

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY
ESTABLISHED 1843

The Only Weekly Agricultural, Horticultural, and Live Stock Journal in the State

VOL. CLIII, No. 14
Whole Number 4065

DETROIT, MICH., SATURDAY, OCTOBER 4, 1919

\$1.00 A YEAR
\$5.00 FOR 5 YEARS



The Michigan Farmer

Published Weekly Established 1843 Copyright 1919

The Lawrence Publishing Co. Editors and Proprietors

99 to 45 Congress St. West, Detroit, Michigan
TELEPHONE MAIN 4525.

NEW YORK OFFICE—331 Fourth Ave.
CHICAGO OFFICE—111 W. Washington Street.
CLEVELAND OFFICE—101 1-1015 Oregon Ave., N.E.
PHILADELPHIA OFFICE—261-263 South Third St.

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

I. R. WATERBURY Associate Editors
BURT WERMUTH
FRANK A. WILKEN
ALTA LAWSON LITTELL
LEROY W. SNELL
W. MILTON KELLY
I. R. WATERBURY Business Manager

TERMS OF SUBSCRIPTION:

One Year, 52 issues \$1.00
Two Years, 104 issues \$1.50
Three Years, 156 issues \$2.00
Five Years, 260 issues \$3.00
All sent postpaid.
Canadian subscription 50c a year extra for postage.

RATES OF ADVERTISING

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

Member Standard Farm Papers Association and Audit Bureau of Circulation.

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

VOLUME CLIII. NUMBER FOURTEEN

DETROIT, OCTOBER 4, 1919

CURRENT COMMENT

Production Versus Demand

UNDER normal conditions American farmers have largely ignored the probable demand for their products in making and executing their plans for production, with the result that their largest crops have often netted them the least money due to over-production of food staples. But under present conditions of abnormally high production costs they cannot take this chance, and the average farmer is studying the question of probable demand as never before. One has but to canvas any group of farmers whom he may meet to realize that conservative production plans are the rule, rather than the exception among them. The patriotic war urge for increased food production has passed, and there is a general appreciation that the war demand for foodstuffs for export may slacken, hence the conservatism regarding production plans with no relief from present production costs in sight.

This situation may prove more serious to the country and the world than is generally appreciated. The ratio of farm population to the total population of the country is lower than ever before and is still shrinking, which is another way of stating the fact that less people are producing food than ever before. They have been able to meet the demand so far with the aid of more efficient equipment and better methods. They have of necessity become better business men and as such are making a closer study of the economics of their business. They know it is uneconomic to produce more food than is needed, and are fearful of the loss which would result. It would be equally uneconomic to produce less food than is needed at a compensatory price.

What the farmers need is a better knowledge of probable demand. If this could be accomplished there would be less fear of the economic results of over-production and less danger of a food shortage resulting from a poor crop year. A comprehensive study of this question will afford a profitable field of effort for the national federation of farm bureau organizations which is contemplated. True, we have a national Department of Agriculture which functions to some extent in this direction, as illustrated by its belated announcement that the country's wheat acreage should be reduced by about fifteen per cent, made after the wheat seeding season was well advanced. But a thorough and constant study of the question of production and demand by a business organization of farmers would contribute to the stability of the

industry and the safety of the consumer. It is one of the economic possibilities of such an organization which should not be overlooked.

Work for the Farm Bureau

EVERY farmer who is asked to join the State Farm Bureau, as every Michigan farmer will be asked to do in the not very distant future, will naturally inquire just what work the farm bureau will undertake which will be of value to him as a farmer. This is a most proper as well as a most natural question, and upon the nature of the answer will depend the success of the membership campaign which is soon to be inaugurated.

Secretary Bingham, of the Michigan State Farm Bureau, made what is perhaps the most comprehensive answer to this question upon being asked it recently, when he replied: "What good thing is there which it cannot do for its farmer members? Its possibilities are limitless." But probably the best answer to this very proper question is to be found in the work which is already being undertaken by similar organizations.

In previous issues reference has been made to the successful organization of the Illinois Agricultural Association on practically the same plan which is being adopted by the Michigan State Farm Bureau. Something of the practical work which has already been accomplished by that organization was recounted by Mr. Saylor, its assistant secretary, in his recent talk to State Farm Bureau delegates at Grand Rapids, as reported in a recent issue. An idea of what the organization will try to do for Illinois farmers will be further gleaned from reading the report of the monthly meeting of its executive committee held in Chicago last week, which will be found in another column of this issue.

Already the Michigan State Farm Bureau has commenced to effectively represent the farmers of the state in a broad way. Last week we published a report of the recent conference of the Federal Board of Farm Organizations, held at Washington, D. C., which was attended by Senator C. B. Scully, of Lapeer county, as a representative of the Michigan State Farm Bureau.

While the local benefits of a strong farmers' organization are in themselves sufficient reason for the affiliation of every farmer with the Farm Bureau, its possibilities in representing and protecting his interests in a national as well as a local and state field, should appeal still more strongly at this time, when the immediate future of our agriculture is dependent in no small measure on the public policies which are adopted by the national government during the reconstruction period. If those policies are to give adequate insurance to the future prosperity of our agriculture, which is necessary to the continued prosperity of the country as a whole, agriculture must exert a wholesome influence in their formulation, which can be best accomplished through the medium of a business organization such as is contemplated in a federation of state organizations such as the Illinois Agricultural Association, the Michigan State Farm Bureau and similar organizations already being formed in other important agricultural states.

Work! Yes, there is work, and badly needed work almost without end awaiting accomplishment through such an organization of farmers. Work of a local as well as a state and national nature is waiting for a business organization of farmers to accomplish. And such an organization as is contemplated in the new farm bureau movement can accomplish it, through adequately financed county, state and national units. Let us get each and all of these units working for us without further

A Get- Together Program

There is great need at the present time for a general get-together program on the part of industrial classes or divisions in this country, and in fact, in the entire world. While labor and capital are grappling in a new phase of the old battle for ascendancy, and agriculture is raising its voice above the din for a fair play, the problem becomes more difficult of solution and the economic status of the country, as well as these interdependent classes or groups of its people, becomes more unstable.

While the individuals making up each of these groups or classes of our people very generally hold to the opinion that the country faces early ruin at the hands of the other classes if they are not checked in the attempt to "get all they can while the getting is good," it is not only probable but certain that the solution of the problem would be greatly simplified if each class or group of our people had a better understanding of the problems of the other groups. In fact, such an understanding would bring home to all a realization of the fact that our troubles cannot be successfully and permanently settled on a class basis. What's "sauce for the goose," will finally be "sauce for the gander," and any temporary class advantage which may be attained will finally react to the detriment of the favored class to just the extent to which the prosperity of the whole people is affected thereby.

What the average red-blooded American wants is a "square deal," and he will be satisfied with just that when he knows he is getting it. And he will be much better able to judge when he is getting it if he has a broader and more dependable knowledge of the other fellow's problems, over in another field. A get-together program along this line is badly needed. There is certainly need for a better appreciation of the farmer's problems by the people engaged in other industries—and vice versa. The coming industrial conference should prove of great educational value in this direction. The President has not been too liberal in the number of farmers who will sit on this round-table discussion of our pressing industrial problem, but the country will hear them as it will the greater numbers, and through them will gain a broader and more wholesome knowledge of American agriculture and its vital relation to American industry.

While it is to be sincerely hoped that more immediately practical benefits may result, the conference will accomplish a most useful purpose if it shall bring about a better class understanding, which would be the beginning of a real get-together program in the solution of our pressing reconstruction problems.

Collective Bargaining on Trial

OUR federal anti-trust law ostensibly exempted labor organizations and the farmers from its provisions, the former because the right of collective bargaining was considered essential to the protection of the laboring man's rights, and the latter presumably because the nature of the industry does not lend itself to the usual methods of "trust" manipulation or operation. The principle of collective bargaining has operated to save the economic life of important agricultural industries, notably the citrus fruit industry of the Pacific Coast and more recently the market milk industry in several states. This important economic principle is now on trial in the case of milk producers' organizations in several states. The immediate result is said by good legal

authorities to depend on the technical interpretation of the law. This trial will be beneficial if it results in a clear interpretation of the law, since then the law can be amended to permit the economic operation of the principle in the distribution of food products.

Will Ask Protection for Beans

CONCERTED action on the part of the organized bean growers and bean jobbers to secure more adequate protection for the American bean industry will be taken in the near future. The Michigan Bean Jobbers' Association took the initiative in this move at its meeting in Detroit last week, and has asked the Michigan Bean Growers' Association, the New York Bean Shippers' Association, the Rocky Mountain Bean Jobbers' Association, and the California Bean Growers' and Bean Shippers' Association to cooperate in presenting arguments in favor of the more adequate protection of the American bean industry at a hearing to be held by the Ways and Means Committee of the House of Representatives, at Washington, on October 13.

The reason for this activity at the present time is the large importations of beans from the Orient, which continue to flood the American market in competition with home-grown beans. Some of these Oriental varieties, notably the Kotonashis, come in direct competition with our product, especially for canning purposes. The Kotonashi is a small white bean, scarcely distinguishable in appearance from our Navy bean, though lacking in its high quality for table use. Millions of bushels of these beans have reached our shores during the war period. The bulk of these receipts have been exported either as dry beans or in cans, though they have naturally competed with the American product in the domestic market to some extent. There is a large hold-over of those beans in American warehouses and more are constantly arriving, a cargo of five million pounds having arrived at a Pacific Coast port only last week.

It will doubtless be contended by those who believe the future welfare of our country to depend on an immediate cheapening of the cost of foodstuffs that the competition of these foreign beans in our domestic market should be encouraged, rather than discouraged, but this would be a shortsighted policy. Last year the total American crop aggregated more than seventeen million bushels, according to the December government estimates. This was a most important source of nutritious food, which materially aided in filling a pressing wartime need. Indeed, the American navy bean has long filled an important place in the dietary of the American people and has been uniformly produced in quantities to supply the normal demand at prices comparable with the level of values for other foodstuffs.

Michigan has been and still is one of the leading states in bean production, but our future volume of production must depend upon a stable market and a compensatory price for the product. Under present conditions Michigan farmers cannot compete with Oriental labor in bean production, and any inroads of these beans on our domestic market will necessarily result in lessened production of this staple on our farms, we firmly believe to the ultimate loss rather than the gain of American consumers.

For this reason, as well as for the equally good reason that the prosperity of American agriculture is seriously threatened by the present industrial trend, we believe this an opportune time to urge upon congressional and public attention the importance of the American bean industry as a national asset and to present facts which will make its adequate protection apparent from a good business standpoint.



Better Farm Loan Service for Michigan

President Quamme of the Federal Land Bank of St. Paul Clears Up Misunderstandings About Securing Loans

I HAVE your communication enclosing a copy of letter from Mr. E. E. Cutler, of Ionia county, Michigan. I have read his letter very carefully and note from the contents that the writer is not familiar with the Federal Farm Loan service and what we are doing. The correspondent seems to think that it is necessary to secure ten farmers to join together every time that a loan is to be made. On the contrary, the method used is as follows: A Farm Loan Association is chartered in a given territory according to the provisions of the Federal Farm Loan Act. It takes ten incorporators to organize such a Farm Loan Association. When this corporation is chartered, they can entertain applications and close loans at any time just the same as any other bank or loaning corporation. They will be given a definite geographical territory, such as a county, for example, and within that territory loans can be made to all farmers that have security that complies with the law. When the corporation is organized, the farmer will make application to the secretary-treasurer and that is about all the farmer has to do. The secretary-treasurer, the loan committee, and the Federal Land Bank will do the rest. It is not necessary for a farmer to go around and secure others to join with him in order to secure a loan.

We find in many cases that farmers are selling their land to beginners who have only a few hundred dollars to pay down. A loan will be made by the Federal Land Bank for one-half the value of the farm and the grantor will take back a second mortgage for the balance the purchaser has to pay, at a low rate of interest. As the interest charge on the first mortgage is very low the purchaser will make payments on the second mortgage from year to year as he sells his produce. In this way many people are able to go on the land that otherwise could not. In other words, people who, from old age or otherwise, must sell their land, are willing to take a second mortgage following a Federal Land Bank loan, which they otherwise would not do.

The correspondent seems to think that the people in the older sections do not take readily to the Farm Loan system. In reply to that will say that the best and probably the highest priced land in the United States, with a few exceptions, is in the state of Iowa and in that state the farmers have

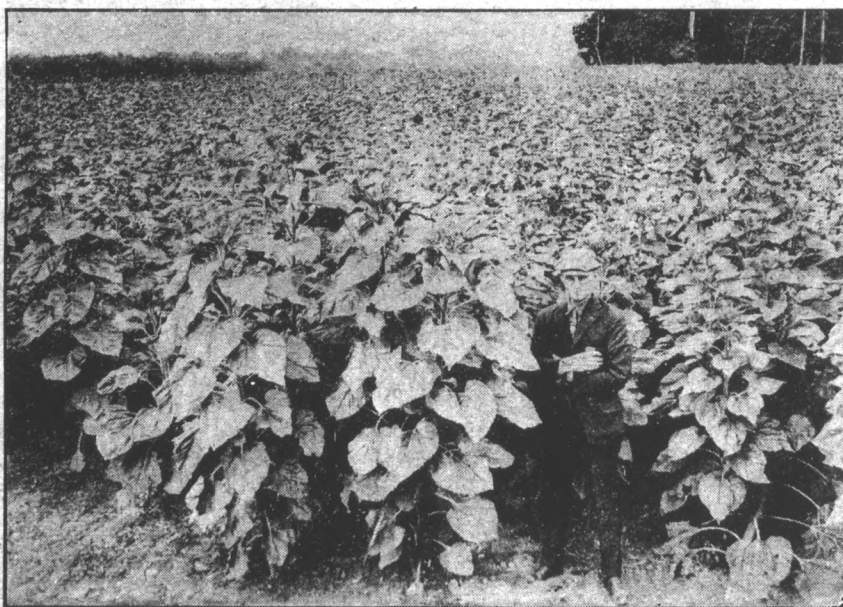
borrowed more than from any state in the Union, from the Federal Land Bank. We have Farm Loan Associations now organized generally throughout southern Michigan and by next year we hope to have every county in our entire district chartered. We are making loans to farmers in southern Michigan every day. To show how readily the farmers have taken to the farm loan system, even though it was a new departure in American finance, and even though it takes considerable time and effort to organize the Farm Loan Associations to begin with, we have, at the present time, closed over thirty-three million dollars in loans in just a little over two years time, besides organizing the system, the bank, and over five hundred Farm Loan Associations. At the rate we are doing business, we will have an institution with over a hundred million dollars in assets before it is six years old. We are already on a successful dividend-paying basis and our record in collections is most gratifying. At this writing we only have four delinquent payments in the bank, totaling less than \$500 and none of them are over sixty days' delinquent. We cannot expect every farmer to

understand this system immediately and we must have patience. The farm journals, such as yours, have assisted us in getting the information to the farmers more than all other agencies combined. I want to take this opportunity to thank you and your splendid paper for the good work that you are doing for the farmers and the farm loan system. You realize the same as we do, that, when a farmer secures a loan through the Federal Land Bank, he is thoroughly established on the farm. His loan runs for a period of a lifetime at a low rate of interest and when it comes due it will be paid. It eases the farmer's mind, with respect to his debt, and he is then ready to go ahead knowing that his home is secure. He will be encouraged to extend his operations and make improvements, thus adding the instrumentalities of production to assist him in his work, such as better barns, silos, hog houses, poultry houses, fencing in his farm, tiling and draining his farm, etc. No better service can be rendered to agriculture than to properly and adequately finance the farmer so that he can bring his farm up to the highest state of production.

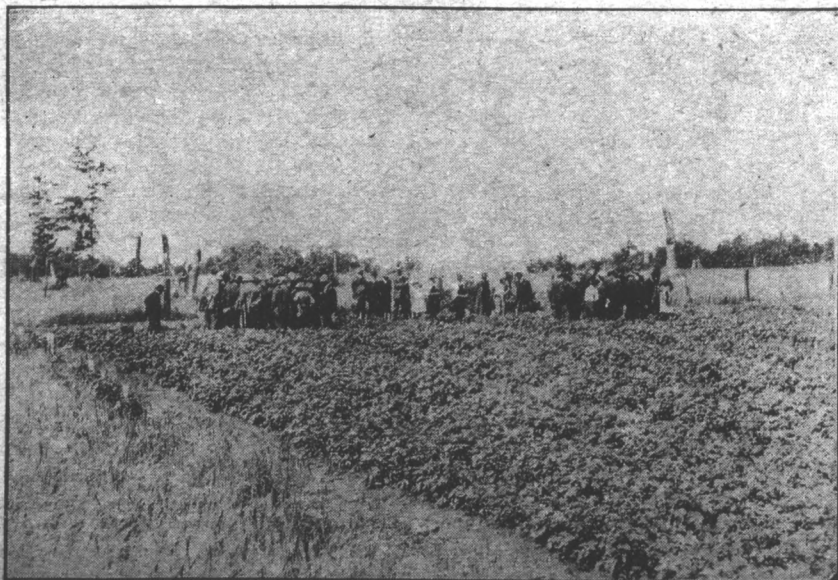
We shall be glad to cooperate with you at any and all times. We want you to write us for bulletins and information circulars. If any question comes up that you want full and detailed information on, we will be glad to give you this information at all times. In this way we can work together to bring this service to the farmers in every section of your state. Your splendid paper goes to the farm homes in every nook and corner of Michigan and is a powerful influence for good. Next year we are going to make a drive in the state of Michigan to complete the organization of Farm Loan Associations so that every county in the state will be organized. In this work we would like to have your cooperation. We have now practically completed the states of North Dakota and Minnesota and our work in these states will be finished this fall. Next year then, we will make our drive in Wisconsin and Michigan to complete those states and when that is done, the Seventh District, comprising the states of Michigan, Wisconsin, Minnesota and North Dakota, will be thoroughly organized so that a farmer living anywhere in this great district, who has the security required by law, can secure a loan from the Federal Land Bank system.

