose grand dam, GLISTA ERNESTINE, has six times made better than thirty pounds of butter. Buy now in order to have 1921-22 winter calves.
GRAND RIVER STOCK FARMS
365 N. East Ave., Corey J. Spencer, Owner Jackson, Mich.
Under State and Federal Supervision

NOTICE

The Winwood Herd

on Nov. 1st will move their Herd of Pure Blood Holsteins to their new home, 1 1/2 miles south of Rochester, Mich. and for the next 30 days we will sell what bull calves we have cheap as we will be unable to get our buildings complete before winter. So get busy if you want a son of Flint Maplecrest Boy at your own price.

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

"Top Notch" Holsteins

Buy a "milk" Bull of Quality from the Breeders of the world's only cow to produce 800 lbs. milk in 7 days, having an 800 lb. daughter.
Our herd is rich in the blood of Colantha 4ths Johanna, the only cow that over held all world's records in every division from one day to one year at the same time. She produced 651.70 lbs. milk in 7 days. We are offering for sale a bull, whose dam exceeds this record by over 7 1/2 lbs. in 7 days.
His dam's records are:—

Milk	1	Day	100.1	lbs.
Milk	7	Days	659.3	lbs.
Butter	7	Days	26.31	lbs.

His name is KING VALE CORNUCOPIA WAYNE, No. 31239

Born February 6, 1920

His dam and sire's two nearest dams average

Butter	7	Days	33.02	lbs.
Milk	7	Days	607.3	lbs.

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

McPHERSON FARMS CO., Howell, Mich.

All herds under U. S. Supervision.

Cluny Stock Farm

Federal Accredited Herd

Semi-Official Yearling Bull
Cluny Konigen Pontiac Niobe

SIRE a 30 lb. son of the \$35,000.00 sire
King Segis Pontiac Konigen

DAM a 16.9 lb. Jr. 2 yr. old made 12,425.5 lbs. milk, 550.38 lbs. butter in 305 days.
DAM'S DAM a 29.67 lb. cow now finishing year record with about 23,000 lbs. milk and 1,000 lbs. butter. She full sister to 1,000 lb. cow with 24,688 lbs. milk.
Seven nearest dams of this bull average 29,482 lbs. butter, 597.3 lbs. milk.
Exceptional Type. Beautifully marked.
Guaranteed to please.
Price \$350.00. Pedigrees and photo on application.

R. Bruce McPherson, Howell, Mich.

2 Heifer calves sire a 27 lb. son of Maple Crest Koradyke Heng. Their dams have 194 lb. 2 yr. old sister and a 27 lb. sire. Terms \$75 down \$50 a year.
N. L. McLAULIN, Bedford, Mich.

FOR SALE Registered Holstein-Friesian extra choice breeding and individuality. King of the Pontiacs breeding. Henry S. Rohlf, R. 1, Akron, Mich.

Young Bull X L. Paul DeKol Maple Crest \$2365 good individual 15 months old 30 lbs. breeding both sides also bull calves 2 and 3 months old. Priced for quick sale.
RIVERVIEW FARM, R. 2, Vassar, Mich.

HOLSTEIN BULLS 16 mos. old 30 lbs. sire untested dams Price \$100. Dewey C. Pierson, Metamora, Mich.

\$75 buys a beautiful registered Holstein heifer calf six weeks old. Sired by a grandson of King Segis. No better breeding.
B. B. Reavey, Akron, Mich.

Herefords For Sale. Fairfax and Disturber blood. 150 Reg. head in herds, 335 reduction on all sires, choice females for sale. Write me your needs.
Earl C. McCarty, Bad Axe, Mich.

THE PONTIAC HERD

"Where the Champions Come From"

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

Pontiac State Hospital
Pontiac, Mich.

HEREFORDS

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

Allen Bros. Paw Paw, Mich.
616 So. Westnadge Ave.,
Kalamazoo, Michigan

Hereford Bull advertised last week sold now offering a very choice bull calf, 8 months old. A real herd-header. E. J. TAYLOR, Fremont, Mich.

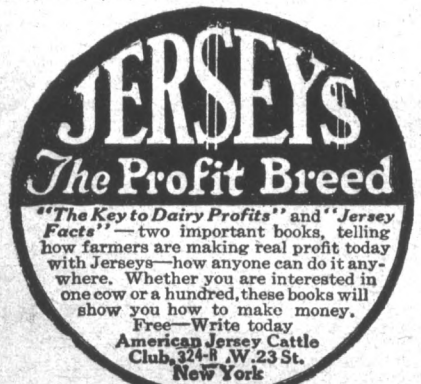
"Economy is the Basic Principle of Success"

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

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

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

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



JERSEYS
The Profit Breed

"The Key to Dairy Profits" and "Jersey Facts"—two important books, telling how farmers are making real profit today with Jerseys—how anyone can do it anywhere. Whether you are interested in one cow or a hundred, these books will show you how to make money.

Free—Write today
American Jersey Cattle Club, 324-B W. 23 St.
New York

The Wildwood Farm

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

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

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

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

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

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

Meridale Interested Owl No. 11311 heads my herd bull calves from this great sire and out of R. of M. dams for sale. Leon E. Laws, R. 6, Allegan, Mich.

REMEMBER

Spalding Dispersion Sale

40 REGISTERED HOLSTEINS 40 PERRY, MICHIGAN

WEDNESDAY, MARCH 2, 1921

Sale includes 25 young cows safe in calf to a 35-lb. son of Friend Hengerveld DeKol Butter Boy, or to a 28.5 lb. son of Sir Veeman Hengerveld, or just fresh with calves by side sired by these bulls.

Sale Managed By

MICHIGAN HOLSTEIN-FRIESIAN ASSOCIATION,
Old State Block,
Lansing, Mich.

O. I. C. BOARS

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

J. CARL JEWETT, Mason, Mich.

O. I. C. HOGS

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

CRANDELL'S PRIZE HOGS, Cass City, Mich.