Building on a Firm Foundation

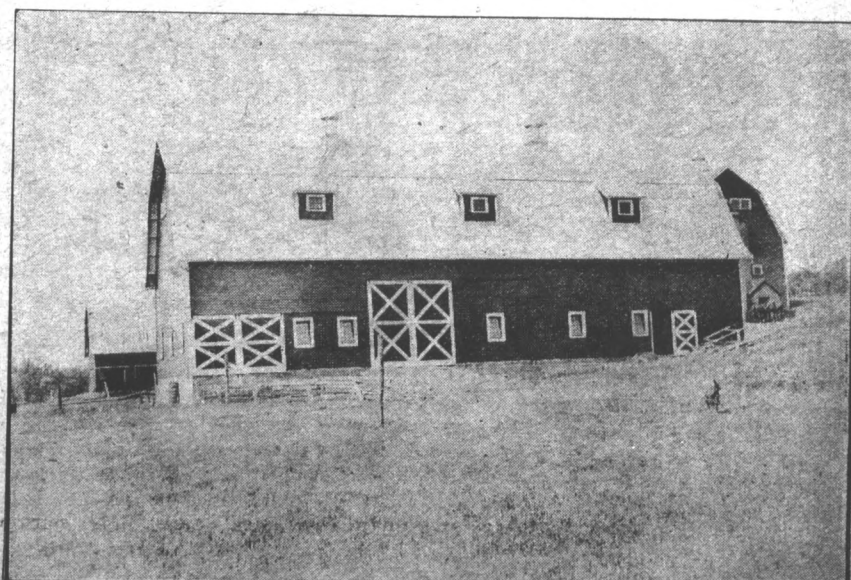
IT is not improbable that the agriculture of Michigan will be greatly changed in the coming years. Increased attention of tillers of the soil and rural leaders to the agricultural conditions of their respective communities is showing us the way to more economic systems of farming. Hardier varieties, new crops, cultural methods especially suited to each class of soil, live stock that fits the peculiar requirements of every feeder and breeder, will displace the less desirable. Then better marketing systems are on the way and there is certain to be a more careful consideration given to farm buildings and machinery, to the end that every dollar invested will produce a maximum of service. Finally the complete establishment of a serviceable farm loan system that will enable farmers to get financial aid on favorable terms and with a minimum of red tape, and the organization of a strong farmers' organization that will faithfully represent and defend their interests, completes a list of movements already under way, which when fully realized will go far toward establishing the agriculture of the state upon the rock of experience and of the best practical and scientific knowledge to be had.



Sunflowers are a Promising Crop for the Northern Dairyman.



Farmers Studying Potato Diseases in Experimental plots.



One of the Barns at the Upper Michigan Experiment Station.

News of the Agricultural World

DETROIT MILK PRICE REMAINS UNCHANGED.

THE milk commission of the Detroit area decided after carefully examining the evidence laid before that body, to keep the price for October and November at \$4.05 for milk testing 3.50 per cent fat and delivered at the railway stations at Detroit. According to evidence submitted the price set will not quite equal the cost of production for these months, and at present retail prices dealers are operating on a very small margin. But it was equally evident that under present economic conditions retail prices could not be further advanced at this time.

ILLINOIS AGRICULTURAL ASSOCIATION BUSY.

AT the session of the executive committee of the Illinois Agricultural Association, held September 24, the live stock committee of five, and Secretary D. O. Thompson were instructed to go to Washington to support the position of the Agricultural Association during the Kenyon-Kendrick hearing. The live stock committee prepared a statement protesting against agitation to cut the high cost of living. This statement was passed on by executive committee and is as follows:

"The result of the high-cost-of-living agitation has been to decrease food prices temporarily at the expense of future production. The recent drop of \$5.00 a hundred in hogs, \$3.00 in cattle, and fifty cents a bushel in corn, has taken all the profit in this year's crop of live stock and grain, and in many cases more. Nothing that the farmer buys has decreased in price.

"In the face of high costs of labor and farm supplies, with an agitation against food prices that is forcing these prices below the cost of production, there is only one thing for the farmer to do—cut expenses and operate on a decreased scale of production. This will mean a shortage, with correspondingly high prices to the consumer next year.

"The drop in cattle and hog prices has hardly been noticed in the consumer's meat bill. But it has cut the farmer's returns so much that he is cutting down the number of sows to be bred for next spring's pig crop. Cattle feeders are afraid to buy feeders, in view of the uncertainty of a profitable market for the finished cattle. There are more empty feed lots in Illinois than at any time in recent years.

"The agitation against food prices is doing the consumer little good. It will do him much harm, that will be felt six months or a year from now in a serious food shortage. Farmers can not and will not supply the country with food at less than cost of production."

Preliminary report of the constitutional convention committee was accepted and committee instructed to make further study, especially in taxation problem.

The organization committee reported 15,500 \$5.00 memberships. Four counties are having membership campaigns each month, five to eight state membership solicitors in each county cooperating with county farm bureau. The main work of publicity to date has been advertising county membership campaigns. Best methods to give publicity to city and country people are being studied.

Rock Phosphate Investigation.

Illinois has not been able to get an adequate supply or shipment of rock phosphate. After two investigations covering three weeks, into Tennessee rock phosphate fields our association secretary states that the conditions

will not be better in Illinois unless the conditions are changed in the rock phosphate fields. He said: "Dr. Hopkins' whole system of agriculture will be defeated if Illinois farmers do not acquire phosphate lands." He strongly recommended a committee to investigate further. Candidates for that committee will be considered by the executive committee before the next meeting, and the committee will be appointed at that time.

General Statement of Farm Paper Editors.

"There is a real need for a representative farm organization that can finance and solve its own problems. The type of the Illinois Agricultural Association is the most helpful and hopeful of any farm organization which has yet been started. This organization must have an understanding and cooperate with the public and must also stand up and fight for its rights and justice."

HOUSE COMMITTEE REPORTS OUT STORAGE BILL.

A COLD storage bill much less drastic than has been advocated is reported out by the House Committee on Agriculture. The bill fixes twelve months as the maximum period during which food may be kept in storage. This period is acceptable to the packers and others interested in the cold storage business. They testified before the committee that the ten months' limit proposed in the Hutchinson bill, or even shorter periods provided in the McKellar bill, would be needlessly severe upon them. They took the position that the cold storage business is seasonal in its nature, and that it is necessary to carry commodities from one season to another, and that any limit short of twelve months would not work out satisfactorily.

A bill provides that the time that goods that have been in cold storage must be plainly marked upon each package removed from storage warehouses. A penalty for violations of the provisions of the bill is fixed at a fine of not exceeding one thousand dollars or imprisonment of not more than one year or both.

The Secretary of Agriculture is authorized to administer the act and to make regulations for its enforcement. Persons conducting cold storage establishments must make monthly reports to the secretary as to the amounts of food in cold storage, the number and nature of refrigerating shipments and such other facts as may be required.

The provisions of the bill apply to "any article, except liquid food, that is intended or designed for food for human consumption." The purposes of the bill as defined are "to prevent hoarding and deterioration of and de-

ception with respect to cold storage foods, to regulate shipments of cold storage foods in interstate commerce, and for other purposes."

Food that has been in cold storage for less than thirty days is not required to be marked. Food held for thirty days or longer must be plainly marked, either on the food itself or its container, giving the date it was put into storage, the date of its removal and the name and location of the refrigerating plant.

Cheese is the only article of food which may be kept in storage for longer than one year.

The Secretary of Agriculture is authorized to enforce sanitary conditions and seize food that is unwholesome.

FARM DELEGATES NAMED.

THE names of three representatives of agricultural organizations who will participate in President Wilson's industrial conference on October 6, were announced this afternoon by Secretary of Labor Wilson. They are: C. S. Barrett, of Union City, Ga., president of the Farmers' Educational and Cooperative Union of America; J. N. Tittmore, of Caro, Wis., representing the American Society of Equity, and T. C. Atkeson, of Washington, of the National Grange. There is general dissatisfaction among agricultural leaders in the number of delegates allotted agriculture in the general conference. The following telegram from Lewis Taylor, General Secretary of the Indiana Federation of Farm Bureaus to Secretary Bingham of the Michigan Farm Bureau indicates how these new state organizations will function when agricultural interests are involved: We regard number of representatives accorded farmers on committee which meets in Washington October 6, as in no way reflecting interests on our questions that will arise in that conference. You are invited to send representatives to Indianapolis Monday, September 29 to consider steps to secure proper representation."

WANT SPECULATION AND PRICE MANIPULATION ELIMINATED.

ELIMINATION by federal law of food speculation and price manipulation, or, if such legislation is unobtainable, collective refusal by producers to sell farm products at the call of speculators, is the aim of the Illinois Agricultural Association, according to its secretary, David O. Thompson. This is the organization which recently sent a telegram to the Indiana Farmers' Association, in convention at Indianapolis, asking cooperation of Indiana growers in holding live stock and grain on the farms until a "sane market has re-established itself."

"Our telegram means," said Mr. Thompson, "that the farmers have had enough of being the goat for the board of trade manipulators. Experience seems to show that it is the custom of farmers to sell their products on a falling market. If the farmer could be assured of a steady price, and know that when he plants a crop or breeds a herd of live stock, he could go ahead at least with the certainty of breaking even in the end, he would increase his production and there would be food enough for everybody, and the cost of living would be reduced to the consumer."

IMPORTED BEANS MENACE HOME INDUSTRY.

THE bean crop of western New York, although a smaller acreage was planted than in several years, is of superior quality and the yield is fair. It will soon be ready for the market, but dealers say that if the government permits the wholesale importation of the Asiatic beans to continue it means that bean growers in this country must compete with the foreign product grown on cheap land and with labor that receives wages of a few cents a day. It is asserted that notwithstanding the handicap of distance, these beans can be laid down in this country at prices that mean ruin to the bean industry of western New York and Michigan.

Bean growers and dealers in New York state are indignant over the action of the federal government in permitting the importation of Asiatic beans under a nominal import duty, and the New York Bean Shippers' Association, with headquarters in Rochester, have received word from the California Bean Growers' Association telling of the protest the California farmers are making against the government's action. It is claimed that a shipment of five million pounds of beans have recently arrived from Japan, to be distributed over this country.

The New York shippers are making an effort to arouse farm bureaus and other farmers' organizations to action in opposition to this menace to the bean industry. The New York senators and representatives will be asked to act in having the wholesale importation of beans stopped.

Beans from the far east have been imported into the United States in small quantities for years, under a high tariff which made it possible for American farmers to raise beans and secure a fairly remunerative price for them. By the request of the Federal Food Administration, Asiatic beans were admitted at the rate of forty cents a hundredweight, or twenty-four cents a bushel. Three years ago, it is asserted, agents of the office of the Federal Bureau of Markets were promoting the use of the imported beans. Then little attention was paid to this activity, but with the war over nearly a year ago, it is contended by the home growers that this trade in foreign beans should be discouraged by the restoration of the former tariff rate. There is need for aggressive action on the part of all the bean growers and shippers' organizations in the country if the bean growing industry is to survive.

E. E. R.

BRADEN MAY GO TO PONTIAC.

MR. W. G. BRADEN, manager and founder of the Adrian community market, is expected to go to Pontiac and assume charge of a new community market being started in that city. Stock sufficient to finance the enterprise has been sold and a site obtained in the old P. O. & N. depot.



Gathering the Cream of the Field to Start the 1920 Crop.

Hints on Pekin Duck Raising

By Anna Wade Galligher

THERE will doubtless be many readers of the Michigan Farmer who will be interested in duck raising the coming season. Those who have had no previous experience with ducks should try to decide beforehand what branch of duck keeping is to be followed; i. e., whether the ducks are to be kept for eggs or meat.

If eggs are wanted, the Indian Runner will be the best selection that can be made. Those who wish to produce duck meat should choose the Pekin.

We have raised a good many different kinds of ducks. And we wish to state that the Pekin is by far the best market duck that we have yet found; because it is the largest, grows the fastest and makes the best appearance when dressed for market.

Then, too, the Pekin has a fine, heavy coat of feathers that bring almost as high a price as the best goose feathers. As a rule, the feathers of a Pekin duck are creamy white, especially if yellow corn is fed. If white corn is used, their feathers will be almost pure white. If they eat much yellow corn their feathers will show a rich yellow tint, which, however, is very attractive.

Perhaps the worst fault the Pekins have (if it could be called a fault) is that they are enormous feeders. But to offset this, they gain in weight when properly fed, in proportion to the amount of feed consumed. No young fowl will grow faster than a well-fed Pekin. But they cannot be fed the same as other fowls with any degree of success. It seems to be a very common mistake among beginners to at-

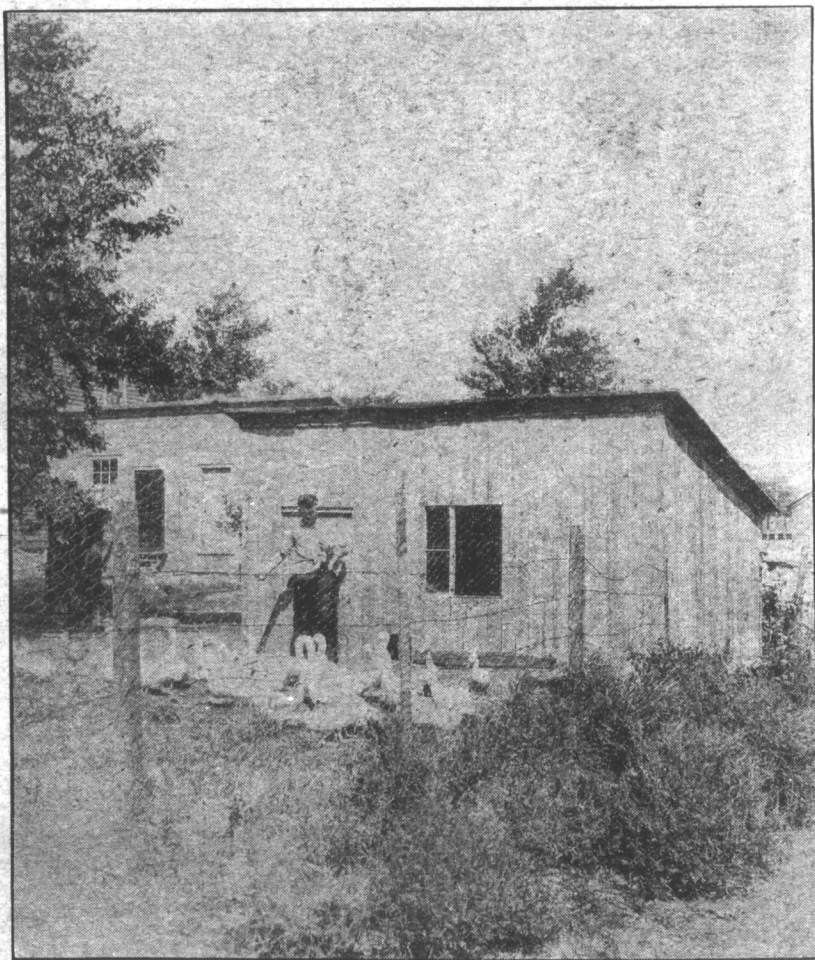
In order to succeed with ducks, it is necessary to have eggs from strong, vigorous stock. And if eggs are wanted early in the season the ducks must be well cared for. That is, well-fed at regular intervals and provided with a dry, comfortable house to stay in at night and during stormy days.

A thin Pekin duck will lay very few eggs, while on the other hand a well-fed duck will begin laying early, usually in March, and continue until late in June. A duck usually lays an egg every twenty-four hours, but will miss a day occasionally, except in the fore part of the laying season.

Duck eggs as a rule require about four weeks to hatch. And they must be fresh; not over one week old. A duck egg ten days old is worthless for hatching purposes. They may be hatched with either incubators or hens. If hens are used, only large, quiet ones should be selected.

If incubators are used, be careful to keep the temperature as even as possible, turning the eggs regularly, twice a day. If the temperature rises to 104 or even 105 degrees during the hatch don't be alarmed, but be careful not to let it go higher. And do not let the little ducklings stay in the incubator any longer than is necessary after they are hatched. As soon as they are dry, remove from the machine and place in a brooder or in baskets close to the kitchen range.

If they must be kept in a brooder at first, see that there is good ventilation. Don't keep the ducklings confined too closely and see that the brooder is not kept at too high a tem-



No Young Fowl will Grow Faster than a Well-fed Pekin Duck.

tempt to raise ducks and chickens together.

It is not even advisable to keep several varieties of ducks together. Some are very small feeders as compared with the Pekins.

For instance an Indian Runner duckling will probably eat about one-fourth as much grain feed as a Pekin. But the Runners are great foragers while the Pekins are not. Of course, the latter require some green stuff, along with other feed but they are no good at all, as bug-catchers.

perature. A brooder is not a good place for ducklings except at first. We refer to the ordinary make of brooders. A duckling will sometimes pip the shell twenty-four hours before it is ready to come out. But they seldom need any help.

If ducks are hatched in an incubator don't keep the machine air-tight. Leave the ventilator partly open. If the outside temperature is very cold, cover the ventilator with a thin cloth to keep out the cold. This is a safe

(Continued on page 417).

Not 1 But 4649 Stockholders

THE Standard Oil Company (Indiana) is owned by 4649 men and women—not one owning as much as 10 per cent of the total.

The Company is not personally owned or controlled by one or two men.

The stockholders have conferred full authority and sole responsibility for the handling of the Company's affairs in a Board of Directors of seven men.

These men have come up from the ranks and risen to their present position because they have demonstrated unusual ability in their particular division of this highly specialized industry.

The Board of Directors measure the success of their trusteeship not by earnings alone, but by the service the Company renders the people at large.

They know that the earnings available for dividends are always in direct proportion to the degree of usefulness and character of service rendered.

It is this ideal of management which has developed the Company to its present proportions as a public servant.

Standard Oil Company
(Indiana)

910 S. Michigan Avenue, Chicago, Ill.



Farm and College Fellowships

THERE are three community fellowships now operating in New York state. These fellowships are groups of cooperating farmers who make an agreement with the agricultural college whereby the college furnishes a specialist with the necessary equipment to conduct experiments and tests, while the farmers pay his salary, provide the land for the laboratory and assist in its maintenance.

This fellowship proposition is most efficient in results where the community is specializing in growing certain crops, providing an opportunity for growers of special crops to determine the causes of factors that are reducing their crops and finding remedies for their control. The fellowships already in operation are giving valuable assistance to the farmers and it is probable that others will be established in the state.

The growers of celery, lettuce and onions at Williamson, New York, have a fellowship, established two or three years ago, under the direction of H. W. Dye, a plant pathologist who is investigating muck land crop diseases.