Bloomdale Shorthorns

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

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

BIDWELL SHORTHORNS

BUY A BULL

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

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

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

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

Stop! Look! Listen!

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

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

The Maple's Shorthorns

Kirklevington Lad, by Imp. Hartford Welfare. In service, bulls for sale.

J. V. WISE, Gobleville, Mich.

Branch County Farm

Breeders of

Polled Shorthorn Cattle

Young Bulls For Sale

Several well bred herd bull prospects.

GEO. E. BURDICK, Mgr., Coldwater, Mich.

Beef - Milk Shorthorns

Fairland Stock Farms now offer for sale bulls aged 2 to 14 mos. Red, White or Roan. Three of extra merit sired by Walgrove Star 648028 and out of dams now milking 45-50 lbs. daily. Inspection invited. We can please you. JOHN J. FOSTER & SONS, Niles, Mich.

VALLEY VIEW FARMS

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

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

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

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

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

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

HOGS

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

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

DUROC JERSEY SWINE

for sale 2 yr. old herd boars, yearling boars and boar pigs, also bred sows and gilts. Write for pedigrees and prices. Come and see them.
THOS. UNDERHILL & SON, Salem, Mich.

DUROC JERSEYS

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

Michigana Durocs Bred gilts and sows for sale at private treaty. Also bred sow sale February 21st. Satisfaction guaranteed. O. F. FOSTER, Mgr., Pavilion, Mich.

Duroc sows and gilts bred to Walts King 29499 who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Get and price list.
NEWTON BARNHART, St. Johns, Mich.

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

Duroc bred sows and gilts for March and April farrow, at prices you can afford to pay. Write
W. C. TAYLOR, Milan, Mich.

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



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

Phillips Bros, Riga, Mich.

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

DUROC JERSEYS

Carey U. Edmonds, Hastings, Mich.

40 Head. Duroc Jersey Bred Sow Sale March 5th. Auto's in waiting at Park Hotel, Monroe, also at National Hotel, Dundee, be our guest sale day. F. J. Drott, Monroe, Mich.

DUROC JERSEYS Boars and gilts by Mich. Pathfinder.
E. D. HEYDENBERK, Wayland, Mich.

Special prices in Durocs. Heavy bone, best of breeding and type. Bred gilts, yr sow and fall pigs. Both sex.
A. W. HOWE, Mason, Mich.

Brookwater Duroc Jerseys

BOARS—Ready for Service
Bred Sows and Gilts

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

DUROC SOWS and gilts bred to Orion King No. 169259 Son of the \$10,000 boar owned by Longview Farm, Le Summit, Mo. also young boars ready for service out of good sows. Apply
THE JENNINGS FARM, Bailey, Mich.

O. I. C's. One last fall boar wgt. 425, two last fall gilts, bred lots of spring pigs and this fall pigs either sex, good growthy stock ½ mile west of Depot. City's Phone 124. Otto B. Schulze, Nashville, Mich.

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

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

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

O. I. C's choice gilts bred for April and May farrow. Fall pigs either sex. Booking orders for spring pigs.
A. J. BARKER & SON, Belmont, Mich.

We Are Offering at special low prices some of our choice O. I. C. fall pigs bred by State Fair winners.
WEBER BROS., Phone 428, Royal Oak, Mich.

WAR-TIME GAINS IN FARM PRODUCTS PRICES WIPED OUT.

THE Bureau of Crop Estimates of the Department of Agriculture has issued a statement showing that the farmers of the United States have lost more by the recent slump in prices of farm products than the war-time price gains. Beef cattle on farms lost in average value per head from January 1, 1919, to January 1, 1921, all that they gained during the participation of the United States in the world war and more than half as much again. In the case of swine on farms, the average price per head, all ages, declined in the two years 1919 and 1920, eighty-eight per cent of the gain in 1917 and 1918, and two-thirds of the decline was in 1920. From 1916 to 1920 the average farm value of the product of corn per acre increased from \$21.67 to \$38.54. The corn crop of 1920, taking the average value of the product of one acre, fell to \$20.93, and this drop not only wiped out the gain of the preceding three years but perceptibly exceeded it.

Commenting on this statement, Dr. T. C. Atkeson, Washington representative of the National Grange, says that unless an equilibrium is reached between the prices of farm products and industrial products, the country is going to see a more serious situation than it is now passing through. A high level of prices for industrial products and a low level for farm products will inevitably mean a food shortage. It is preferable to maintain a high range of prices covering all commodities. In a free country you cannot permanently maintain a higher range of prices for one class of commodities than for another, all things considered. The people are going where they think they can do the best.

After carefully considering the question of a fair ratio of wages for the mechanic and the farmer, deducting the lower cost of living in the country and the farm and garden supplies, Dr. Atkeson concedes that the man in the country should receive one-third less than the worker equally well qualified receives in the city; if a mechanic in town has \$6.00 a day the man on the farm should receive \$4.00 a day.

TRUTH-IN-FABRICS BILL TIED UP.

THE Truth-in-Fabrics bill, which has been the subject of much discussion all over the country, is dead so far as this congress is concerned. Probably no other measure before congress has been the subject of more widespread discussion or favorable comment, having been endorsed by nearly all the farmers' and stockmen's organizations and also by consumers' leagues and commercial associations. It has quite a following of good friends in congress, and several influential enemies, and unfortunately a number of these unfriendly congressmen are members of the interstate and foreign commerce committee of the house, having the French Truth-in-Fabric bill in charge.

It is the suggestion of friends of the measure that the representatives of the wool growers, the woolen manufacturers, the textile and clothing industries meet in conference and agree upon a truth-in-fabric bill which will be sufficiently acceptable to these interests to insure its enactment in congress. There is a growing sentiment for a law which will put a stop to the selling of shoddy for fleece wools in woven textiles. It is thought that this sentiment should be drafted into a practical, effective bill which will enable its friends to answer satisfactorily the arguments of its opponents.