The effectiveness of formaldehyde as a means of controlling onion smut is being demonstrated in a large field of onions on one farm. One test plot treated with formaldehyde yielded six hundred and fifty-six bushels of onions per acre, while the yield of the plot where no formaldehyde was used was three hundred and fifty-six bushels. In this test there was thirty per cent of smut in the untreated plot and four per cent in the treated plot. As there have been no onions grown in the field in nine years until this season, it is plainly seen that crop rotation is of little value in reducing the amount of smut in a field.

The formaldehyde solution was applied in the furrow with the seed at the time of sowing. The solution used

is made by adding one pint of commercial formaldehyde to sixteen gallons of water. This solution is applied at the rate of two hundred gallons per acre. The application is made by means of a watering device attached to the drill. By this method the liquid is discharged in the open furrow either behind the seed or directly with it in such a manner as to prevent washing of the seed in the row. A tank of three gallons capacity for this purpose is attached to the seed drill. A stop-cock and tank outlet of five-sixteenths of an inch bore when opened wide, makes the desired application per acre.

Celery blight causes a considerable loss to the muck land growers. A test to demonstrate the value of Bordeaux

in controlling this disease in a large celery field showed a ninety-five per cent increase in the crop treated with Bordeaux mixture as compared with the check rows.

Other experimental work being conducted by Mr. Dye in cooperation with the vegetable growers are breeding improved types of lettuce, potato and onion fertilization.

Once a year, usually early in September, the growers hold a field day and inspect the fields in which the demonstrations are made. This year many vegetable growers from other parts of the state joined in the inspection trip and attended the meeting held under the direction of the county farm bureau and local vegetable growers' association in the afternoon. Addresses were made by Professor M. F. Barrus of the Department of Plant Pathology at Cornell University, who spoke on the diseases of vegetable crops and the need of a more systematic effort in effecting their control, and Professor H. C. Thompson, of the Department of Farm Crops at Cornell University, who spoke on what the college and the truckers can do in cooperation.

There are several districts in New York state in which lettuce is grown in large quantities for the city markets. At present there is no central organization to keep the growers posted on supply and demand and frequently the losses are heavy because one market is glutted and there is a shortage in another market. At this meeting the lettuce growers took the preliminary steps to form a central organization which will keep the growers in all the lettuce shipping points informed on market conditions in all the large cities from day to day, and thus secure a more systematic distribution and prevent gluts and consequent heavy losses. E. E. R.

Labor Requirement for Beans

THE law of supply and demand may determine the price of beans but the farmer is the one who decides whether or not he will raise them. A careful study of the labor cost in producing beans may help some of the bean growers to make their decisions.

In a survey conducted by the Farm Management Department at M. A. C. there was found the average amount of labor required to produce an acre of beans. These figures will serve as a guide to any bean grower to work out the required labor for his own farm.

Fifty-two farmers reported an aggregate of 731 acres, or an average of fourteen acres per farm. The average labor for an acre was distributed according to the following table:

	Hours Man Work.	Hours Horse Work.
Plowing, per acre.....	5.5	11.0
Rolling, per acre.....	3.0	6.0
Harrowing, per acre.....	4.5	9.0
Applying barnyard fertilizer.....	4.0	8.0
Applying commercial fertilizer.....	0.5	1.0
Planting, per acre.....	1.25	2.0
Cultivating, per acre.....	7.0	10.0
Handwork, per acre.....	6.5	0.0
Pulling, per acre.....	1.75	3.5
Turning and bunching.....	7.0	3.5
Hauling, per acre.....	3.0	3.0
Total.....	43.8	57.5

The cost of producing beans is fifty to sixty per cent labor, so that any practice that will produce the same yield per acre with less labor is an added profit to the producer. Yield does not vary directly with the amount of labor applied because many other factors, such as disease and poor soil, have as great an influence as cultivation and it has often been the case that the expense of labor on the crop can be lowered without materially affecting the yield.

The Kind of Cattle the Buyers Like

By Earle W. Gage

THAT kind of cattle do buyers want? Answer this question, and you insure profit, but neglect it, and you lose money. The market wants wide, well-fleshed cattle. With the buyers the main points are to get cattle that are smooth, well balanced, with width and depth, and with short heads and short necks. Not only is this the kind wanted as "packer" steers, but the same type is also wanted in the "feeder" steer class, because this steer is needed only to grow into a "packer" steer. The buyer of the "feeder" steer wants the right kind, not only because he knows what kind of animal the "packer" steer should be, but also because the right kind to sell when finished is also the cheapest kind to feed.

Starting at the front of the beast, you want a short, wide head; a short neck; smooth, well-fleshed shoulder, and a well developed chest; with as great girth as possible just behind the front legs. The animal should not be bare or shaggy in the back, nor should the back nor ribs be covered by rough lumps of fat. The ribs should be broadly sprung and long so as to give a deep side to the steer. The buyer does not want a paunchy steer, but an animal to feed well must have a good "middle." In the hind quarters, width and depth are again the requirements.

An essential characteristic often considered too lightly is quality. Qual-

ity is a hard thing to describe. About the easiest way to describe it is to say that it is absence of coarseness. Buyers look for fine quality, or absence of coarseness, in the animal throughout—not only absence of coarseness in the head, shoulder, along the back, etc., but general smoothness and evenness of flesh everywhere. This, of course, applies to the finished animal. You will always find the packer paying the highest prices for good quality animals.

The highest prices go to the man who has a lot that is practically all alike. Profits are not made on a herd with a few well formed animals, the remainder common or scrubs, for in live stock sales, profits are not made by attracting the eye of the buyer to mountain peaks of perfection, for he also sees the valley of inefficient individuals—sees this to the exclusion of the better animals. And he pays on the basis of the poor ones, too.

The most practical way of insuring good stock, bringing a profit, is to head the herd with good bulls. Get a pure-

bred bull and one of the type you wish to have reproduced in the steers. Be sure he is a good one. A sire may not transmit all his good qualities, but you cannot expect him to transmit that which he has not.

Passing through the stock yards from pen to pen, we often compare a couple of loads of steers. We can see at once where one man has economized, as he would probably call it, on a bull. Probably he saved \$50 to \$150. But in the next pen we see a herd that were treated with a different kind of economy—that kind resulting in profit. He used a better bull and realized two dollars per hundred pounds more for his stock, besides putting on two hundred pounds more meat per animal at the same age than the over economical farmer. It would pay some breeders to stay at the yards and see these things for themselves.

And there are a lot of farmers losing profits by underfeeding, as well as improperly caring for them. No matter whether "feeders" or "butchers" are produced, there is no money in

starving them, no matter how high feed may be.

In supplying the market with hogs, many breeders and feeders make the mistake of thinking that carelessness is excusable because "a hog is a hog," and will command the same price regardless of quality. The first thing to do is to see to it that both the sow and the boar are well built. Smooth types of hogs that are in a healthy, fleshy condition, and are neither fat nor thin, should be used; sows that are too fat are inclined to be lazy, and therefore do not get the exercise that is necessary, while the sow that is really thin, is naturally in a weakened condition and healthy strong pigs cannot be expected from her.

For the best bacon types of hogs, the Yorkshire and Berkshire are the most desirable, or a good cross between these should bring good results, while for a shorter, fatter hog, the Poland Chinas, Durocs and Chester Whites are reliable breeds to choose from.

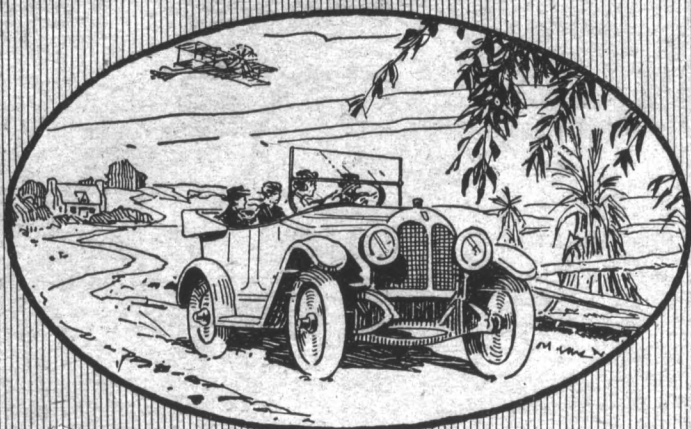
In fattening hogs for market, they should be fed a balanced ration regularly, and care should be taken that the feed boxes are kept clean and that they are eating all the feed that is given them at each feeding, so that no grain is wasted.

In the summer young hogs should be allowed to run in the fields, or fence-
(Continued on page 435).

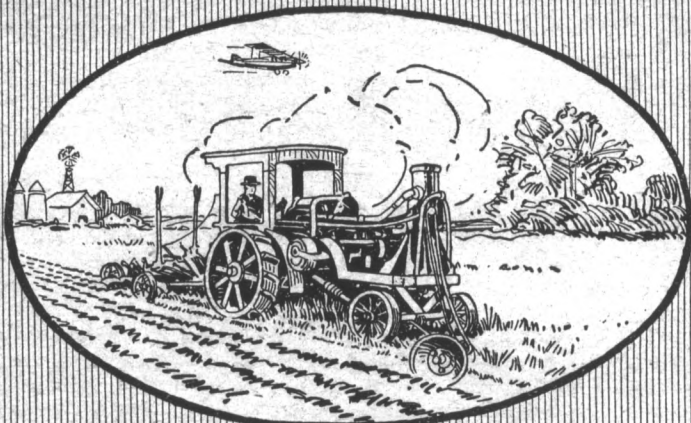


En-ar-co National Motor Oil

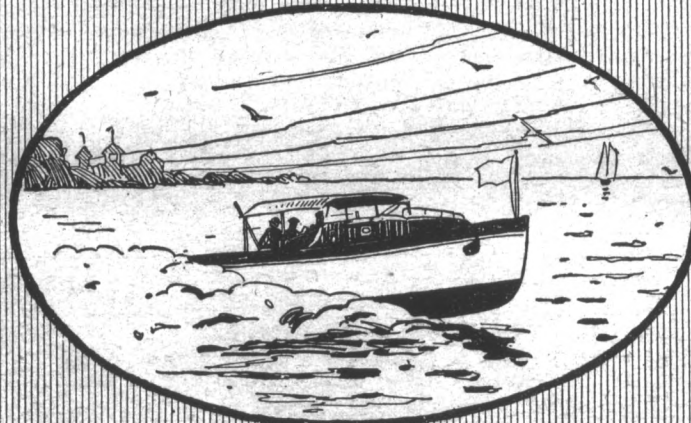
For Every Motor Use



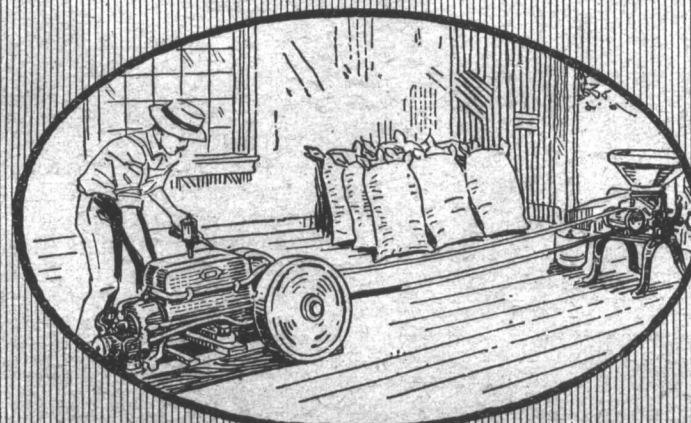
Lubricate your automobile and aeroplane with En-ar-co National Motor Oil.



Lubricate your tractor and other motor power farm machines with En-ar-co National Motor Oil.



Lubricate your motorboat and other motor power craft with En-ar-co National Motor Oil.



Lubricate your stationary engine with En-ar-co National Motor Oil.

Scientifically Refined By Graduate Workmen

The high quality of En-ar-co Motor Oil is unvarying. This has been accomplished not only by the use of the best materials, the most perfect equipment, exact formulas, and rigid tests, but also by the highly specialized training each En-ar-co workman receives.

Each must pass through many steps of refining instruction. And not until he has received his master degree is a workman entrusted with responsible tasks.

Thus we have developed Scientific Refining. And thus have we produced an oil that is uniform—that never fluctuates in its perfect quality.

On the road, in the field, on the water or in the air, En-ar-co National Motor Oil conquers the resisting force of friction, and lightens the load. It increases the power, and by a soft, velvety cushion or film—strong and tenacious—it reduces the wear on parts.



All En-ar-co Products Excel

As En-ar-co National Motor Oil is extra dependable, so are all other En-ar-co products.

White Rose Gasoline for greater power.

National Light Oil for Tractor fuel. Also best for lamps, oil stoves, and incubators.

En-ar-co Motor Grease for every lubrication point around the motor car or tractor.

Black Beauty Axle Grease for wagons.

Tell your dealer you want to try En-ar-co National Motor Oil and other products bearing the En-ar-co label. If he cannot supply you, write us.

National Refining Company

1939 Rose Building, Cleveland, Ohio

Branches in 89 Cities

En-ar-co Auto Game FREE

A fascinating game in which autos compete in a cross country race. Two, three or four can play. Get this game for the children. Grown folks, too, will like it. Sent free only to auto, tractor, motor boat or engine owners.

THE NATIONAL REFINING COMPANY, 1939 Rose Bldg., Cleveland, Ohio

Send me your En-ar-co Auto Game free. Enclosed find two-cent stamp to partially cover postage and packing.

Also give nearest shipping point and quote prices on the items I have marked.

I use.....gals. Gasoline per year
I use.....gals. Motor Oil per year
I use.....gals. Kerosene per year
I use.....gals. Tractor Oil per year
I use.....lbs. Motor Grease per year
I use.....lbs. Axle Grease per year

My Name is.....

Street or R. F. D. No.....

City..... County.....

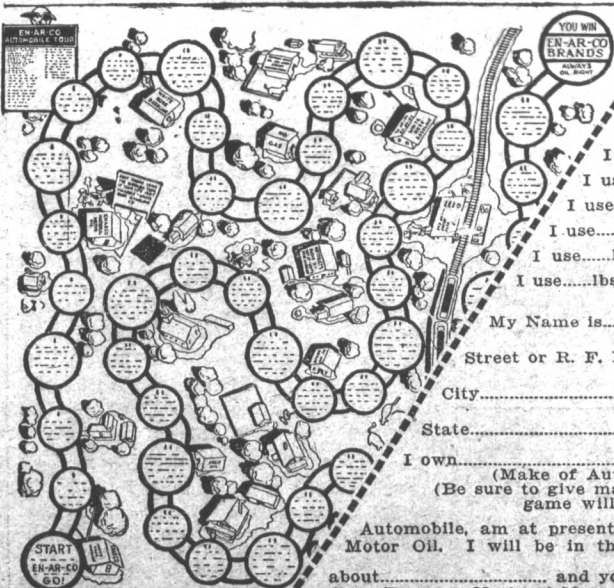
State.....

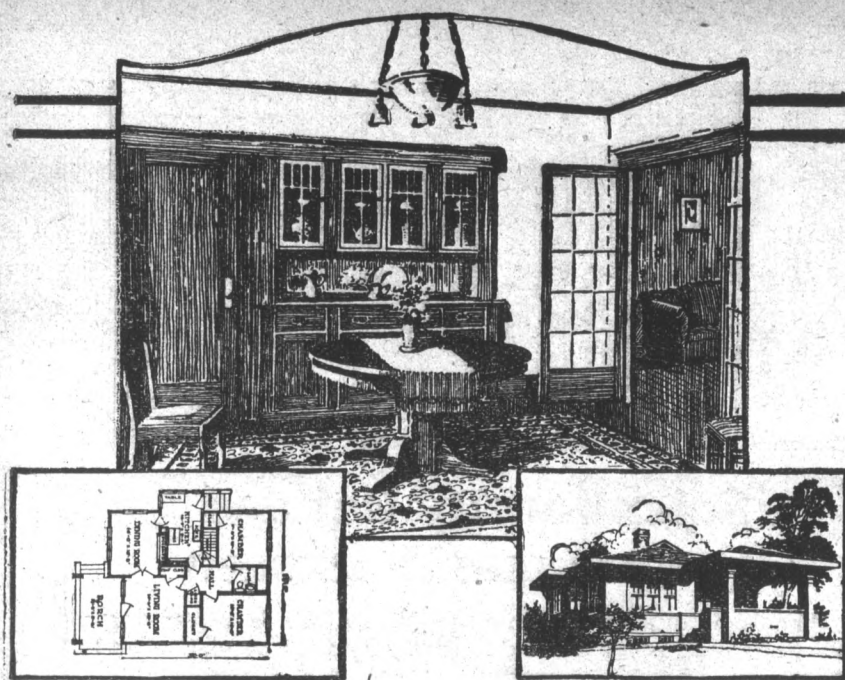
I own.....

(Make of Automobile or Tractor)
(Be sure to give make of auto or tractor or game will not be sent)

Automobile, am at present using.....
Motor Oil. I will be in the market for more oil again

about..... and you may quote me on.....
gallons En-ar-co National Motor Oil.





Curtis Doors are Necessities Beautified

YOUR home has to have doors. If you select and see that you get **CURTIS** Woodwork for your home you will have beautiful doors, well made of carefully selected and carefully handled woods.

The dining room above owes its convenience and beauty to the Curtis Built-in Sideboard and Curtis Doors. And that which is typical of this room is typical of the entire home that is finished throughout with **CURTIS** Woodwork.

Many thousands of dealers carry and sell **CURTIS** Woodwork. They recommend it because they know that the purchaser will be satisfied whether he buys a housebill or only a single window.

If you plan to build, probably we can help you. Our free books of plans contain many homes with floor-plans plainly marked, pictures of both interiors and exteriors, and are full of suggestions for making your home convenient, beautiful, and easy to keep.

These books are "Better Built Homes"—Vol. IV with homes of \$4000 and under; and "Better Built Homes"—Vol. V showing homes of \$4000 and up.

Write today for your choice—Free.

CURTIS SERVICE BUREAU

2020-3020 S. Second Street Clinton, Iowa

MANUFACTURING AND DISTRIBUTING PLANTS AT
Oklahoma City, Okla. Detroit Lincoln, Neb.
Wausau, Wis. Sioux City, Iowa Minneapolis, Minn.
Topeka, Kan. Clinton, Ia. Dayton, O. Chicago, Ill.