The supply of winter roughage for sheep has a marked influence upon the health of the animals and the economic consumption of the food furnished them.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

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

Imperfect Udder.—On December 17, 1920, my Guernsey cow came fresh. We ceased milking on December 1, but up to this date she gave one gallon of milk daily, but at this time one-quarter of bag was dry. Now her whole udder is rather inactive. She gives very little milk from three best quarters, most milk from the quarter that first closed. T. A. N., Comins, Mich.—Gently hand-rub udder, change her feed, if bowels are costive, give epsom salts, or feed her roots, or sage. Give her a half-ounce of fluid extract of phytolacca at a dose in either food or in drinking water three times a day.

Light Milker.—Unthrifty Heifer.—Guernsey cow is off in milk, giving about four quarts at a milking. She will not freshen until next July. She is irritable, switching tail, occasionally kicking when teats on left side are touched. Am feeding two quarts of ground oats, one part corn, with some oil meal, also four pounds of mangels twice a day. Yearling heifer is thin and unthrifty. H. O. S., Redford, Mich.—You should try to overcome the nervousness by the same person feeding and milking her, or perhaps changing her to another part of stable might have good effect. Feed some clover, alfalfa and plenty of roots. Give her half an ounce of powdered gentian and one ounce of bicarbonate of soda in feed twice a day. Give heifer a teaspoonful of Fowler's solution three times a day and increase her feed.

Luxation of Stifle.—Our eight-year-old mare went lame last summer, and since then the stifle cap slips out of place and back again. What shall I apply? L. G., Selkirk, Mich.—Clip off hair, apply one part powdered cantharides and five parts lard to stifle joint every two weeks. If not, apply the liquid blister you have on hand.

Diseased Tooth.—Bursal Swelling.—Last spring my six-year-old mare had distemper, since then she has had nasal discharge from one nostril, which shows most after she pulls a heavy load. I also have a twelve-year-old horse that has been troubled with soft puff in knee for the past seven years, but never lame until lately. The puff extends through the joint. J. E. M., Paris, Mich.—Examine the mouth and you will perhaps find the fourth molar tooth diseased; if so, have it extracted and nasal discharge will soon cease. Give her a teaspoonful of powdered sulphate of iron at a dose in feed three times a day. Paint bunch with tincture of iodine daily, or apply one part red iodine of mercury and six parts lard every eight or ten days.

Stocking.—One hind leg of our Holstein cow stocks below hock, but she is not lame. J. C., Ontario, Canada.—Give her one dram of acetate of potash in feed or in drinking water two or three times a day, and bandage leg in cotton.

Indigestion.—Rheumatism.—My two-year-old bull acts as if sore all over, has but little ambition and when in the barn is uneasy, changing position very often. D. J. I., Olivet, Mich.—Give him one pound of epsom salts in three pints of tepid water to clean him out, then give one-dram doses of sodium salicylate three times a day. Also change his diet.

Small Abscess.—Failing to see many veterinary items in my paper and not knowing what ails my six-year-old cow I am writing to find out how to treat her. She has small bunch on neck which is full of pus. This same cow is slightly lame, especially during cold weather. E. W. W., Pontiac, Mich.—Open sack, swab out cavity occasionally with tincture of iodine. Give her a teaspoonful of nitrate of potash in feed or in drinking water daily.

Stringy Milk.—I have a Holstein cow due to freshen in May, that had one caked quarter, from which she gives stringy milk. What is the cause and remedy? H. R. S., Allegan, Mich.—Discontinue milking her from the diseased quarter and apply iodine one part, and fresh lard ten parts, to caked portion of udder. Kindly keep in mind that cleanliness of milking utensils and all other surroundings where the milk is kept has a whole lot to do with keeping it free from becoming stringy.

SHORTHORN

SALE

Administrator's Sale of Shorthorn Cattle registered and eligible to register, of the late Amasa Wilcox.

Wed., March 2, 1921

Catalog Furnished Upon Application

Fred S. Smith, Special Administrator
Jerome, Mich.

HOCS



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

For Sale O. I. C. Swine. Strictly Big Type with good bones and gilts left of same type and blood lines, that won for us at Ohio and Michigan State Fairs. Priced very cheap. Write us before you buy.
NEWMAN'S STOCK FARM.
R. 1, MARLETTE, MICH.

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

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

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

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

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

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

L. T. P. C.

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

Francisco Farm Poland Chinas

Offering a dozen choice gilts and a few tried sows bred to such boars as Michigan Mastodon and Michigan Glensman.
P. P. POPE, Mt. Pleasant, Mich.

BIG TYPE POLANDS

Bred gilts for sale. Also a few choice fall pigs by The Glensman and his son The Glensboy. They are great. Immune and registered. Come or write.
WESLEY HILE, R. 6, Ionia, Mich.

LARGE Type Poland Chinas. A few choice fall boars for sale. Write or come and see them.
A. A. FELDKAMP, R. 2, Manchester, Mich.

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

Big Type Poland Chinas bargain \$75 buys a bred gilt and a 250 lb. spring boar also choice gilts bred for \$40. Guarantee Satisfaction.
DORUS HOVER, Akron, Mich.

Bg Type Poland Chinas at lowest prices. Both sex, all ages, and bred sows and gilts.
G. A. BAUGARDNER, R. 2, Middleville, Mich.

P. C. Bred sows. Fall pigs singly or in pairs. Also S. C. Minorca cockerels all big type of the best of breeding. Satisfaction guar. R. W. MILLS, Saline, Mich.

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

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

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

Registered Hampshire gilts now ready to ship. Spring boars and fall pigs at a bargain.
JOHN W. SNYDER, R. 4, St. Johns, Mich.

SHEEP.

Wool-Mutton Shropshire Rams. Good strong individuals, royally bred, priced right.
A. H. FOSTER, Allegan, Mich.

Shropshires Choice ewes, all ages, bred to imported ram. Also a few rams.
W. B. McQUILLAN, R. 7, Howell, Mich.

Want a Sheep? Let American Hampshire Sheep Association send you dandy booklet with list of breeders. Write COMFORT A. TYLER, 22 Woodland Ave., Detroit, Mich.

HORSES

Percheron Stallions and mares at reasonable prices; inspection invited.
F. L. KING & SON, Charlotte, Mich.

Belgian Stallion for sale, good breeder and well broken for farm work.
W. B. STICKLE, Three Oaks, Mich.

POULTRY

DAY OLD CHICKS

It will pay you in selecting Chicks for the coming season to consider the quality of our

Pure Bred Practical Poultry
We will send you our new spring Catalog, which explains this breeding. Also the catalog tells how to brood your Chicks successfully; it describes our

High Class Egg Leghorns
And All Standard Breeds

Both Chicks and Hatching Eggs from all breeds guaranteed, and delivered post paid.

STATE FARMS ASSOCIATION,
Kalamazoo, Michigan

Barred Plymouth Rock Cockerels

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

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

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

BABY CHICKS

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

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

Baby Chicks and Eggs for Hatching
Baron's White Leghorns, Barred Rocks and R. I. Reds. Big sturdy chicks from free range stock with high egg records. Interesting catalogue free.
BRUMMERS POULTRY FARM, Holland, Mich.

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

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

Crystal Poultry Farms

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

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

Baby Chicks

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

Big 5lb. Barron White Leghorns

Real winter layers. 700 eggs from 50 pullets in Dec. Free catalog describes them, gives feeding methods, a new way to cull hens and much valuable information. Send for it.
A. WAUCHEK, Gobsville, Mich.

BABY CHICKS Single Comb White Leghorn (Tom Barron Strain) White and Barred Plymouth Rock, S. C. R. I. Red, Anconas, White Wyandottes and Brown Leghorns 25 for \$6.25, 50 for \$11.00 and 100 for \$20.00. Ross Wade, Meadow Brook Chicken Hatchery, Mt. Morris, Mich.

Baby Chicks Anconas 17c, Rocks 20c, B. All S. C. 5% Dis. in lots of 1000 or more. Parcel Post Paid and safe delivery guaranteed. Catalog free.
KNOLLS HATCHERY, R. 3, Holland, Mich.

Barred Plymouth Rock cockerels large birds from a prize-winning laying strain.
J. A. BARNUM, Union City, Mich.

Barred Plymouth Rock Cockerels, M. A. C. Strain \$5 Mrs. JESSE F. BALL, R. 3, Charlotte, Mich.

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

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

DAY OLD CHICKS S. C. White Leghorn, trap-nested stock where every hen must produce 60 eggs in four winter months. One hundred big thrifty chicks for \$25.00.
MACALWHITE POULTRY YARDS, Alex. MacVittie, Proprietor, Caro, Mich.

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

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

Barred Rocks Hatching eggs from Parks 200-egg best pedigreed pens. \$2 per 15, \$6 per 50, \$12 per 100. Prepaid by parcel post in non-breakable containers.
R. G. KIRBY, Route 1, East Lansing, Mich.

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

100 March hatched, Barron strain, S. C. White Leghorn cockerels. Large, vigorous, pure white birds \$3 and \$5 each. R. E. McInerney, R. 1, Frankenthum, Mich.

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

CHICKS CHICKS

Shipped safely everywhere by mail. S. C. White Leghorns and S. C. Mottled Anconas, the great egg machines. Strong, sturdy chicks guaranteed to satisfy. Order now for spring delivery. 18th season. Free catalogue, W. Van Appledorn, R. 7, Holland, Mich.

CHICKS Pure-bred S. C. White and Brown Leghorns, from heavy laying strains. Parcele-post brings them up to your door. Safe arrival guaranteed, \$15.25 per 100 post-paid Catalogue free. Royal Hatchery, R. 2, Zeeland, Mich.

CHICKS! Standard bred White Leghorns and Brown Leghorns. Bred to lay large white eggs. 50 chicks \$7.50; 100, \$15.00 and 500, \$72.50. Safe arrival guaranteed. Parcel post brings them to your door. Catalog free. Wolverine Hatchery, R. 2, Zeeland, Mich.

CHICKS. Bred-to-lay S. C. W. Leghorn and Barred Rock quality chicks that please, guaranteed full point and to arrive to you "all ready made" in first class condition by parcel post paid. Leghorns \$15 per 100, Rocks \$20 per 100. Special prices on 500 to 1000. Circular. Sunnysbrook Poultry Farm, Hillsdale, Mich.

CHICKS English Strain White Leghorns the heavy laying strain at only \$16 per 100; prepaid by mail safe arrival guaranteed send each with one special rates on 500 or more.
JAMESTOWN HATCHERY, Jamestown, Mich.

DAY-OLD CHICKS

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

DAY-OLD CHICKS

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

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

JOHN'S Big Beautiful Barred Rocks are hen hatched quick growers, good layers, sold on approval \$4 to \$8. Circulars photos. John Northon, Clare, Mich.

LOOK [75,000] CHICKS

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

Anconas Prize winners at the M. A. O. Show. Cockerels and trios.
W. E. WEST & SON, R. 1, East Lansing, Mich.

BABY CHICKS 25 for \$5.50 50 for \$10.00 Prepaid, safe delivery guaranteed. Single Comb White Leghorns; White, Buff and Barred Plymouth Rocks; S. C. R. I. Reds and Anconas.
Fenton Chicken Hatchery, Box 244, Fenton, Mich.

BABY CHICKS

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

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

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

COCKERELS: A few choice Anconas and W. F. B. Spanish cockerels. \$3 and \$5 each. Prize Winners. Lawrence Lahaie, Oheboygan, Mich.

DAY OLD CHICKS

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

For Sale 3 S. C. Buff Orpington Pens \$25 each. 1 pen 4 pullets headed by 2nd prize cock. 2 pens 4 hens headed by cockerel from prize stock. 100 N. Foster Ave., Lansing, Mich.

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

Look! 100,000 for 1921. Day Old Chicks, Barred, American and English; and Anconas. Write for free catalog. Fairview Hatchery, R. 2, Zeeland, Mich.