EASTERN OFFICES AT PITTSBURGH AND WASHINGTON

The makers of **CURTIS** Woodwork guarantee complete satisfaction to its users. "We're not satisfied unless you are."

1866 CURTIS WOODWORK

"The Permanent Furniture for Your Home"

HOOSIER STOVES & RANGES FREE

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

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

Profitable Employment

Use your spare time profitably by representing the Michigan Farmer in your neighborhood. You can work up a pleasant and profitable business taking care of new and renewal subscriptions for us. You will be interested in our special literature and attractive subscription rates. Address, The Michigan Farmer, Detroit, Mich.

ROLLING BATH TUB WITH WATER HEATER

The wonderful new Ro-San product for homes without plumbing. Nothing like it anywhere. Equal in comfort, style and quality to our famous Indoor Toilet and Washstand. Full size metal tub, white enameled. Simple heater and 12 gallon nickle-plated water tank. Water heats quickly. A boon if you have sickness or need hot water quick, day or night. Use gas, gasoline or kerosene. No plumbing or extra. After use tub closes up against frame, less than 8 feet square. Covers heater. Rolls anywhere easily. Keep in small closet. Bathe in comfort—as often as you like—anywhere in the house. Write today for particulars and price.

ROWE SANITARY MANUFACTURING CO.
10141 6th St.
Detroit, Mich.



Please mention The Michigan Farmer when writing to advertisers.

MINNESOTA TO HAVE BIG STATE FARM BUREAU.

THE progressive state of Minnesota is completing plans for a statewide campaign to put the farm bureau of that commonwealth on a highly efficient and thoroughly representative basis. A preliminary conference was held in August at which time a call was made for a later session to perfect a temporary organization. This conference was held at St. Paul on September 16, with one hundred and twenty-five representatives present from fifty-seven counties. Of these, forty were authorized delegates.

An opportunity was offered to delegates of representative agricultural organizations to express their views relative to the farm bureau federation question. Those present and the organizations represented were as follows: N. J. Holmberg, State Department of Agriculture; L. E. Potter, Director Minnesota Live Stock Breeders' Association; G. G. Tolaas, Secretary Minnesota Potato Growers' Association; P. E. Clement, Manager of Clay County Cooperative Certified Seed Potato Growers' Association; J. F. Harrison of the Minnesota Horticultural Society; C. W. Smeltzer of the Farmers' Cooperative Equity Exchange; Sam Hammerback, President Minnesota Farmers' Club Federation; A. E. Anderson, President State Association of Farmers' Mutual Insurance Companies; J. E. Kienitz, of the Federal Land Bank; and D. A. Wallace, editor of "The Farmer." All such representatives spoke favorably to the organization of Farm Bureau Federation.

A general discussion on plans and the necessity of Farm Bureau organization was thoroughly discussed by the delegates present. There was no doubt in the minds of any of the delegates that a state federation if properly financed and directed, could wield great influence. The general opinion of the delegates was expressed by Mr. Wallace when he brought out some very interesting points relating to the necessity of such organization. In the course of his remarks he stated that this is a movement we cannot stop if we wanted to. That this is a period of uncertainty and the solution of the situation depends upon the farming population, as well as the capitalists and laborers. The State Federation of Farm Bureaus, being properly financed, can do more good for the state of Minnesota than any other organization ever thought of. He also emphasized strongly, that the matter of proper finances should be the important subject to be taken up first. He also stated that from the people of every county he heard nothing but approval of the idea of Farm Bureau Federation, both state and nation-wide.

A few present were in doubt as to whether the County Farm Bureaus were ready now to join and finance the Federation. Since this view was not held by the majority, the conference proceeded to perfect a temporary organization.

There had been appointed at a previous meeting, a committee of ten to act as a temporary executive committee. The conference moved at this time to retain this committee as a temporary executive board. They also agreed that this conference approve the plan of a national farm bureau federation, and that they request the delegates from the temporary organization of Minnesota be permitted to participate in the proceedings of the convention to be held in Chicago on November 12-13.

WAR DEPARTMENT STOPS PARCEL POST FOOD SALES.

THE War Department announces that sales of surplus foodstuffs through the parcel post will be suspended and that the unsold stocks will

be redistributed to the twenty-four retail stores which the War Department will open throughout the country.

The stocks will be offered through the stores at the same prices at which they have been sold through the parcel post and to municipalities. These food stuffs will be sold both over the counter and on mail orders.

Mail orders for the foodstuffs, as for the other commodities which will be offered for sale in the retail stores, must be addressed to the store in the district in which the purchaser resides.

The prices fixed on the food commodities will be the prices at which those commodities will be delivered at any point in the retail district within which the purchaser lives.

BEAN MEN GUARANTEE PRICE ON NEW CROP.

THE California Lima Bean Growers' Association announces that its position this year in handling or marketing regular as well as Henderson bush lima beans is much better than heretofore, it having secured sufficient membership or acreage to justify it in guaranteeing its prices on new crop beans against their own decline for reasonable periods. Heretofore its tonnage control was not sufficient to do this, causing a more or less unsettled market. Price guarantee means stabilized market, fully proven by pooling of the unsold portion of the 1918 crop. The association realizes that the trade cannot purchase any lines of foods safely unless it knows that the prices are right.

FARM CONGRESS WILL SEND FIVE DELEGATES TO INDUSTRIAL PARLEY.

THE International Farm Congress will have five delegates at the industrial conference in Washington, on October 6, despite failure to secure representation through request of the administration, according to W. I. Drummond, a director of the congress.

Telegrams sent President Wilson and Secretary Tumulty more than a week ago, asking them to seat five Farm Congress delegates on the industrial conference, are as yet unanswered, according to Mr. Drummond. He stated the demands of the congress will be stated again to the administration, "but in any event we will send our five men there with instructions to be seated and obtain recognition if possible."

FOOD CHEAPER IN FRANCE.

AFTER giving normal prices of staple foodstuffs for the current week and comparative tables showing those of July 31, when the decree ordering the fixing of normal prices went into effect, the Official Journal adds that the upward movement of prices had undergone an almost general check and that the cost of foodstuffs of prime necessity has been diminished throughout the country.

"Prices have decreased in forty-three of the eighty departments and in the remaining thirty-seven there is a general decrease, but the cost of butter and eggs has been slightly increased owing to the drought," the Official Journal says. "Results obtained permit the hope that by a better coordination between different districts more important decreases may be obtainable."

AGRICULTURE IS FIRST.

AGRICULTURE constitutes more than half the foreign commerce of the United States. The total foreign commerce for the fiscal year ended on June 30, 1919, amounted to \$10,169,888,111, of which imports were \$3,095,876,582 and exports were \$7,074,011,529.



Lazzari stands beside the New Edison and sings "Mon coeur s'ouvre à ta voix"

Lazzari has now ceased to sing, and the New Edison is singing the same song alone

The pictures above are drawn from actual photographs. They show Lazzari in the act of comparing her voice with its RE-CREATION by the New Edison. She sang. Suddenly she ceased to sing, and the New Edison took up the same song alone. There was *no difference*. It was only by watching Lazzari's lips that the audience could tell when she had ceased to sing.

Lazzari has made this test before more than ten thousand music-lovers and representative music critics. This test proves beyond all question that the voice of Lazzari, as RE-CREATED by the New Edison, is absolutely indistinguishable from her voice as heard on the stage of the Metropolitan Opera House in New York.

THE voice of the decade has appeared. A transcendent artist has flashed into operatic glory.

Twenty-two months ago, Carolina Lazzari joined the Chicago Opera,—unknown, unheralded.

Today, three continents clamor to hear her.

This fall, the Metropolitan Opera Company brings her to New York,—its new prima donna contralto.

While the golden horseshoe of the Metropolitan sits enthralled by the spell of her magnificent voice, you in your own home can hear that self-same voice. For the New Edison brings you the real voices of the world's

great artists, wherever you may be. Not strident and mechanical travesties on their art, but literal RE-CREATIONS, indistinguishable from their living voices. The New Edison's life-like Re-Creation of music in all its forms is the amazement of the music critics of the country.

The entire genius of Edison, the wizard, is summed up in this marvelous phonograph—his Official Laboratory Model. It cost him three million dollars to perfect. Yet all the musical world counts every penny of those millions well spent. For, he thus perpetuated the priceless art of great artists, and introduced the wondrous cultural benefits of good music to discriminating homes everywhere.

The NEW EDISON

"The Phonograph with a Soul"

Our new book, "Edison and Music," is the most interesting phonograph story of the year. Free. Write for it. Thomas A. Edison, Inc., Orange, N. J.




Comfort?—You'll know it, men, the minute you get your High Rocks on. Fleece-lined, it feels great on the skin. Warm? Well, you'll say so. And the durable, flexible material allows free play to every muscle and saves money in long wear.

Look for the High Rock label on the front.
At your dealers in two piece or union suits.

HIGH ROCK
FLEECE LINED
UNDERWEAR

High Rock Knitting Co.
Philmont, N. Y.



Locks 50 Cows Instead Of One

West Bend BARN EQUIPMENT

West Bend Automatic Stanchions equipped with our wonderful locking-releasing lever save you time and labor—and insure safety in locking up or releasing the cows, yet you pay no more for West Bend equipment than for ordinary stanchions that must be opened and closed singly by hand. The West Bend lever controls from 2 to 50 West Bend Automatic Swinging Stanchions. The entire row of cows can be locked up or released instantly by one throw of the lever. Cow stops are operated at same time, and when set guide cow into the stanchion. Every user says it's the greatest idea ever brought out in modern barn equipment. You certainly want it in your barn. Write today for catalog showing complete line of West Bend Barn Equipment.

WEST BEND BARN EQUIPMENT CO., 280 So. Water St., West Bend, Wis.

Salesmen Wanted

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

The Michigan Farmer

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



BE AN EXPERT

Auto and Tractor Mechanic
Earn \$100 to \$400 a Month

Young man, are you mechanically inclined? Come to the Sweeney School. Learn to be an expert. I teach with tools not books. Do the work yourself, that's the secret of the **SWEENEY SYSTEM** of practical training by which 5,000 soldiers were trained for U. S. Government and over 20,000 expert mechanics. Learn in a few weeks; no previous experience necessary.

FREE Write today for illustrated free catalog showing hundreds of pictures men working in new Million Dollar Trade School.

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

Our Service Department

THE RENTER'S SHARE.

I am talking of renting my farm on shares to a man whose farm is near mine. I have no live stock on the farm. What I want to know is, what part, if any, of the fertilizers would I have to furnish? How much commercial fertilizer do they usually put on to the acre? Had the man ought to put back barnyard fertilizer for what he takes off the place? I intend to get cows as soon as I can. I also intend to put my share of the straw back on the place. Could you tell me what share of the hay they give?

Ottawa Co.

K. S.

Where one rents a farm on shares without any live stock the rule is that the renter does all the work, furnishes the seed and two-thirds of the fertilizer and gives the owner one-third of the crops, but one can give no hard and fast rule that will apply to renting various farms. Farms differ so much in their productive power that one farm might rent for twice as much almost as another and so the renting of a farm is a matter of a special bargain between the owner and the renter. For instance, one man is a better farmer than another, and a person would much rather a good farmer would have control of the farm than a poor one, and so he would give a good farmer a better lay than a poor one. All these things must be taken into consideration.

If you would furnish cows, a sufficient number up to the capacity of the farm, then the renter would do the work and give you one-half the products of the cows, providing you furnish one-half the purchased grain. The other crops could be divided one-third and two-thirds. That is, this is the usual rule.

For wheat or rye or any cereal crop two to two hundred and fifty pounds of commercial fertilizer is considered a good application. Usually the renter would not be required to put stable manure back upon the farm, providing no live stock was kept on the farm.

If you would rent a meadow separate from the rest of the farm you could undoubtedly get someone to harvest this for one-half of the hay instead of two-thirds, but where the meadow goes in with all the other crops on the farm the land usually draws one-third and the renter two-thirds, the same as with other crops,

C. C. L.

SEEDING VETCH WITHOUT COVERING.

I have a piece of land—a clay soil with some gravel in—which I want to bring into better condition quickly. Have just disced in rye and wonder if fall vetch would do well on it, and would supply the needed nitrogen to plow in next spring when I plow in this rye. Will vetch do well on a dry soil and will it take root to just broadcast it on without covering. Could not get the seed to put on when I did the rye, but would send for it if it would do well. I disced the rye into oat stubble without plowing. Or would crimson clover be better to use? Could I broadcast timothy onto my new clover seeding now with much chance of its taking root and coming on for hay next year as the clover has not caught well. How much Red Rock wheat should I plant per acre. How much vetch is planted to the acre?

Lapeer Co.

C. V. Y.

I don't think it would be practical to sow vetch on top of the ground now if you have disced in rye on this field and trust to the rain covering it. Very much of the seed would never be covered so that it would get any start this fall. What you should have done was to sow the vetch with the rye. If you had sowed broadcast vetch and rye and then disced it in it would have been all right, but now if you try to

cover the vetch seed by discing again you will destroy a larger part of the rye, which has undoubtedly germinated by this time. The only thing I see is to let it go.

You could sow on crimson clover broadcast and if we had a good rain much of this fine seed would be sufficiently covered so that it would germinate, but it will be pretty late now to sow crimson clover and have it get a sufficient start so that it will withstand the winter if we should have a very severe one. Providing the winter is no more severe than last year, you wouldn't run much risk, but we are liable to have a severe winter this year and crimson clover that is sown on top in the middle of September would be liable to winter-kill. This crimson clover ought to be sown in the middle of the summer, say at the last cultivation of corn or something of that sort, as a cover crop, then it gets root enough so that unless the winter is very severe it will live through, but even when sown at this time of the year it is not a very hardy plant for this latitude and is very liable to winter-kill. However, in Maryland and New Jersey crimson clover is a wonderful plant and just as reliable down there as common red clover is up here.

You can sow on common red clover on this field and probably would stand the winter, but it would be so small next spring that there would be little to plow under with the rye, and so I don't think it would pay. The best you can do now is to depend upon your rye entirely.

If timothy is sown broadcast on your new seeding of clover now, it doesn't have a fair chance. The most of this will germinate and probably live through the winter, but it will be small because there isn't time for it to develop. Timothy seed sown now on carefully prepared land will produce a good crop next year but it will be late. The ground ought to be disced and prepared especially where you are going to sow the timothy. Sweet clover can be sown broadcast late this fall on this poor seeding of red clover and would probably make a good stand but it would be too late to cut with your red clover. However this might be, and I think it would be, the best method for you to do to sow sweet clover. It will probably get tall enough so that you will clip it some when you mow the red clover, but here again it won't work well because sweet clover ought to be clipped about six inches high and when you mow the red clover you will want to mow it close. If you get a good stand of sweet clover probably along later in the season you can get a good crop of hay and should you conclude to sow sweet clover when you cut the red clover you ought to cut it high because if you cut sweet clover close it will not grow again.

Two bushels of Red Rock wheat per acre is about the right amount. If you have very rich land you can get along with seven pecks, or perhaps six pecks and it will stool out and make a good stand, but on the average land two bushels per acre is about the proper amount.

C. C. L.

BLUE OINTMENT FOR LICE.

I noticed an article in the Michigan Farmer entitled, "Fight the Lice," in which you recommend blue ointment. Will you tell me where I can get this blue ointment, or what it is?

Hillsdale Co.

L. O.

Blue ointment is blue mercurial ointment and can usually be purchased under that name at a drug store. (Continued on page 416).



An Old Fable That Proves a Big Fact

A certain man had several sons who were always quarreling with one another. And try as he might, he could not get them to live together in harmony. So he determined to convince them of their folly by the following means:

He bid them fetch a bundle of sticks and invited each in turn to break it across his knee. All tried and all failed. And then he untied the bundle and handed them the sticks, one by one. They had no difficulty at all in breaking them. "There, my boys," said he, "united you will be more than a match for your enemies, but if you quarrel and separate, your weakness will put you at the mercy of those who attack you."

—AESOP'S FABLE

Together You Win

Aesop, in his ancient fable, in his "Together You Win," voiced no new fact.

Throughout the history of man, the really big things in life have been achieved by organized effort.

In pre-historic times, each man worked alone, supplying the crude needs of himself and family.

Civilization, however, has been the history of the development of organized effort. The gathering of people into great cities—the building of wonderful structures and gigantic, industrial institutions.

Labor began centuries ago to organize and thereby raised itself from practical serfdom to the good earnings and working conditions it enjoys today.

Manufacturers in every line of business have organized and thereby protected themselves against ruinous competition and insured fair prices for their products.

Farm folks alone have lagged behind in this great development of organized effort.

While all the world has been organizing, the farmer has been working alone, buying alone, selling alone.

Organizations working along restricted lines such as we have in our own State have done great things and will do more.

But, in spite of all this, the farmer is still at the mercy of the organized manufacturers of everything he buys and of the city organized marketing machinery in selling everything that he raises.

There is not a progressive farmer anywhere but realizes that in order to solve the farmer's problems of high producing costs, lack of labor and

vanishing selling profits, a powerful farmers' organization is absolutely essential.

Today, the farmers of Michigan are creating such an organization.

The farmers of other states are well on the way.

If Michigan only equals the record being made in Illinois a year from now over 75 per cent of all the farmers in Michigan will be enrolled in this great organization.

We are going to beat Illinois. We are going to beat all the other states in the Union.

We want every farmer in the State a member of the Greater Michigan State Farm Bureau.

With such an organization as this we can solve the problems that are confronting us—we can reduce our production costs and solve our help problem—we can market our products for a fair return, not only on our investment but on our labor. We can secure legislation which will be favorable to the farmer.

The great organization campaign starts actively in Oakland County on the morning of October 15th.

Other counties will follow as rapidly as they can be worked, until every farmer in Michigan has been visited personally and asked to join at a yearly membership fee of \$10—\$5 to the County Bureau and \$5 to the State. This will give ample funds to accomplish the great work we propose.

But don't wait. Get your counties organized well in advance of the State organizers. Learn all the details about this great movement by communicating with Mr. C. A. Bingham, State Secretary, Birmingham, Mich.