Oh s Improved Leghorns

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

100,000 CHIX 15c UP.

Best selected utility trap-nested exhibition stock ever produced. 18 varieties. Hatching eggs. Hens, ducks, early bookers, avoids disappointment. Catalog FREE.
Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

R. C. Rhode Island Reds

Choice Rose Comb cockerels—hen-hatched, farm raised, big thrifty, prize winning strains. \$3, \$7.50 and \$10.00. We raise only R. C. Reds.
BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

Rhode Island Reds R. C. Large fancy cockerels at \$3 each. Address
BURT Sisson, Lmly City, Mich.

Rhode Island Whites If you have ever said there is no money in raising poultry try the R. I. White, stock for sale, order ahead.
H. H. JUMP, R. 5, Jackson, Mich.

R. C. Br. Leghorn Eggs,

\$1.50 for 15. Pekin duck, \$1.50 for S. W. Chinese geese eggs, 40c each. Mrs. Claudia Betts, Hillsdale, Mich.

SELECTED WINTER LAYERS

S. C. WHITE LEGHORN EGGS FOR HATCHING, laid by hens that averaged over two hundred eggs each last season. 15 Eggs \$3.00; 50 \$5.50; 100 \$10.00. BABY CHICKS each week beginning March 1st, 15 \$7.50; 25 \$10.50; 50 \$20.50; 100 \$40.00 no catalogue.
Dunningville Poultry Farm, Dunningville, Mich.

S. C. WHITE LEGHORN CHICKS

Send for Catalog
SNOWFLAKE POULTRY FARM, Route 1, Grand Rapids, Michigan

Thoroughbred Golden Wyandotte Cockerels \$5.00, pullets \$3.00. Write H. C. SCHLICHT, Thomas, Mich.

WHITTAKER'S R. I. REDS

Michigan's Color and Egg Strain. Both Combs. Cockerels, Chicks and Eggs. Write for free catalog.
INTERLAKES FARM, Box 39, Lawrence, Mich.

[Additional Poultry Ads. on Page 285]

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Wheat.

Detroit.—Cash No. 2 red \$1.94; May \$1.87; No. 2 white and No. 2 mixed \$1.92.

Chicago.—No. 1 hard \$1.81; No. 2 hard \$1.78; March \$1.71½.

Corn.

Detroit.—Cash No. 3 yellow 73c; No. 4 yellow 70c.

Chicago.—No. 2 mixed 70c; No. 3 yellow 67½@67¾c.

Oats.

Detroit.—Cash No. 2 white 49½c; No. 3 white 48c; No. 4 white 45c.

Chicago.—No. 2 white 46½@46¾c; No. 3 white 45½@45¾c.

Beans.

Detroit.—Immediate and prompt are lower at \$3.85 per cwt.

Chicago.—White beans steady. Hand-picked beans choice to fancy \$4.50@4.75; red kidney beans \$9@9.25 per cwt.

New York.—Market is dull. Choice pea \$4.90@5; do medium at \$5.50@5.75; red kidney \$9.25 per cwt.

Rye.

Detroit.—Cash No. 2 rye \$1.59.

Seeds.

Detroit.—Prime red clover \$11.75; alsike \$15.50; timothy \$3 per bushel.

Toledo.—Prime red clover, cash and March \$10.95; alsike \$15.50; timothy \$2.95 per bushel.

Hay.

No. 1 timothy \$20@21; standard and light mixed \$19@20; No. 2 timothy \$18@19; No. 1 clover mixed and No. 1 clover \$17@18; rye straw \$12@13; wheat and oat straw \$11@12 per ton in carlots at Detroit.

WHEAT

The visitation of green bugs in Texas promises to cause more or less damage to the wheat and oat crops in part of that state and the pest has appeared as far north as Illinois. The unusually mild winter has caused many to look for severe visitations of insect pests of all kinds this year. Hessian fly reports are being received from the soft winter wheat states, but it is too early to make estimates as to the losses. High drying winds have been reported in parts of Kansas and drought is a far greater destructive agency in wheat, as a rule, than green bugs. Owing to the close adjustment of the wheat supply to demand for it the world over the prospect of a reduction in the new crop from green bugs or other causes had more or less effect on the market. In some sections prospective damage caused farmers to hold for higher prices but after an advance of almost 30c a bushel offerings increased which, with a change in the weather unfavorable for insects, resulted in moderate decline. A leading European authority disagrees with some of the leading American statisticians and says that stocks at the end of the season promise to be small and that it is very probable that the world demand next season will be larger than this year. Foreign exchange continues to advance as purchases of commodities of all kinds in the United States have fallen off materially. Practically no export demand for domestic wheat was reported during the week, as Argentine and Australia are offering freely at lower prices. Flour demand shows little improvement, although all reports indicate that stocks in second hands are unusually small for this season of the year.

CORN

Movement of corn which has been relatively light of late promises to increase again as surplus states have been selling rather freely due to the better condition of country roads, colder weather and higher prices. There are complaints of corn getting out of condition. In parts of Nebraska much grain was left on the ground without protection and continued mild weather has caused damage. It is said that the bulk of the selling necessary to meet March 1 money requirements has already taken place. The export demand for corn has improved considerably with around 2,500,000 bushels sold abroad during the week. Some of this business was forced as elevator room at Chicago is growing scarce. Prices also have been below Argentine corn. Germany has been the best buyer. A

little improvement is noted in the eastern demand.

OATS

The oat markets follow the fluctuation in corn closely. Seeding is under way in southern Kansas with the season about two weeks earlier than usual.

BEANS

Due apparently to a price cutting wave as a result of a disagreement among Michigan operators, the bean market has declined for the last several days to around \$3.90 per hundred pounds for choice hand-picked beans f. o. b. Michigan points. Price to growers for beans in the dirt range from \$3@3.25. Demand from wholesale grocers subsided when the market weakened as they were disposed to wait for bottom.