Join the Michigan
State Farm Bureau

It is Organized
for Business

MICHIGAN STATE FARM BUREAU

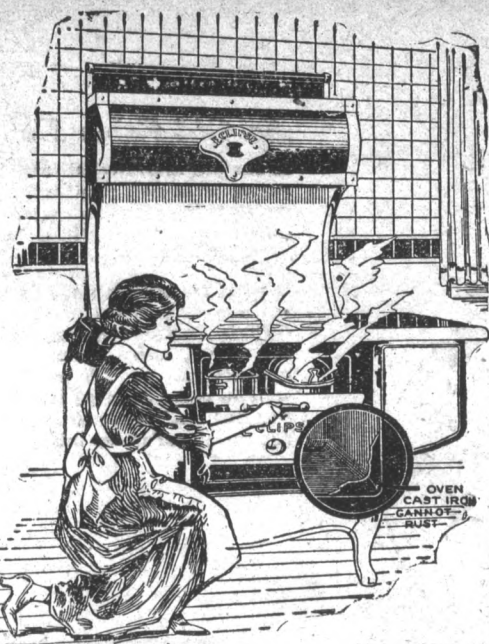
Executive Office:

Birmingham, Mich.



You Can Be Proud of the Baking

Here is a *guaranteed* baker—the Joy Eclipse Range. All parts of the big oven get even heat. Fire-box and flues are properly balanced to distribute uniform heat to all parts of the oven. Adjustable Damper controls the oven temperature to exactly the heat you want for sure results. The Joy



ECLIPSE

range is guaranteed never to rust or warp out of shape. Not a scrap of asbestos is used in the oven because asbestos collects moisture and starts rust. Steam and vapor given off from roasts won't rust out the oven.

You'd like to have a JOY range in your kitchen—it's a beauty. White enameled splasher back—polished top. Easy to keep clean and new-looking. Plain, smooth castings with no unsightly carvings and ornamentation to collect dirt and rust.



Burns Either Coal or Wood

You can wash the splasher back and top with a damp cloth. Notice that the smoke pipe is behind the high closet—thus the big enameled splasher back is easier to keep clean. Also allows you more cooking space.

Send for free illustrated book J showing different styles of the JOY ECLIPSE. This booklet will help you choose the range you need.

Eclipse Stove Company
Mansfield, Ohio

Vegetable Growers' Association

(Concluded from last week)

"Analyses of samples of muck soil and it will take years of cultivation as to their chemical composition have been unsatisfactory in the past. In the future I believe we are going to work out physical standards for muck. We are going to work out a standard whereby the farmer can decide as to the physical condition and workability of the soil. The important matter in the handling of our muck soils is the decomposition of the muck, by the use of manure supplemented with acid phosphate, which we find tends to break down the muck and releases and makes available the nitrogen that is in the muck itself."

"An important consideration in connection with this method is the effect on soil bacteria. We believe the application of phosphoric acid is for the purpose of hastening the nitrification of the bacteria. In experiments where sodium nitrate was used, this supplied nitrogen in the early part of the season when the soil bacteria were not active in the cold soil, but the final results were the same as where an application of acid phosphate was used."

"The reason we get a large leaf growth on muck soils is due to an excess of nitrogen. We roll muck to repress the nitrogen. If we want the crop to grow well, we naturally will cultivate the soil more to release nitrogen. One can keep down the leafiness of cabbage and make a solid head by rolling the soil and keeping it compact. The object in cultivating muck soil during the growing season is to keep down the weeds."

"Crops sown to produce seed require a different treatment on other soils. We cannot use high land methods on muck soils. In an experiment with one-eighth acres of beans, those sown as on high land produced a luxuriant growth of vines but no seed. On another plot the beans were drilled thickly in the row, and being thus crowded produced a sufficient leaf growth and a splendid crop of matured seed."

"We are working to find out crops and methods so that we may utilize muck lands for general farming. We have got to find another system of handling muck lands so that it will be adapted to growing something besides leafy vegetables. We know it is adapted to the growing of silage corn, and hay and such cash crops as celery, onions, cabbage and for canning factory crops. We are experimenting with frost-proof crops that will grow rapidly. Every muck farmer wants to grow a forage crop, but has great difficulty in doing so. We find the soy bean excellent for that purpose. We can put it in the first of July and take it off the first of September. I will cite an instance of a farmer who says he figures he will have between four and five tons of forage per acre, and that without inoculation of seed. Even on the most acid peats we are growing soy beans without inoculation, the soy beans supplementing the silage. In case of early frosts, the beans will be protected. If the season is favorable, this will make a high quality of silage rich in protein."

In answer to a question as to the efficiency of lime on muck, Mr. Levin said the beneficial effects were not perceptible. The application of small quantities of manure will break down the muck so that the lime in the muck will be released, and it does not pay to apply lime. Regarding the application of salt to muck, this is a practice that has been discontinued, and experiments do not reveal any satisfactory results. In reply to the question as to whether burning over of muck is injurious, it has been found that burning removes the valuable top layer,

Round Table Discussion on Diseases of Muck Land Crops.

The round table discussion was conducted by Professor G. H. Coons, of M. A. C. Professor Coons made the observation that a general talk on diseases of plants might not be a solution of the problems of those present, as it is the specific problem that ought to be discussed. "The essentials to be considered are sanitation, plant protection and the use of disease resistant varieties. Fully fifty per cent of the products grown are wasted through fungous diseases, etc., before they reach the consumer, which fact bears a close relation to the price the consumer has to pay."

Regarding the matter of celery blight with which one grower had trouble, Prof. Coons said this is distinguished from the ordinary celery blight, in that the former is a brown color and is found to attack the golden varieties of celery. This is known as the bacterial leaf spot. While it has never been known to destroy the whole crop, the celery is disfigured and is discriminated against in the market. At Cornell they have controlled this by spraying with Bordeaux mixture. This is undoubtedly an infectious disease, but it does not cause rotting of the stalks.

Regarding late blight of celery, the speaker said that late blight is no doubt carried over from year to year. With late blight every rainy period is a danger period for celery as the moisture opens up the fungous spores. Rains coming in close succession in the early part of the season will do more damage than the same amount of moisture throughout a longer period. By intelligent application of control spray, it is possible to prevent blight to some extent. Many market gardeners make it a practice to spray their celery regularly.

The possibilities of the selection of disease resistant plants was touched upon. After a serious outbreak of cabbage yellows in a Wisconsin field, it was found that there were but three sound heads that to all appearances were disease resistant. After taking these three plants and using them for the production of seed, a new strain has been developed called Wisconsin Hollander No. 8, which has been found to be from ninety to ninety-five per cent disease resistant.

In this connection Professor Coons said: "When the farmer is challenged to reduce the price of his products his answer is going to be greater efficiency in producing disease resistant varieties, thus reducing losses in marketing. I believe we have only just started in this study. There are several instances of the production of such strains. There is a rust resistant asparagus developed in Massachusetts. Some growers claim to have found strains of tomatoes that are immune to blossom end rot, the variety mentioned being Bonnie Best, while one grower claimed to have developed a strain of the Earlianna which he has found to be resistant to this disease. The grower is coming to a closer study of the life history of the various plant diseases."

Growing Celery in the Kalamazoo Region.

Mr. Ezra Levin, of the M. A. C., in his address on the above theme, referred to this industry as the one which has made Kalamazoo City, and county as well, famous the country over. Due to rich soil, painstaking work by the grower's entire family, and a ready market for the celery, the growers have been inclined to overlook the scientific study of celery diseases and

Revillon Frères

SHIP YOUR RAW FURS TO US

The largest manufacturers of furs in the country. We pay highest prices, allow liberal assortment, and remit all Express or Parcel Post charges. Prompt payments.

Send us your name for our price list when issued

REVILLON FRÈRES
442 West 23rd Street, New York City

More Cash

For Your Raw Furs

Ship to the
Co-operative Raw Fur Company

And get more cash for your Raw Furs. This is the big year—the opportunity to make big money trapping. Ship to a responsible house that

PAYS YOU PROMPTLY
CHARGES NO COMMISSION

Mail and express charges paid by us. You get the biggest net returns, quickly, without waiting or delay. Send us your first catch and get

10 PER CENT MORE CASH

More than you can get from any other house in America. Years of satisfactory service to trappers have made us the foremost fur exchange.

PRICE LIST FREE

Write at once. Get on our list and keep up-to-date on latest prices—prices that enable you to make the most money. Send name at once. A postal card will do.

The Co-operative Raw Fur Co.
85 Jefferson Ave., Detroit, Mich.

When writing to advertisers please mention the Michigan Farmer.

High Power Mantles



for Gasoline Lamps and Lanterns

Made to give service. Will last longer and stand rougher usage than any other mantle known. Made in our own factory by special patented process. Buy from your dealer or order direct from nearest office. Price per doz. \$1.50. **THE COLEMAN LAMP CO.** Mfrs. of The Famous "Quick Lite" Lamps and Lanterns. Wichita, St. Paul, Dallas, Toledo, Los Angeles, Chicago

of the matter of the fertilizers best suited to their land. It is possible to produce two, and in favorable seasons, three crops of celery in one year. The first plants are set a suitable distance apart and the spaces filled in with a later crop. The basis of the land in this region was originally tamarack swamp with a layer of muck about twelve inches deep on top. Formerly growers got eight, ten and twelve cents per dozen for their celery, but it is a fact worthy of mention that since the United States Bureau of Markets has issued their daily market letter and the celery growers have received this regularly, the average price per dozen which growers have sold for has gradually increased, until now it is around eighteen cents.

"There never had been any accurate tests made with commercial fertilizer until 1915. The growers had gone along without accurate knowledge of the goods they have been using. In 1915 the growers lost seventy-five per cent of the crop, due to blight. When the college was called upon to help, it was found that these people were using large quantities of manure every year, sometimes as high as twenty-five tons per acre. In one instance the fertilizer salesman had advised the use of goods, which would amount to about \$240 per acre. We advised him to use acid phosphate, which he did at a cost of only \$30 per acre, with splendid results. It has been found in crop rotation that when a crop of millet, for instance, is plowed under, nitrification takes place much more quickly than is the case when the residue of a corn crop is plowed under. The best results are secured where manure is supplemented with a good mineral fertilizer as acid phosphate. The manure is not applied for the amount of nitrogen or potash it contains, but for the fact that its application breaks down the muck.

"Celery is a crop that requires moisture and a constant supply of moisture, which has been given by the underlying muck. Below we have a great absorbent layer of peat. One of the reasons that the celery grower does not want tile drainage is because you cannot get tile to remain in the place where it is laid, as the action of the frost causes the ground to heave, thus displacing the tile. They are raising two or three crops a year, and they want the moisture conserved. If they underdrain too well, there will be times in the season when the muck gets too dry, resulting in the loss of the late crop of celery."

An Indiana grower brought up the matter of a disease prevalent in his state, "sick celery," so-called. Mr. Levin explained that this is a distinct disease, and the fact that it occurs in hot seasons bears no relation to the fundamental cause of the disease. Many diseases, the most notable instance of which has been celery rot, have been spread through plants sold to all parts of the country from the Kalamazoo region. It is impossible to quarantine this district to prevent the spread of diseases.

"Here is a region that has given Kalamazoo its reputation throughout the country. These growers, all unorganized, have had no way of arriving at a solution of their troubles. The college was called upon too late to help. The shippers were unsympathetic, and endeavored to prejudice the growers against the college. In order to make a living on a small acreage, the whole family, even small children, have had to help with the work, thus depriving them of the proper education at the public schools. There was no cooperation between shipper and grower; just as soon as a grower made enough so that he could do so, he began a shipping business of his own. This is a three million dollar industry but the manufacturers and business men of

(Continued on page 433).



Compare the tree in this picture with the tree in the lower picture. In each, both fork and entire tree are shown. The tree in this picture shows health, vigor, growth, and productivity—freedom from Scale and Blight—as a result of spraying with "SCALECIDE."



While this tree was actually saved by "SCALECIDE", if it had been sprayed with "SCALECIDE" several years sooner, it would have been as big and profitable as the tree shown above.

Scalecide Kills Scale

—even when you are spraying primarily for Pear Psylla, Blight Canker, Collar and Root Rot

"SCALECIDE", as its name implies, eradicates Scale—for 15 years it has been the recognized spray for this pest. Fortunately, no extra spraying is necessary. "SCALECIDE" is "the complete dormant spray"! At one spraying you fight Scale, Pear Psylla, Fire Blight, Canker, Collar and Root Rot—all at the same time with one operation.

"SCALECIDE" is a tree invigorator—it "makes a tree outgrow its troubles". It is perfectly soluble in water (if not don't use it) and contains both fungicidal and germicidal properties. "SCALECIDE" penetrates! It reaches and destroys the disease without injuring the delicate plant tissues in the slightest. Moreover, "SCALECIDE" is easy and pleasant to use, and costs less to apply.

"SCALECIDE" has literally saved many orchards—and will improve any orchard. If yours is in good condition it will make it better; if in bad condition it will make it good. The rest is up to you! A fair trial will never be regretted.

Send today for copy of our guarantee. Address Dep't 13.

B. G. PRATT COMPANY

Manufacturing Chemists

50 Church Street

New York City

SCALECIDE

THE COMPLETE DORMANT SPRAY

SCALECIDE

"Makes a Tree Outgrow Its Troubles"



Stop the Theft of Power

It is not necessary to put up with loss of power and waste of oil and gas. Don't let badly fitting piston rings steal your motor's power and your gasoline. Install a full set of

McQUAY-NORRIS LEAK-PROOF PISTON RINGS

Increase Power—Decrease Carbon
Save Gas

By creating uniform pressure on the cylinder walls, McQuay-Norris LEAK-PROOF Piston Rings stop piston ring leakage, increase power, decrease carbon and save fuel and oil.

Wherever you are you can get them to fit any car, truck and tractor. Jobbers and supply houses in over 300 distributing points carry complete stocks of standard sizes and over-sizes, backed by a factory stock of 3,000 unusual sizes. You don't have to wait—the rings are awaiting your order.

Send for Free Booklet

"To Have and to Hold Power"—a simple, clear explanation of piston rings, their construction and operation.

Manufactured by

McQuay-Norris Manufacturing Co.

2877 Locust St.

St. Louis, U. S. A.

McQUAY-NORRIS Superoyle RINGS

A special ring for engines that pump oil.

Used in top groove only of pistons to control excess oil, with McQuay-Norris LEAK-PROOF Piston Rings in lower grooves to insure maximum compression and fuel economy.

Good Clubbing Offer

No. 7.

Michigan Farmer, 1 yr., wk.....\$1.00
Woman's World, mo..... .50
Boys' World or Girls' Comp., mo.. .50

Regular price, one year.....\$2.00

OUR PRICE ONLY \$1.60

No. 8.

Michigan Farmer, 1 yr., wk.....\$1.00
Breeder's Gazette, wk..... 1.50
Woman's World, mo..... .50
American Boy, mo..... 2.00

Regular price\$5.00

OUR PRICE ONLY \$3.90

No. 9.

Michigan Farmer, 1 yr., wk.....\$1.00
Green's Fruit Grower, mo..... .50
American Bee Journal, mo..... 1.00

Regular price, one year.....\$2.50

OUR PRICE ONLY \$2.00

No. 10.

Michigan Farmer, 1 yr., wk.....\$1.00
Youth's Companion, wk..... 2.50
McCall's Magazine, mo..... 1.00
Poultry Success, mo..... .50

Regular price, one year.....\$5.00

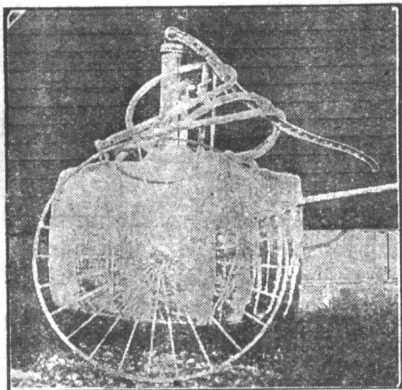
OUR PRICE ONLY \$3.90



Handy Poultry Equipment

By R. G. Kirby

WHEN the cost of labor is high it is necessary for the poultryman to make an unusual effort to reduce the work necessary in caring for the flocks. On the farm where large flocks of poultry are maintained it is very important to give the birds the best possible care without taking too much time away from other duties. Observations on poultry farms leads



Good Spray Rig for the Poultryman.

one to believe that the most successful poultrymen accumulate a variety of equipment which they have found profitable in carrying on their work.

Spraying the poultry houses is necessary to keep down mites and lice and this work is too expensive if the poultryman has only a brush or small potato sprayer to protect several houses. The small barrel sprayers which can be wheeled into the houses are useful. They will contain enough of the mixture to do a thorough job in a short time. Sprayers of this type can also be used in controlling fungous diseases and insect pests that injure the fruit garden. They will pay for themselves in a short time in spraying shrubs, flowers, potatoes or grapes and at the same time they will be ready for the never-ending task of keeping the poultry houses in a sanitary condition.

On the small poultry farm the wheelbarrow is a valuable tool and the doors of the house should be the right width to permit the owner to use it inside the houses. A wheel cart similar to the illustration is practical for hauling mash or green food from pen to pen. Frequently the farmer will have a pair of old wheels which can be used in making a cart of this kind. It saves much lifting and many extra trips in caring for large flocks of birds and this is an important consideration on a poultry farm.

Trap Nests Useful.

When the poultry farmer has progressed far enough with his flocks to understand the fundamentals of the business it pays to install a few trap nests and make an effort to develop flocks of birds which are capable of making fine egg records. The general farmer has little time for trap-nesting unless there is some member of the family who will make frequent trips to the poultry houses to release the layers. However, when the business progresses far enough to make it a factor in the farm income many farmers can well afford to build or buy a few trap nests. These can be used for obtaining the records of the best birds which will be retained for breeders, and it will not be necessary to trap-nest the entire flock. A few trap nests will prove very handy equipment and

the results from their use will be a great stimulation to the farmer's interest in raising profitable poultry.

Feed hoppers are necessary to furnish the birds with a balanced ration and on many farms there are no hoppers. The size and shape of the hopper can depend on the available material at hand as this equipment can frequently be made from scrap lumber left over from other work. The hopper in each house should be large enough to hold a week's supply of mash or more. The small hoppers will often be emptied in a short time and then if the poultryman is busy they will remain unfilled for one or more days and this is not conducive to the best egg records. Make the hoppers wide enough so that two or three hens will not spend most of their time there, to the exclusion of the other members of the flock.