SEEDS

The spring demand for grass seed is growing. Supplies in the hands of the growers and distributors are large, however, and the effort to move these

holdings neutralized any increase in purchasing power. European growers continue to reduce their prices in order to stimulate buying from this country. During the week ending February 5, nearly 800,000 pounds of clover seed arrived at New York from France and Italy. Timothy seed exports during 1920 were 13,522,000 pounds, or about the same as in 1919. A broader foreign outlet would aid the market for this seed. Winter-kill of clover seedlings is not supposed to be large, but it is still too early to make certain upon this point. Toledo prices per bushels are: Prime red clover \$10.75; prime alsike \$15.50; 1919 prime timothy \$2.80; 1920 prime timothy \$3. Chicago, per 100 pounds, clover \$13@19; timothy \$4.50@5.75.

FEEDS

The decline in feed prices to a basis more nearly on a par with farm-grown feeds attracted new purchasing power and slight advances were made on mill feeds during the past week. Quotations on oil meal remain unchanged.

EGGS AND POULTRY

Cooler weather had the effect of stimulating consumptive demand for eggs and promised to check the flow of receipts resulting in a firmer market especially in the east. Cold storage holdings of case eggs on February 1 were only 44,000 compared with 408,000 a month ago, and 342,000 a year ago. Frozen egg holdings decreased about 2,544,000 cases during the month but are still nearly 50 per cent larger than on February 1, 1920. Storage holdings of frozen poultry on February 1 totalled 81,000,000 pounds, representing a gain of 2,000,000 pounds during January, but are still about 12 per cent smaller than on the same date a year ago. Latest quotations were as follows:

Detroit.—Eggs, fresh firsts 37@37½c. Live poultry, springs, 29@30c; leghorns 24@25c; heavy hens 29@30c; light hens 25@26c; roosters 20c; geese 27@28c; ducks 35c; turkeys 40@42c.

BUTTER

The upward turn in the butter markets continued throughout the past week. Fresh butter became comparatively scarce and the previous period of uncertainty left the dealers with small stocks. The eastern market for Danish butter also advanced, due to a delay of several days in landing the cargo of the steamer United States, as a result of a typhus scare at New York City. The ship carries a cargo of 7,800 casks with some additional boxes. As the market has had a sharp advance, and there has been a change to the use of storage butter, and as the new cargo of Danish butter is expected to be available before the end of the present week, the prospect suggests a slight reaction within a few days. Prices upon 92 score fresh butter as quoted by the Bureau of Markets, February 19, were: Chicago 47½c; New York 48c; Philadelphia 48½c; Boston 48c.

POTATOES

Both consuming markets and shipping points report weakness and lower prices for potatoes during the past week. Demand appears to be light, and the movement from the hands of growers is extremely slow as a result of the condition of the market. Demand improved slightly, especially from the south toward the close of the week, and shipments declined, suggesting that improvement may soon be manifest. Northern shipping stations are quoted at 80@90c per 100 pounds. Prices for bulk northern round whites U. S. Grade No. 1 are quoted as follows: Chicago, \$1.05@1.20; Detroit \$1.70@1.90 per 150-lb sack.

FARM BUREAU MARKET REPORT.

Grain markets suffered a slight decline the past week but are materially above low point of the previous week. Firmer prices are expected if export buying continues. This applies to wheat, corn, rye and oats. Hay continues dull with little prospect of its recovering to higher price range. Large volume to be moved before new crop. General tendency of seed market is weak. Futures are low. Many farmers holding their seed. Carry-over will be large. Many local points not buying. Alsike and timothy steady with no changes during the past week. June clover is a little unsettled, the price range not exceeding \$11 high level or \$10.50 low mark. Corn and beans are more active.

NEWS OF THE WEEK.

the Atlantic coast, and traffic is paralyzed in many sections by the heavy fall of snow.

Monday, February 21.

AMERICAN Legion posts have been asked to watch for a revival of German propaganda in this country. In the allied conference which is convening in London to consider terms of payment of German reparations there appears to be an attitude toward complying with the wishes of America.

COMING LIVE STOCK SALES.

Holsteins.—March 2, Michigan Holstein-Friesian Association, Perry, Michigan.

Shorthorn.—March 2, Fred S. Smith, administrator estate of Amasa Wilcox, Jerome, Michigan.

Live Stock Market Service

Markets for February 23.

BUFFALO

On today's market heavy hogs were bringing \$9.50@10; medium and mixed grades \$10.25@10.75; others at \$11; lambs \$10.50; calves \$16.50.

DETROIT

Cattle.

Market strong.
Best heavy steers \$ 8.00@ 8.50
Mixed steers and heifers 7.25@ 8.00
Best handy wt bu steers 6.50@ 7.25
Handy light butchers 5.50@ 6.50
Light butchers 5.00@ 5.50
Best cows 5.50@ 6.00
Butcher cows 4.00@ 5.00
Common cows 3.25@ 3.75
Canners 2.75@ 3.00
Choice bulls 5.25@ 5.75
Bologna bulls 5.00
Stock bulls 4.50@ 5.50
Feeders 6.00@ 7.00
Stockers 5.00@ 6.50
Milkers and springers..... \$ 40@ 90

Veal Calves.

Good calves strong; others steady.
Best \$13.00@14.00
Others 6.00@10.00

Hogs.

Hogs 15@25c higher.
Mixed hogs \$ 9.65@10.00
Pigs 10.25@10.50
Heavy 9.00

Sheep and Lambs.

Market 50c higher.
Best lambs \$ 9.50@ 9.75
Fair lambs 7.50@ 8.50
Light to common 4.75@ 7.00
Fair to good sheep 4.00@ 5.00
Culls and common 1.50@ 3.00

CHICAGO

Hogs.

Estimated receipts today are 16,000; holdover 3,898. Market 15@25c higher; heavy slow; others active. Bulk of sales \$9.25@10; tops \$10.25; heavy 250

lbs up medium, good and choice \$9.20@9.50; medium 200 to 250 lbs medium, good and choice \$9.25@10; light 150 to 200 lbs common, medium, good and choice \$9.85@10.25; light lights 130 to 150 lbs common, medium, good and choice \$9.85@10.25; heavy packing sows 250 lbs up smooth \$8.10@9; packing sows 200 lbs up rough \$7.85@8.10; pigs 130 lbs down medium, good and choice \$8.90@10.

Cattle.

Estimated receipts today are 6,000. Market 25@40c higher. Beef steers, medium and heavy weight 1100 lbs up choice and prime \$10.25@11.15; do medium and good \$8.65@10.25; do common \$8@8.65; light weight 1100 lbs down good and choice at \$9.50@10.75; do common and medium \$7.75@9.50; butcher cattle heifers, common, medium, good and choice \$5.50@9.40; cows common, medium, good and choice at \$4.25@7.75; bulls bologna and beef at \$1.75@6.75; canners and cutters cows and heifers \$2.25@4; do canner steers at \$3.75@5.50; veal calves light and handyweight medium, good and choice at \$9.50@12.75; feeder steers common, medium, good and choice at \$7.25@9; stocker steers common, medium, good and choice \$6@8.25; stocker cows and heifers common, medium, good and choice \$4@6.15.

Sheep and Lambs.

Estimated receipts today are 14,000. Market strong to 25c higher. Lambs 84 lbs down medium, good, choice and prime \$8.50@10.75; do 85 lbs up medium, good, choice and prime at \$7.75@10.25; do culls and common \$6.50@8; spring lambs medium, good, choice and prime \$6.50@8.25; ewes medium, good and choice \$4.25@6.25; ewes cull and common \$2.25@4; yearling wethers medium, good and choice \$7@8.25.

Little Journeys to the Markets

UNDER this heading we are going to discuss each week some market term or phrase in frequent use but the meaning of which may not be entirely clear to everyone. Our purpose is to enable our readers to obtain the greatest possible benefit from reading our market pages.

I.—Liquidation.

Liquidation is a term borrowed from the lawyers who apply it to the process of turning the assets of an individual who is in financial straits, into cash which is the most "liquid" form of capital, and applying it to the payment of what he owes. The market uses the term when farm products are closed out in a declining market in order to prevent further loss. The inference is that the sale would not be made if prices were not declining.

The opposite of the term, or selling at a profit, is known as "realization."

"Liquidation of longs" or those who have a surplus, may occur coincidentally with the "covering by shorts," or those who need additional supplies.

Liquidation has been in such common use in reports of markets for farm products during the past six months that farmers may be as tired of the word as they surely are of the process.

WOOL

Boston reports a firm wool market with a moderate demand. The outcome of the tariff law is still uncertain, although its veto by the President is considered highly probable. American buyers have been less active in foreign markets, and prices in Australia are slightly lower. Chicago reports recent sales of quarter-blood wools at 25c f. o. b. mills. There is but little upon which to base a belief in an advance in prices in view of the large stock now on hand, and the opening of the new shearing season. Goods markets show little change, but at least conditions have not become worse. General trade sentiment is cheerful but not bullish. Boston quotes the markets as follows: Ohio and Pennsylvania fleeces, delaine unwashed 39@40c; fine unwashed 29@30c; half-blood unwashed 32@34c; three-eighths-blood unwashed 29@30c.

HOG BREAK CURTAILS RECEIPTS.

HOG producers responded promptly to the decline in hog prices reported a week ago by reducing shipments, while the bargain prices attracted buyers from the east to corn belt centers. Prices reacted to the high point of the year at Chicago in short order only to be followed by a marked reversal of form before the close of the week. All advices indicate that numbers of hogs remaining in the country are gradually dwindling and that the ability of producers to flood the market grows less and less with each passing week. Fresh pork markets appear to have struck bottom, an advance of three to five cents per pound wholesale taking place at Chicago, although the eastern markets remain weak.

As the season of spring work upon farms in the corn belt will soon open, periods of shortage in market supply may be expected, especially after a month or six weeks, and a top of \$11.50 to \$12 may be obtained at Chicago in the course of this usual spring bulge.

PACKER CONTROL LEGISLATION.

ALL the agricultural organizations represented in Washington have been making strenuous efforts to get action on the packer control bill in the house. More than a hundred congressmen were induced to sign a petition asking the house committee on rules to report favorably on a special rule giving an opportunity to vote on the packer control bill. These congressmen were mostly from the south and west. A number of eastern congressmen said they would vote for the packer control bill if it came before the house but they refused to sign the petition.

There is a strong sentiment in congress against any extension of the policy of government by commissions. For this reason it is believed that the house bill, known as the Haugen bill, is preferable to the senate bill, and also that it is less objectionable to the packers.

In a comparison of the senate bill and the house agriculture committee's amendment, Representative Haugen points out that the senate bill creates a new commission, to be known as the federal live stock commission, composed of three commissioners appointed by the President at a salary of \$10,000 per year. The committee is opposed to the creation of any new commission, believing that existing agencies may be utilized instead. Accordingly, the committee amendment gives to the secretary of agriculture control over the packers on the theory that his duties are closely connected with the investigation and control of the meat-packing industry. The committee amendment gives to the Interstate Commerce Commission control over the stockyards and commission men and others furnishing services at the stockyards. That commission already has control over transportation of cattle, which does not end until they are unloaded at the yards, and, through its administration of the act relating to feeding and watering of cattle in transit, has familiarity with the general subject matter.

The senate bill prohibits the packers, after two years from the date of passage of the act, from owning or

having any interest in any stockyard unless the commission under certain conditions extends the period. The committee amendment contains no such provision, on the ground that the consent decree entered into by the five great packers and the attorney-general before the supreme court of the District of Columbia already provides for such separation of packers and stockyards as is necessary at this time. The senate bill includes within the definition of "live stock" only cattle, sheep and swine. In this connection the committee calls attention to the fact that by the agricultural appropriation act of July 24, 1919, horse meat was made subject to the meat inspection act and that there are already two plants under federal inspection.

At this date it is apparent that the only chance of any packer legislation being enacted during this session of congress is that the Haugen committee amendment may pass the house and senate without amendment. It is believed that no agreement can be reached on the senate bill.