Small hoppers for oyster shell, charcoal and grit are necessary equipment in each poultry house. A large hopper divided into three sections can be used for this purpose. If the hens scratch the material from the hoppers, place short strips of wood across the front. This will not prevent reaching into the hoppers but it will keep their feet out of the material and save more or less waste.

Some breeders buy the metal hop-

pers for the birds healthy, that represents a large part of the necessary preparation for success. Without storage room and plenty of bins and a cellar for the green food, the farmer faces a severe handicap in the management of a large flock. After visiting poultry farms of many kinds, a farmer will soon form the conclusion that the proper equipment for feeding birds is possibly the most important factor in successfully managing the business.

Small bins in the poultry houses can sometimes be used to advantage. In the winter it saves time and hard work if the farmer has a supply of scratch feed in a handy bin near the door of the house. Some breeders speak very highly of the automatic feeders which are now on the market. The value of such equipment must be determined by the farmer himself. It does not pay to buy or make a large amount of any kind of equipment without first trying it out on a small scale. No two poultry farms have the same problems and the farmer can only find by experience just the equipment that is the most valuable in the management of his farm.

Small wooden tables are useful to hold the water pails and sour milk crocks in a poultry house. They prevent the birds scratching litter into the milk or water. In cleaning the

essentials in managing the flock that must not be neglected. A poultryman soon finds by experience how much equipment will be handy and useful in the proper management of his flocks.

PLANT MANGELS FOR COWS.

IN growing mangels some farmers have found that it pays to plant them early, at about the time that the first vegetable crops are started in the home garden. This gives them a chance to develop rapidly in the spring and make a large growth before the dry weather of summer arrives to retard growth. When the summers are cool it seems as if the growth of mangels is very slow. Last year we started some mangels in the early spring and made another planting about six weeks later. The first planting grew rapidly and made fine feed for poultry. The second planting started very well but was stunted by the cool dry weather and worth practically nothing for feed.

The two most popular varieties of mangels are the Mammoth Long Red and the Golden Tankard. We have always been able to obtain the best mangels from the Golden Tankard but possibly the quality of the seed may have something to do with the results. The Mammoth Long Red grows large and straight and the flesh is white tinged with pink, while the Golden Tankard has a sort of grayish flesh above ground and the part below ground is orange. In planting mangels the rows should be two and a half feet apart with the plants thinned until they are one foot apart in the rows. As mangels grow to a large size they require much plant food and should not be crowded. A sandy loam soil that has been heavily fertilized, is good for beets. If the crop is preceded by a well cultivated crop, like corn or potatoes, it will succeed the best. Mangels will often reach a large size, weighing as much as twenty pounds, and a large amount of green feed for the cows and hens can be produced in a small area.

THE NATIONAL DAIRY SHOW OF 1919.

THE National Dairy Show of 1919 will be opened in the International Amphitheater, Union Stock Yards, at Chicago, promptly at six o'clock on the morning of October 6. It will close on Sunday, October 12.

It will be a show complete to the last detail on opening day and the biggest and best and most important of all National Dairy Shows. It should leave its impress on the dairy industry of the world for years to come. It isn't too late to determine now to attend the Dairy Show. Those who miss it will be missing a lot.

MAIZE MEN TO ORGANIZE.

PAPERS have been filed with the Federal Trade Commission for the formation of the American Maize Association for the transaction of an export business under the Webb-Pomerene act. Among the companies which are interested in the venture are four in Louisville, Ky., and one in Milwaukee.



A Wheel Cart Cuts Down Labor Costs on the Poultry Farm.

pers from poultry supply houses. They are clean and will last many years and give the poultry house a neat, business-like appearance. Very satisfactory feed hoppers can be made on the farm. If they are painted and fastened securely in the houses they will last indefinitely. The manufacture of feed hoppers is an excellent rainy-day job on the poultry farm and the farmer who cannot build such material with a hammer, saw, and square faces a handicap in the economical management of his business. In building equipment of this kind the first effort seems difficult but after that a man does not have to be a skilled carpenter to turn out the work quite rapidly.

Storage Bins Necessary.

The feed room is the heart of the poultry farmer's business. If it is well supplied with the necessary ingredients for producing eggs and keeping

droppings boards in a poultry house it may save time to have a basket and scrapper hanging just inside the door. The farmer who must hunt up a hoe and basket every morning before cleaning the roosting place is not apt to be the man who cleans it every day. The best breeders of poultry seem to have found by experience that this daily cleaning is necessary. A wire crook hanging in the poultry house is also of value. This can be a long wire with a curved crook on one end and a handle at the other. With a little practice the poultryman can catch birds around the leg with this crook without causing much disturbance among the other members of the flock. It is a handy implement as frequently it will be necessary to examine the birds to note their condition.

In general, it does not pay to clutter up houses with too large a variety of equipment. However, there are cer-



Live Stock Awards at West Mich. Fair

FOLLOWING is a list of the live stock awards as announced by the management of the West Michigan State Fair:

Holstein-Friesians.

Bull three years old or over—Dudley E. Waters, 1st; Pontiac State Hospital, 2d and 3d.
Bull two years old—Waters, 1st; C. J. Spencer, Jackson, 2d.
Bull one year old—J. L. Wilson, of Grand Rapids, 1st; Spencer, 2d.
Senior bull calf—Waters, 1st; Spencer, 2d and 4th; Wilson, 3d.
Junior bull calf—Pontiac State Hospital, 1st; Waters, 2d and 4th; Wilson, 3d.
Cow five years old or over—Waters, 1st and 2d; Pontiac State Hospital, 3d and 4th.
Cow three years and under five—Waters 1st and 2d; Pontiac State Hospital, 3d and 4th.
Heifer two years old—Pontiac State Hospital, 1st; Waters, 2d and 4th; Wilson, 3d.
Heifer one year old—Pontiac State Hospital, 1st and 3d; Waters, 2d and 4th.
Senior heifer calf—Waters, 1st and 2d; Pontiac State Hospital, 3d and 4th.
Junior heifer calf—Waters, 1st and 3d; Pontiac State Hospital, 2d; Arthur Blanchard, Sand Lake, 4th.
Exhibitor's herd—Waters, 1st; Pontiac State Hospital, 2d; Spencer 3d.
Breeder's herd—Pontiac State Hospital, 1st; Waters, 2d; Wilson, 3d.
Four animals, get of one sire—Waters, 1st; Pontiac State Hospital, 2d; Wilson, 3d.
Two animals, produce of one cow—Waters, 1st; Pontiac State Hospital, 2d; Wilson, 3d.
Senior champion bull, two years or over—Waters.
Junior champion bull, under two years—Waters.
Senior champion cow or heifer, two years or over—Waters.
Junior champion heifer, under two years—Pontiac State Hospital.
Grand champion bull—Waters.
Grand champion cow—Waters.

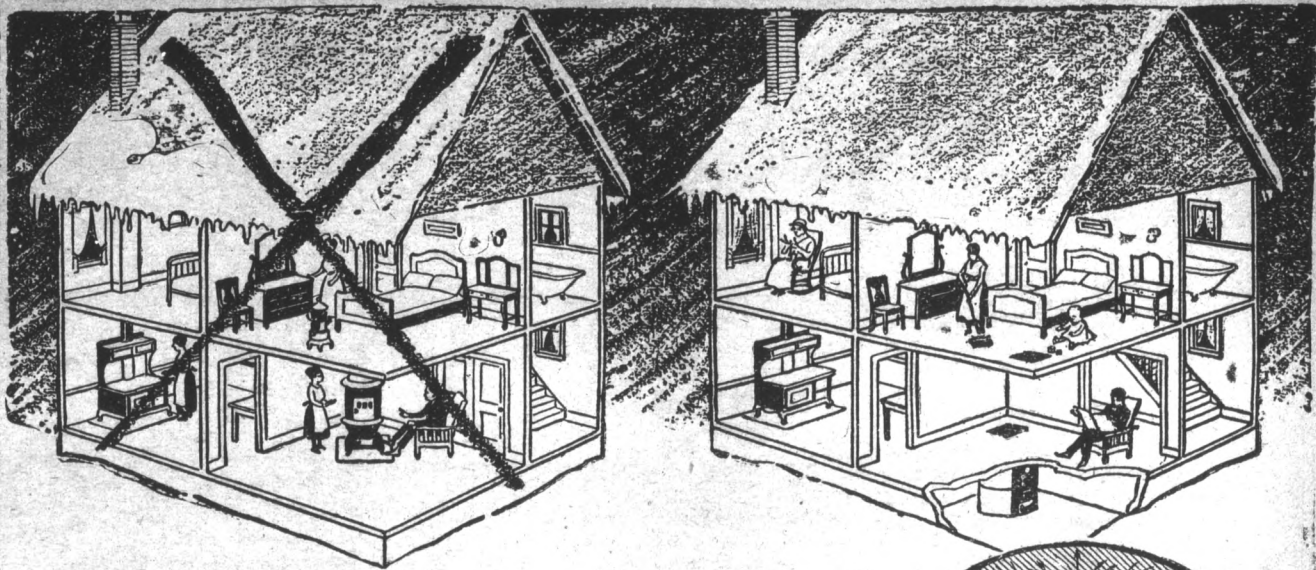
Guernseys.

Bull three years old or over—F. L. Irish, Owosso, 1st; John Ebela, Holland, 2d.
Bull two years old—R. A. Holmes, Grand Rapids, 1st.
Bull one year old—Ebela, 1st; Holmes, 2d.
Senior bull calf—Holmes, 1st and 2d; Ebela, 3d; Irish, 4th.
Junior bull calf—Milo H. Edison, 1st; Irish, 2d; Holmes, 3d; Ebela, 4th.
Cow five years old or over—Holmes, 1st; Irish, 2d and 4th; Edison, 3d.
Cow three years old and under five—Holmes, 1st and 2d; Irish, 3d; Ebela, 4th.
Heifer two years old—Holmes, 1st and 3d; Ebela, 2d; Irish, 4th.
Heifer 1 year old—Holmes, 1st and 2d; Ebela, 3d; Irish, 4th.
Senior heifer calf—Ebela, 1st; Irish, 2d and 3d; Holmes, 4th.
Junior heifer calf—Holmes, 1st.
Exhibitor's herd—Holmes, 1st; Ebela, 2d; Irish, 3d.
Breeders' herd—Ebela, 1st; Holmes 2nd.
Four animals, get of one sire—Holmes, 1st; Ebela, 2d; Irish, 3d.
Two animals, produce of one cow—Irish, 1st; Ebela, 2d; Holmes, 3d.
Senior champion bull, two years or over—Holmes.
Junior champion bull, under two years—Ebela.
Senior champion cow or heifer, two years or over—Holmes.
Junior champion heifer, under two years—Ebela.
Grand champion bull—Ebela.
Grand champion cow or heifer—Holmes.

Shorthorns.

Bull three years or over—John Lessiter's Sons, Clarkston, Mich., 1st.
Bull two years old—Chas. Bowditch & Sons, Osseo, Mich., 1st.
Bull one year old—Lessiter's Sons, 1st.
Senior bull calf—Bowditch & Sons, 1st; B. D. Kelly & Son, Ypsilanti, 2d; Lessiter's Sons, 3d and 4th.

(Continued on page 434).



"You too can have Seventy Degrees all over the house and a Lower Coal Bill"

"The Homer Furnace installed in the parsonage last fall has given entire satisfaction.

"We encountered no difficulty in heating our home as per guarantee to 70° and more with the temperature 14° below zero. It is very economical of fuel. We used 175 bushels of coal last winter. It produces practically no cinders, thereby getting all the heat out of the fuel."

—Rev. CHAS. J. SCHWEITZER, Pastor Salem M. E. Church, Evansville, Ind.

CONTRAST these homes! Is yours the one where they "hug the stove," to keep warm? Then why not put in a Homer Pipeless furnace costing much less than what a pipe furnace costs—a furnace that can be installed in one day without tearing up your house—that users say will actually save you from 30 to 50 per cent on coal bills—that will keep your home at an even 70 degrees all winter?

Homer Heat Is Healthy Heat

Consider your health and comfort—and your family's. Protect the children against colds and disease arising from poor, uneven heat, bad ventilation, by heating the Homer way.

The Homer Furnace is Built Right

The Homer is the most scientifically constructed furnace made. Its construction is based on the idea that heat ascends—cold descends. The furnace is placed in your cellar right underneath one big combination register. Through it the hot air ascends and the cold air is drawn down from the floors of your house. Thus, perfect ventilation and constant circulation of heat is maintained.

Homer Furnace Company, Homer, Mich., Address Dept. F-10

Thermo-Seal Inner Lining

The exclusive Thermo-Seal feature alone puts the Homer Furnace far ahead in scientific construction. This is an inner asbestos lining which divides the hot air from the furnace cold air chamber. It keeps the furnace operating perfectly, sending the heat into all parts of the house and keeping the cellar cool.

35,000 Enthusiastic Homer Users

35,000 are using Homer Furnaces in homes, schools, stores, churches. It has met with eight years of flattering success. The Homer cost is so low that it quickly pays for itself in the fuel it saves.

It will pay you to find out now what Homer heat can do for you.

HOMER FURNACE

THE ORIGINAL PATENTED PIPELESS FURNACE

It Does More and Goes Farther Than Any Product Known



Wise Stockmen Everywhere are TIX-TON Users

Tix-Ton ANTISEPTICS

the year around keep stock healthy and free from disease germs, worms, and ticks. A \$5.00 box makes \$60.00 worth of medicated salt, or stock conditioner—saves you big money. Send \$2.00 for a box of "TIX TON-MIX" by parcel post. It will medicate a barrel of salt. For hogs, sheep, cattle, horses, and poultry.

PARSONS CHEMICAL WORKS, Grand Ledge, Michigan
Write for Club Offer Leona Park Farms Experiment Station

IF FEEDING HOGS, YOU NEED THIS FEED

Ask Your Dealer for

DIAMOND HOG MEAL

Made from the nutritious hearts of corn kernels

Write to H. CRYSTAL, Selling Representative, 909 Ford Building, Detroit,

for sample, literature and particulars. Who is your dealer?



Write for Homer Facts

Get the details of the Homer Furnace Construction—its Thermo-Seal inner lining; how it is built of our special brand, secret process Strokel Iron which will not chip or break—how all parts are built so well that we guarantee them with the exception of grates (which mishandling may ruin in any stove or furnace in five minutes) for five years. Send the coupon today!

COUPON

Homer Furnace Co., Dept. F-10
Homer, Michigan

Without obligation on my part, send me full information about the Homer Pipeless Furnace—and how I can get more heat in a room house with less fuel cost and bother.

Name _____

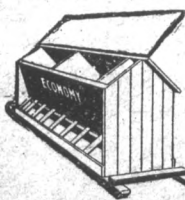
Street or R. F. D. _____

City _____

State _____



ADOPTED BY YOUR UNCLE SAM after rigid tests. Ask your dealer to show them to you. JOHNSON IDEAL HALTER CO., Aurora, Ill.



ECONOMY FEEDER. A perfect working self-feeder for hogs. A 100-lb. pig pays for it. Saves on purchase price, time, floor space, repairs and feed. Will feed 40 hogs. Sold direct, \$18.50. Money refunded if not satisfied. For further information address, THE ECONOMY FEEDER CO., Box 536, New Washington, O.

Agricultural Lime High calcium hydrated lime in 50 lb. paper bags, in car lots of 20 tons or more. Delivered, price promptly quoted on request. Northern Lime & Stone Co., Petoskey, Mich.

POTATO BAGS sold direct to the grower at wholesale prices. Lincoln Bag Co., Springfield, Ill.



Trade Mark

The Experience of Three Generations

Is Back of Hirth-Krause Shoes

"SHOES THAT ARE SHOES"

"Rouge Rex" Shoes are made for the man who works.

It's not the first cost that counts, it's the cost per year.

Service and comfort in every pair.

Put this down---no concern can make poor shoes or anything else and stay in business for three generations.

HIRTH-KRAUSE tan their leather because they know shoes can be no better than the leather from which they are made.

"ROUGE REX" shoes from Hide to you.

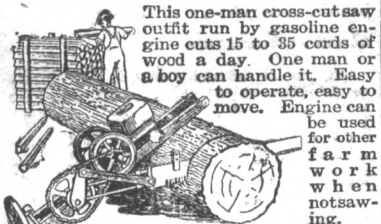
Hirth-Krause Co.

Tanners and Shoe Manufacturers

Grand Rapids, Mich.

Saws at 4c a Cord

Does the Work of 10 Men.



PHILLIPS DRAG SAW

Fast money-maker and big labor saver. Works anywhere in any weather. Write for description and money-saving offer.

THE PHILLIPS DRAG SAW & MFG. CO.

703 Kemper Bldg., Kansas City, Mo.

POULTRY

HOMESTEAD FARMS

This work is organized and incorporated and headquarters have been moved to Kalamazoo. We invite the interest and the cooperation of the farmer people of Michigan.

All our stock is guaranteed; any bird not satisfactory may be returned.

Spring Pullets--About 100 each of Barred Rocks, S. O. Black Minorcas, S. S. White and S. C. Brown Leghorns.

Yearling Pullets--200 S. O. White Leghorns; a limited number of our other breeds as given in our Fall Poultry circular.

Cockerels--Barred Rocks, White Rocks, Buff Rocks, Rhode Island Reds, White Wyandottes, White Orpingtons, S. O. Black Minorcas, S. O. and R. C. White and Brown Leghorns, Anconas.

Guineas, Ducks, Geese--White Pekin, Gray Toulouse.

Turkeys--Bronze, White Holland, Bourbon Reds.

Rabbits--Belgians, New Zealand, Rufus Reds, Giants.

Please send for circular on Fall Sale of Poultry with price list.

STATE FARMS ASSOCIATION,
Kalamazoo, Michigan

Ancona Cockerels Very good stock at \$1.75 each. Order early. **EMIL JOHN-SON,** R. R. 1, Box 70, Reed City, Mich.

S. C. B. Minorcas--Eggs from pen 1, \$3.00 per 15, from pen 2, \$2.00 per 15. Incubator eggs \$7.00 per hundred. **R. W. MILLS,** Saline, Mich.

Silver Golden and White Wyandottes young breeding stock after Oct. 1st. Choice cockerels \$5 to \$15. Write your wants now. **C. W. Browning,** R2 Portland, Mich.

Single Comb White Leghorn Cockerels, Ferris 230-264 egg strain April and May hatch. **Alvah Stegenga,** Portland, Mich. \$2.00 and up.

Ring Necked Pheasants

We can now make shipments of our birds. They will lay next spring--are easy to raise and do not eat one-half as much as chickens. These birds are not subject to disease--are hardy and unrelated. You can sell their young and eggs at good prices--they are much more profitable than chickens.

Single Pheasants \$6.00 Each
5 Hens, 1 Cock (Pen) 30.00

Genuine Wild Mallard Ducks

Guaranteed to be from nothing but genuine Wild Trapped stock--not the coarse semi-wild strain. Will lay next spring. Fine eating--good decoys--and money makers.

Single Ducks or Drakes \$5.00 Each
5 Ducks, 1 Drake (Pen) 25.00

Bloomfield Giant Bronze Turkeys

We have some of the young for sale, from our wonderful 55 pound tom "BLOOMFIELD KING." Why not buy one of our fine extra toms and improve your flock.

Pullets \$15.00 Each
Cockerels 20.00 to 35.00 Each
Hens 20.00 Each
Toms 35.00 to 50.00 Each

We are accepting orders now for eggs from our Pheasants, Wild Mallard Ducks, Turkeys and Single Comb Rhode Island Red chickens for spring delivery. Orders will be filled in the rotation that they are received.

Bloomfield Farms

America's Largest Game Farm

1714 Penobscot Bldg.

Detroit, Michigan



Get your order in early and send check with it. Send for free descriptive booklet of instructions.

BROWN'S BARGAIN FENCE BOOK

Get My Prices First

Before You Buy

See for yourself the money I save you on any fencing you need. **WRITE** today for my big new FREE Bargain Fence Book. Shows 150 styles. Low Factory Prices--Freight Prepaid. Also Gates, Lawn Fence, Barb Wire at bargain prices. Sample to test and book free, postpaid. **THE BROWN FENCE & WIRE CO., Dept. 349 Cleveland, Ohio**

Service Department---Continued

(Continued from page 410).

It is rather expensive but a small quantity will treat a large number of hens. The cost can be reduced by mixing it with equal parts of low-grade vaseline. It is poisonous and should always be placed out of reach of children and never left around the farm where it might be eaten by either the poultry or live stock. **R. G. K.**

RABBITS IN HUTCHES.

Can you tell me how I can raise little tame rabbits and keep them shut in boxes? The old ones run loose and when the little ones first come from the nests, the neighbor's cats get them and when I shut them up some of them always die. **Wayne Co. E. T.**

When young rabbits are about eight weeks old it is best to remove the doe to another hutch and leave the young in their old hutch. Some rabbits can be weaned at four weeks of age but the best results come when the young are left three or four weeks longer with the doe. The young can then be left together until three or four months of age, when it is best to separate the sexes.

It pays to keep the young rabbits enclosed in hutches to prevent losses from cats or dogs. An outside exercise yard is fine for the young. It can be enclosed in fine mesh poultry wire

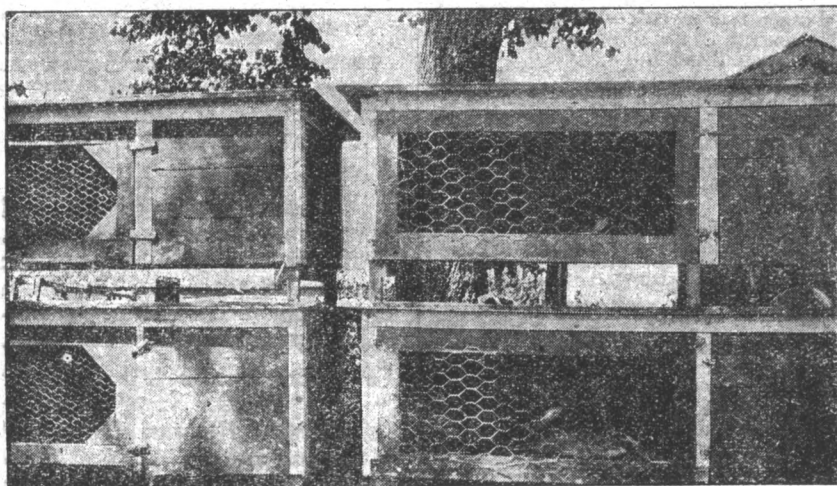
day in the summer and at least once each day in the winter. Rabbits like carrots the best of any green vegetables.

Rabbits need fresh air and sunshine and the hutches should be placed where the sun will strike inside for at least a portion of the day. Most breeders seem to have the best success with outdoor hutches. In the winter they can be placed in an open shed which will help to keep out snow and cold rain and yet give them plenty of air. **R. G. K.**

SEEDING ALFALFA.

I have about seven acres of gravelly sand, fairly good. Part of it is hill land. This has been in rye two or three years. I would like to put alfalfa on this piece, and would like to know if I could get good results if sown now. Should it be sown now or with other grasses or a catch crop? Would inoculation of the seed be enough, or would the land have to be inoculated also? How late can alfalfa be sown? I have heard that alfalfa cannot be pastured, as it makes stock bloat. Would like some information on this. **Newaygo Co. C. L.**

Alfalfa gives best results on a fertile soil, and one must not expect profitable returns on a soil too poor to grow other crops well. If this field of gravelly sand is fairly fertile, well drained and not too sour, it should



A Very Satisfactory Type of Rabbit Hutch.

and a small trench dug around the outside and filled with stone will keep the rabbits from digging out and other pests from digging in.

The best hutch for rabbits is two feet wide, two feet high and six feet long. One-third of the distance is divided off for a nesting place. Young rabbits usually do well in such a hutch allowing from one to six or eight in each hutch, depending on the size of the rabbits. An empty room in a barn or tool shed can often be turned into a run for young rabbits. We have seen between thirty and forty rabbits grown to market size in a room over a woodshed. The floor was covered with straw litter and the feed and water thrown to the growing rabbits as if they were so many pigs in a pen. They thrived and did not die because of the confinement. Of course, rabbits in confinement are living under unnatural conditions and it pays to keep their hutches clean and sanitary.

If the rabbits die in confinement it may be due to a lack of vigor in the breeding stock or poor feeding methods. If the breeders are not of good vigor it will pay to sell them for meat and buy a pair of pure-bred Belgian hares, Flemish Giants, or New Zealand Reds from a reliable breeder. These breeds have vigor and size and do very well in confinement.

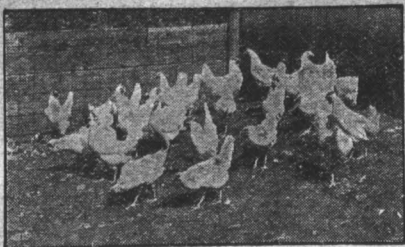
Try feeding oats and bran to the rabbits instead of too much green feed. A little salt is also good for them. Keep a rack of clover in the hutch or exercise yard so they can use it for green feed. Fresh water is always necessary and should be supplied twice a

give satisfaction with alfalfa; otherwise, it will pay to put the field in such condition before trying this valuable legume.

One cannot be certain of getting a good catch of alfalfa when sown after August 1. Later seedings may be successful, depending on weather conditions. At this late date, the risk is too great to warrant taking a chance. It will be better to wait until spring and sow early with a light seeding of some spring grain, or alone. If the grasshoppers are bad again next year, the early sown alfalfa will be better off than that sown in mid-summer.

Inoculation of the seed with a pure culture obtained from the Agricultural College is usually sufficient, and this method is much easier than scattering the inoculated soil. Either method of inoculation is useless on soils which are very sour. Have your agricultural agent test the soil in this field for acidity and lime requirement. If lime is required, it should be applied on the plowed ground and worked into the soil a considerable length of time before sowing the inoculated seed.

With the same care that one would use in pasturing other clovers, sweet clover excepted, he can also pasture alfalfa safely. It makes an excellent pasture. During the years of its prime alfalfa is too valuable for hay to be pastured much. Often, however, the second crop is pastured off, and the meadows which are beginning to run out may be used for this purpose for one or more years. Very close pasturing should be avoided, especially late in the fall. **H. L. B.**



FEEDING SMUTTY WHEAT.

I can buy smutty wheat cheap. Is it good to feed hens?
Sanilac Co. I. M.

The writer purchased twenty bushels of smutty wheat early in August and has fed it to birds of all ages. The hens and growing stock seem to like it as well as clean wheat. It is not as clean to handle while feeding, but the results in feeding have been good and we shall buy more smutty wheat if we can obtain it at a price somewhat less than for clean wheat.

In buying wheat at a low price for poultry feeding always examine it and be sure that none of the wheat is sour or mouldy. Poultrymen who purchased salvage wheat a few years ago severely injured their flocks because some of the wheat was only spoiled feed and unfit for use. In our experience we have had no trouble in feeding wheat containing smut to poultry.
R. G. K.

HINTS ON PEKIN DUCK RAISING.

(Continued from page 405).

rule to follow when hatching chicks.

However, it is best not to hatch ducks too early. As a rule, they thrive better when the weather is not too cold.

Give the ducklings a drink of clear water, with the chill removed, soon after they are hatched. Put a little clean coarse sand in the dish.

When the little ducklings get hungry and begin picking at each other, a little stale bread may be given. They cannot do without food as long as the young chicks.

The brooder and duck-house floors should be covered with cut straw, clover or clean litter. Never use sawdust. Young ducks will sometimes eat it.

If a considerable number of ducklings are hatched, several good, substantial duck-houses will be needed. These should be in readiness before the ducks are hatched.

These houses need not be high, as ducks sit on the floor at night, and, of course, no roosts are required. A house built with shed roof is best, and need not be over four feet high in front. We had the duck-houses built to hold from twenty to thirty-five ducklings, according to size and age. A house seven by ten feet floor space will accommodate thirty-five small ducks, without crowding them.

Never keep young ducks of different sizes together, as the smaller ones are sure to "get the worst of it," especially at feeding time. Besides, they will thrive much better when kept in small flocks.

Pekin ducks as stated above, are large feeders. But their food must not be too highly concentrated. Bran is an important factor in duck feeding, but it should not be made the basis of their grain ration. A good mixture for either ducklings or laying ducks, is composed of corn meal, oat chop, middlings and bran well moistened with skim-milk. Sometimes instead of the chop and middlings, cooked vegetables, well mashed, are used with the bran and corn meal. A little salt and powdered charcoal are sometimes added. Water may be used instead of milk. Never feed young ducks whole grain. They cannot digest it well. We sometimes feed whole corn to grown ducks, but not often. We never advise beginners to use much whole grain.



For Sunday Afternoon At Home the Gulbransen Plays the Hymns

WHEN you gather 'round on Sunday afternoon or any other time—and hymns are in order, the Gulbransen is always ready to furnish the music.

All the well-known hymns in universal use are now available in player-rolls. Some with the words on the roll. Here is a partial list:

Standard Hymns

Abide With Me
I Need Thee Every Hour
Jesus Lover of My Soul
Lead Kindly Light
Nearer My God to Thee
Onward, Christian Soldiers
Rock of Ages
Ave Maria
Come All Ye Faithful
Holy, Holy, Holy

Christian Science Hymns

Shepherd Show Me How to Go
Saw Ye My Savior
Day By Day the Manna Fell
A Glorious Day is Dawning
Billy Sunday Hymns
Brighten the Corner Where You Are
De Brewer's Big Houses
If Your Heart Keeps Right
Keep On Singing

The Gulbransen transposes the music into any key so that all may sing without straining the voice, and it can be played as slowly as desired. No knowledge of music is required to play the Gulbransen. Neither does it require effort.

The pedals operate so gently that a tiny baby once crept up to the Gulbransen and played it as shown in picture below, which gave us the idea for our trade mark.

Elderly people take a keen delight in this ease of operation, and in the simplicity which makes the playing with expression so natural to you at the Gulbransen.

The moment your feet touch the Gulbransen pedals you know you are playing a better player-piano than any you ever tried before. The Gulbransen is so Easy to Play.

Look up our dealer and try the Gulbransen yourself. Try some of the good old hymns. The dealer has them. You can locate him by the Baby at the Pedals in his window and newspaper advertising. Or write us for his address.

GULBRANSEN-DICKINSON CO.
825 North Sawyer Avenue, Chicago

NATIONALLY PRICED

Three models, all playable by hand or by roll, sold at the same prices to everybody, everywhere in the U. S., freight and war tax paid. Price branded in the back of each instrument at the factory:

White House Model \$675
Country Seat Model 585
Suburban Model 495



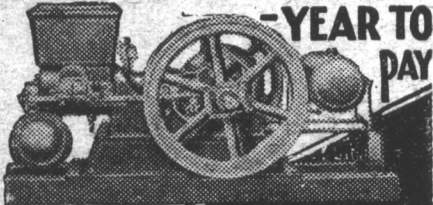
Gulbransen Trade Mark

GULBRANSEN

(Pronounced Gul-BRAN-sen)

Player-Piano

NO MONEY DOWN - YEAR TO PAY



Sold on Farm Credit Plan

Nothing to pay until 60 days after arrival. GREATEST Famous Majestic Engines

We send you any size without a cent of advance payment. No deposit, no C. O. D.; no references. If you keep it, make first payment 60 days after arrival; balance in equal 60-day payments. Otherwise return it and we will pay freight both ways. Compare Point for Point deal more. Jacket-hopper wheel. Perfect lubrication. Perfectly balanced fly wheel. Order Before Price Advances. Increasing costs will soon force an advance in price. Get yours now at present lowest bed-rock price—and take a whole year to pay. Free Book 26 Gives you all the facts. Also 601 reasons why you should have a Majestic—testimonials from users in every state. Wonderful bargains in cream separators and all kinds of farm equipment. Write for it. The Hartman Co. 4043 LaSalle Street Dept. 1948 Chicago

CULL BEANS FOR FEED
Car lots or less. Ask for prices.
YOUNG-RANDOLPH SEED CO., OWASSO, MICH.

THE SELF-OILING WINDMILL

has become so popular in its first four years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aermotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil, preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load. We make Gasoline Engines, Pumps, Tanks, Water Supply Goods and Steel Frame Saws. Write AERMOTOR CO., 2500 Twelfth St., Chicago

For Sick Chickens

Preventive and curative of colds, roup, canker, swelled head, sore head, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley of Galien, Mich., says: "Have used Germozone 17 yrs. for chickens and could not get along without it." Geo. F. Vickerman, Rockdale, N. Y., says: "Have used Germozone 12 years; the best for bowel troubles I ever found." Frank Sluka, Chicago, Ill., writes: "I have lost but 1 pigeon and no chickens in the 3 yrs. I have been using Germozone." C. O. Petrali, Moline, Ill.: "I never had a sick chick all last season." Bernard Horning, Kirksville, Mo., says: "Cured my puniest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhoea in 3 yrs. I raise over a thousand a year." Good also for rabbits, birds, pet stock. GERMOZONE is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha postpaid in new 25c, 75c and \$1.50 sizes. Poultry books free. GEO. N. LEE CO., Dept. 265 OMAHA, NEB.

SEED PEAS BEANS

Send us samples of your clover seed, peas and beans of all kinds and state your price cleaned or uncleaned.
W. L. IRELAND & CO., Grand Ledge, Michigan

POULTRY

Buff Leghorns, and White Leghorns. 100 early hatched Cockerels from great laying strains \$1.50 to \$3.00. Dr. WILLIAM SMITH, Petersburg, Mich.

Fowler's Buff Rocks Cockerels \$4 up. Utility eggs for hatching \$2.00 for 15. R. B. FOWLER, Hartford, Mich.

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

March Hatched R. I. Red Cockerels Both Combs. Write for prices and order early. Interlakes Farm, Box 39, Lawrence, Michigan.

R.C. Brown LEGHORNS, M. Pekin Ducks, W. Chinese Geese. Place orders early for young stock. Mrs. Claudia Betts, Hillsdale, Mich.

LOOK BABY CHICKS \$13 A 100 UP

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

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

Barred Roc's Exclusively. Baby chicks all sold. Thanks to all our customers. Order early for next season. H. H. Pierce, Jerome, Mich.

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



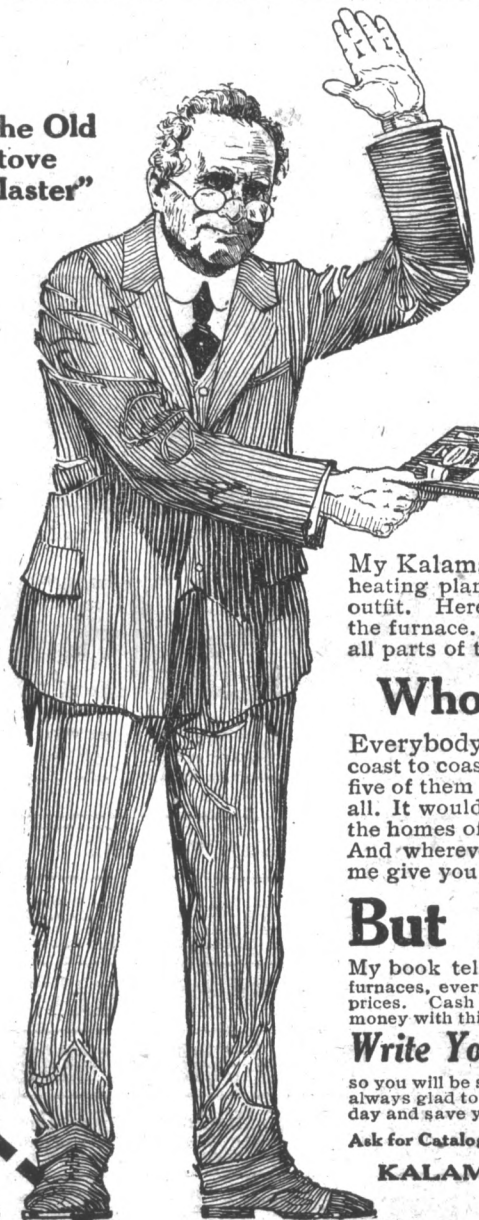
Get the Old Stove Master's
Wholesale Factory Price

I Build 'Em Myself- Who Can Beat My Prices?

Kalamazoo Pipe Furnace

For homes with warm air registers wanted in different parts of the house, our heating engineers draw up plans showing how to install to get the best heating results. Burns any kind of fuel.