KNOWLEDGE OF SEED PEDIGREE.

ABSOLUTE guarantee as to the origin and adaptability of its seed is the Michigan State Farm Bureau Seed Department's greatest contribution toward the advancement of Michigan agriculture. The iron-clad statement, says Mr. Nicholson, head of the department, backed by expert investigation of all seed handled by the farm bureau, points the way for the elimination of the greatest of the farmer's seed gambles—that of origin and adaptability.

Michigan's state seed law falls short of giving the farmer full protection in that it fails to insist upon the origin of the seed, according to Mr. Nicholson, who declared that northern states cannot use many of the southern-grown seeds to advantage. He cited government reports showing that Italian and other southern-grown clovers and alfalfa are not adapted to northern winters and is quite subject to disease, and pointed out that last year twenty million pounds each of clover and alfalfa seed not adapted to northern climate was imported into the United States. He said there was nothing to prevent much of it from getting into northern states.

By excluding from its warehouses all suspected seed, and insisting on the origin and history of all the seed it handles, the farm bureau seed department claims that it has gone the seed industry one better, in that it affords the farmer for the first time, complete and accurate information on his seed and enables him to investigate successfully the stock he intends introducing on his farm.

Notwithstanding the fact that all hard shelled seed is scarified at the farm bureau warehouses and cleaned to a rigid standard, the farm bureau seed department reports that it has handled more than a million pounds of seed since November 1, 1920.

The department has found that the present crop of Grimm alfalfa seed has an unusually tough seed coat, because of the long growing season last year. Germination tests on northwestern-grown seed showed a germination of sixty-two per cent. Scarification raised the germination to ninety-two per cent.

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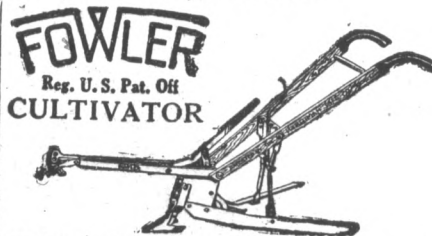
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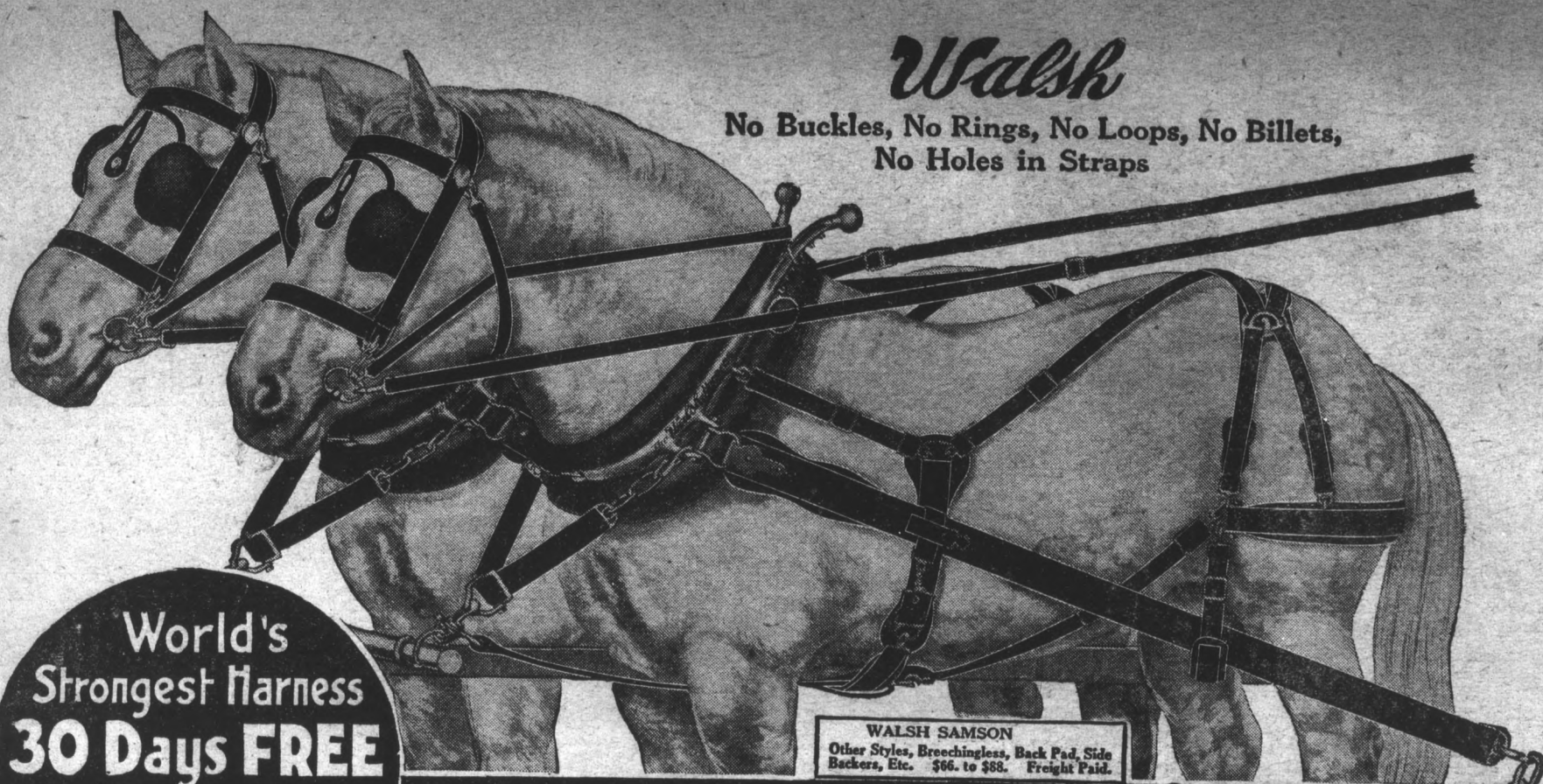
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