"The Old
Stove
Master"



NEIGHBOR, let me ask you a question. Does boosting the price of a furnace \$25 to \$80 after it leaves the factory make it a better heating plant?

I don't think it does. I think that \$25 to \$80 is as good to you as anyone else. And that's what I can save you when you get "A Kalamazoo Direct to You." Because you deal direct with the manufacturer. And no one can quote lower prices than the man who makes the goods.

Write and Get My Price On a Pipe or Pipeless Furnace

Mind you, these are real quality heating plants. The kind the best homes want. Furnaces made with good heavy castings which mean long, satisfactory service.

Heat your home with a pipeless furnace this winter and save money. Save money on installing and in fuel bills. Burn any kind of fuel.

My Kalamazoo Pipeless Furnace is a wonder as a home heating plant. You can't compare it with the ordinary pipeless outfit. Here you get separate flues for bringing cold air back to the furnace. Complete, healthful circulation of warm air through all parts of the house.

Who Buys From Kalamazoo?

Everybody. You'll find my satisfied customers from coast to coast. If you started out to visit them all and could call on five of them every day it would take you fourteen years to see them all. It would take you to farms and small towns and big cities. To the homes of well-to-do folks and homes where every dollar counts. And wherever you go you would find a satisfied customer. Let me give you the names of a few of my customers near you.

But Send for This Book

My book tells the story. It shows my full line—stoves, ranges, furnaces, everything needed in home heating—all at "Direct-to-You" factory prices. Cash or Easy Payments. Unconditional Guarantee. You'll save money with this book. But

Write Your Name in the Coupon Right Now

so you will be sure to mail it. Or send a postal or a letter, as you prefer. I am always glad to mail this book. You are welcome to a copy. Let me send it to-day and save you what you ought to save in dealing direct with manufacturers.

Ask for Catalog No. 909

Yours truly,
"The Old Stove Master."

KALAMAZOO STOVE COMPANY, Manufacturers
Kalamazoo, Michigan



Heat Your Home With a Pipeless Furnace

There are two big points that make the Kalamazoo different from all others. One is the installation with separate flues for cold air—the other is the money-saving price. Throws a powerful heat with any kind of fuel. Send for our catalog telling about it.

"The
Old
Stove
Master"

Kalamazoo Stove Co.
Kalamazoo, Mich.

Please send me your
Catalog No. 909.

Name.....

Address.....



Also Get My Offer On

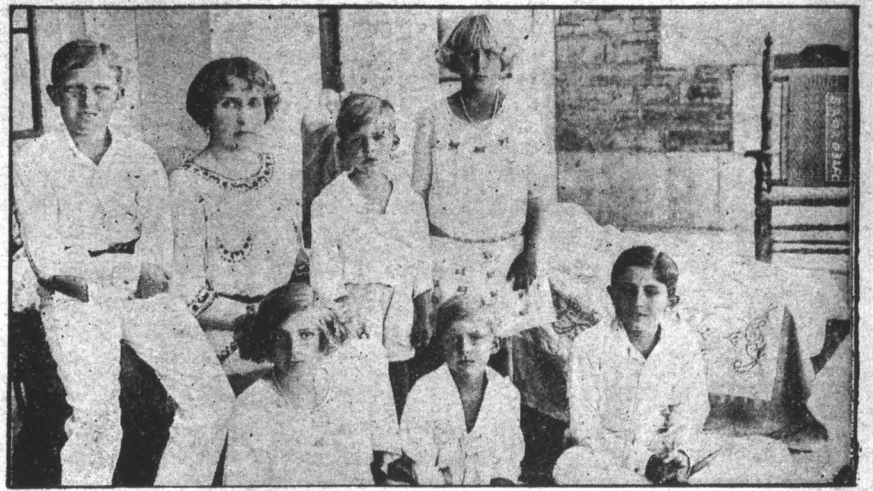
Stoves and Ranges Gas and Oil Stoves
Kitchen Cabinets and Tables Refrigerators
Phonographs Cream Separators
Fireless Cookers Washing Machines
Sewing Machines
Paint and Roofing
Indoor Closets

"A Kalamazoo"
Trade Mark
Registered **Direct to You**

WORLD EVENTS IN PICTURES



Famous women M. D's from all over world attend International Convention.



The Queen of Spain photographed with her children in Magdalona Castle.



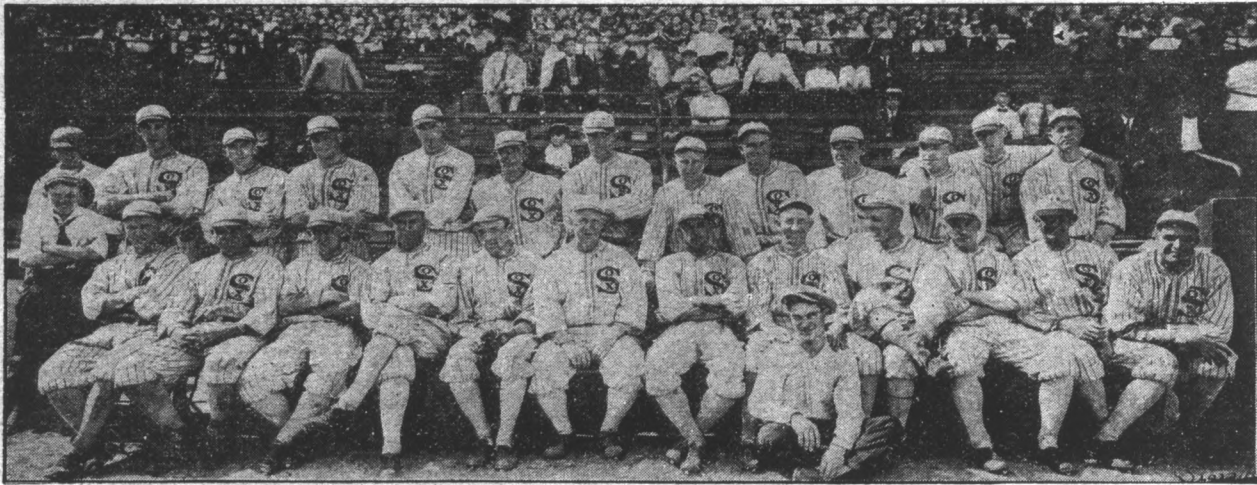
Senator Hiram Johnson of California, in characteristic speaking pose.



Everybody smiling the Peace Smile with Secretary of War Baker and General John J. Pershing.



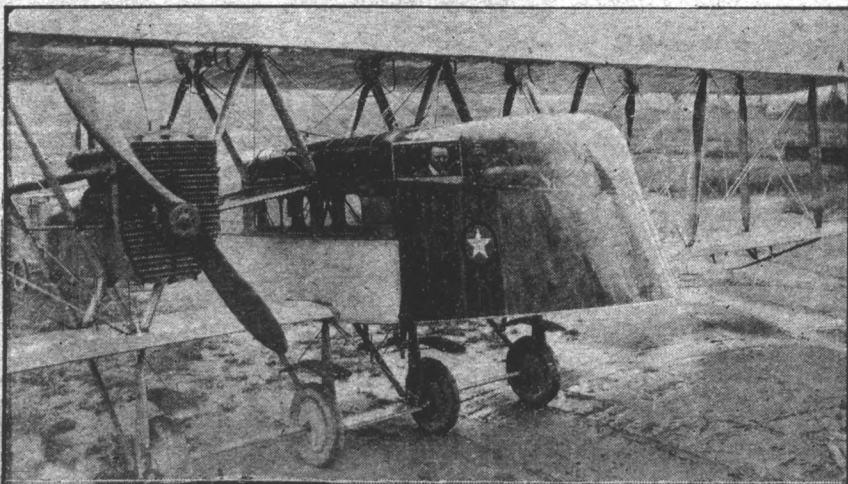
Wm. C. Bullitt, attache to Peace Commission, testified before Committee.



Chicago Champs After World Series Honors.—Remarkable group photograph of the Chicago White Sox, Champions of the American League, expected to contest for World Series Honors with Cincinnati Reds.



Capt. Bertram Hayes, of the Huge Liner "Olympic," who carried millions across the ocean during the war, goes back to the farm for his first vacation since war started.



Close-up view of the "U. S. Army Martin Aerial Transport," showing the fine passenger arrangements. Note Pilot's Hood and Many Windows.



One Killed, Many Hurt in attempted rescue of these Boston Gamblers, Arrested by troops while shooting craps on common.

SAVAGE



Woodchuck Season and Your Savage

SIDE-HILL—hazy afternoon sunshine—clover—bumblebees. Hunch down lower. That woodchuck is working this way. See the grass shake. There—he's sitting up!

Now hold that little Savage front-sight into the grey of his neck—right where the ear ought to be. Hold that rifle tight! And don't yank that trigger. Squeeze it gradually—smoothly—and watch those sights while you squeeze!

Bang! Spat! Hear it hit? Never knew what struck him! Face it off. Eighty-eight steps? About fifteen rods, and right where you held. Some gun!

Aren't you glad you picked a Savage? The .22 Model 1904 Savage Junior is made and inspected and tested by the same men who make the .22 Savage N. R. A. rifle—the miniature military match rifle that the greatest experts use—and the .250-3000 Savage that kills lion and rhino and hippo and elephants. It has 19-inch round barrel, military bolt action, automatic ejection, and is a take-down. Shoots the world-beating .22 long rifle cartridge (shorts and longs too) and costs only \$3.00.

See it at your dealer's. If you want to know still more about it write us.

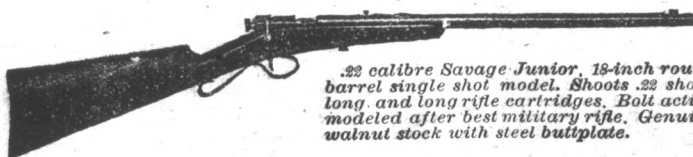
SAVAGE ARMS CORPORATION

UTICA, N. Y.

Sharon, Pa.

Detroit, Mich.

Executive Offices: 50 Church Street New York City.



.22 calibre Savage Junior. 19-inch round barrel single shot model. Shoots .22 short, long, and long rifle cartridges. Bolt action modeled after best military rifle. Genuine walnut stock with steel buttplate.

SELDOM SEE

a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF. will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2.50 per bottle delivered. Describe your case for special instructions, and Book 8 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; allays Pain and Inflammation. Price \$1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c. W. F. YOUNG, INC., 268 Temple St., Springfield, Mass.

Lump Jaw

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

Fleming's Actinoform

Sold for \$2.00 (war tax paid) a bottle under a positive guarantee since 1896—your money refunded if it fails. Write today for FLEMING'S VEST-POCKET VETERINARY ADVISER. A book of 197 pages and 67 illustrations. It is FREE. FLEMING BROS., Chemists, 202 Union Stock Yards, Chicago

Good Clubbing Offer

No. 6.

Michigan Farmer	\$1.00
Gentlewoman20
Home Life35
People's Popular Monthly25

Regular Price, one year.....\$1.80

OUR PRICE ONLY \$1.50

No. 7.

Michigan Farmer, 1 yr., wk.....	\$1.00
Woman's World, mo.....	.50
Boys' World or Girls' Comp., mo..	.50

Regular price, one year.....\$2.00

OUR PRICE ONLY \$1.60



Is worth a dozen on the sick list. Keep your horses, cattle, sheep and hogs in

the pink of condition by feeding them

Buckeye Feeding Molasses

Scientific analysis of molasses proves it to contain the greatest amount of food for the cost, of any known stock food. Make your stock healthier and stronger and at the same time save money.

Mix with the regular stock food.

One man says: "It has surpassed all my expectations. Am feeding a three-year-old filly and her twenty-year-old mother and when I hitch them up together it is hard to tell which one is the colt."

Our Free Trial Offer

Write today for our free trial test and proposition.

W. H. Edgar & Son

520 Lafayette Blvd.,

DETROIT

Please mention the Michigan Farmer when writing to advertisers.



The Farm Girl and Her Vote

By E. L. Vincent

THE other day at a primary election I saw a well dressed, intelligent looking lady come out of the booth, holding her ballot in her hand and looking helplessly first one way then another, uncertain what she should do with the important piece of paper, now that she had marked it; and I could not help wondering just what sort of a time she had been having in the secrecy of the voting place, while she was struggling to do her duty as a citizen. Did she have a clear idea of what she ought to do, or did she flounder about helplessly, scarcely knowing what was the right thing to do? How much did she really know about the candidates for the various offices to be filled? Was she sure when she came out that she had done what she set out to do?

Very many who have lately been given the right to vote by the laws of the states in which they live are just as uncertain as was this good woman as to the right and the best thing to do, when it comes to the actual work of exercising the right of franchise. To the girl who goes for the first time to the polls, voting is more or less a mystery. Girls have not paid much attention to politics in the past, being satisfied to leave the matter to their fathers and brothers; but now that the privilege has been granted them of taking part in election of officers and of expressing their opinion through the ballot on the questions of finance

proach of selfishness or partisan influence that they can be depended upon to state the truth, the whole truth and nothing but the truth, from the platform. That day may come some time and even now there are many speakers who are so true and so honest and so imbued with the thought of the best good of the people that they are above misrepresenting men, whether of their own party or not and scorn anything that seems like falsehood when it comes to the issues of a campaign. These are the men every girl should try to hear before she votes.

Then, too, one of the most satisfactory ways of securing accurate knowledge about the form of government under which we live, as well as of ascertaining the rights, duties and privileges of all officers, is to get a good book on civil government and study it faithfully. These may be had for a small sum and a copy should be in every home. Better still, every young person, boy or girl, ought to have his or her own copy of the book. No citizen's library is complete unless it has in it a copy of some good civil government. This must not be considered simply as one more volume in the library or as an ornament for the desk or table. It must be used to make it worth anything. Take it up a few minutes every day, and keep doing that until you have mastered the theory and the practice of the form of government to which you owe allegiance.

Crooked Trails and Straight

OUR New Serial, by William MacLeod Raine, Author of Brand Blotters, Bucky O'Connor, Mavericks, Wyoming, Ridgway of Montana, a Texas Ranger, Etc. It will begin in an early issue of the Michigan Farmer.

and public economy, they want to do their best and be sure that they will make matters better, not worse. I think, as a rule, almost all women have that earnest desire in their hearts to improve conditions and make the world better. How can they be most sure of doing this?

In the first place, there must be a good, practical knowledge of the issues at stake before we can intelligently cast our ballots. A vote cast carelessly or ignorantly is a dangerous ballot. Only the ballot which has had the best thought of the man or the woman who deposits it in the box can be said to be for the good of humanity. And there are several ways of securing this close, definite information. One is by reading reliable papers. It is a pity we have to make this distinction. All papers should be truthful and unprejudiced, so that the reader might always know when he reads about men and things that he is not being deceived. There are papers that can be depended upon. These ought to be in every home and read diligently and with an eye to preparing for the greatest privilege ever yet given to any man or woman—that of voting.

And then, one should hear what reliable men have to say as to the men and the movements which will have to be voted for or against at any given election. Here comes in a grave responsibility on the part of those who speak from the public platform in the campaigns that come and go every year. It may be too much to expect that all men shall be so above the re-

After you have done this and want to have some fun, just ask the men folks who have been voting for years to tell you what are the duties of justices of the peace or pound masters, or supreme court judges. And see if you do not send them scurrying to some book to post up. But look out that the joke does not come back on you.

Probably the young folks depend more upon the men of their own homes for information along these lines than they do upon anyone else. Home is the great national forum in the United States. There things which are of public interest ought to be talked over freely. All possible information as to the men on the ticket should be obtained, so that you may know who is most likely to be your best representative in the state, county or nation. But have opinions of your own and do not be afraid to stand up for them. And remember this, arguing a point successfully is not disputing about it. Keep your temper. Present your arguments clearly but never get mad and make a scene. When you do that you place your cause in jeopardy.

And make yourself acquainted with the machinery of voting. You may some day be chosen an inspector of elections or a ballot clerk or poll clerk. A copy of the election laws of your state is a valuable book to have and may be a companion volume to your book on civil government. And always prize your right at the polls very highly. It is the one great treasure of the good citizen.

News of the Week

Wednesday, September 24.

IT is estimated that 327,000 steel workers are out on strike. In the Pittsburgh zone 21,000 men are reported to have returned to work.—The United States Senate has begun hearings on the strike causes, also on the advisability of a law preventing future strikes.—A model of gas-propelled street cars makes its appearance on the streets of Detroit.—The selling of army goods in Detroit is delayed because no store room can be found.—The Ontario electorate will vote upon the liquor question Monday, October 20.—President Wilson will not reply on the Fiume settlement until Italy brings to an end the irregular position caused by D'Annunzio's occupation of the Adriatic port.

Thursday, September 25.

UNION chiefs declare there is no possibility of the steel strike becoming a general strike throughout the country.—Italian troops are reported to have crossed the line into the province of Dalmatia and thereby complicated the Mediterranean situation.—China officially declares the state of war between that country and Germany at an end.—The British transport minister agrees to a conference with leaders of railway employees of England.—Germany appoints a commission to supervise the rebuilding throughout the war zone of Belgium and northern France.

Friday, September 26.

THE steel strikers offer to arbitrate their differences with the operators, but the latter refuse to deal with the union labor men.—Bituminous coal miners prefer to allow the present wage agreements to run until next April instead of attempting a revision November 1.—United States troops may remain in Siberia all winter.—The Grand Duchy of Luxemburg will hold a plebiscite to decide the future form of government.—The parley between British government and railway men fails to bring the parties together, and the conference will be continued.

Saturday, September 27.

THE call for a railway strike in Great Britain is responded to generally, and traffic throughout the islands is practically at a standstill. The government has reinvoiced wartime food measures.—Leaders fear a civil war in Italy as a result of political division over the Fiume question.—The storage of the usual seasonal requirements of meats is held by United States Department of Justice to not be an act of hoarding.—President Wilson is obliged to discontinue his speaking tour and return to Washington as a result of his nervous condition.

Sunday, September 28.

THE mixed German and Entente Commission will direct the evacuation of German troops from Baltic provinces.—President Wilson reaches Washington.—Paris musicians are still out on strike.—During the week 326 influenza cases are reported throughout the United States.—The return of the railroads to their owners will probably not be affected by December 31 as had been announced.—France will probably ratify the peace treaty this week.—Alabama enacts an anti-strike law prohibiting persons entering into combination or agreements to impede industry.—British evacuation of Archangel has practically been completed.

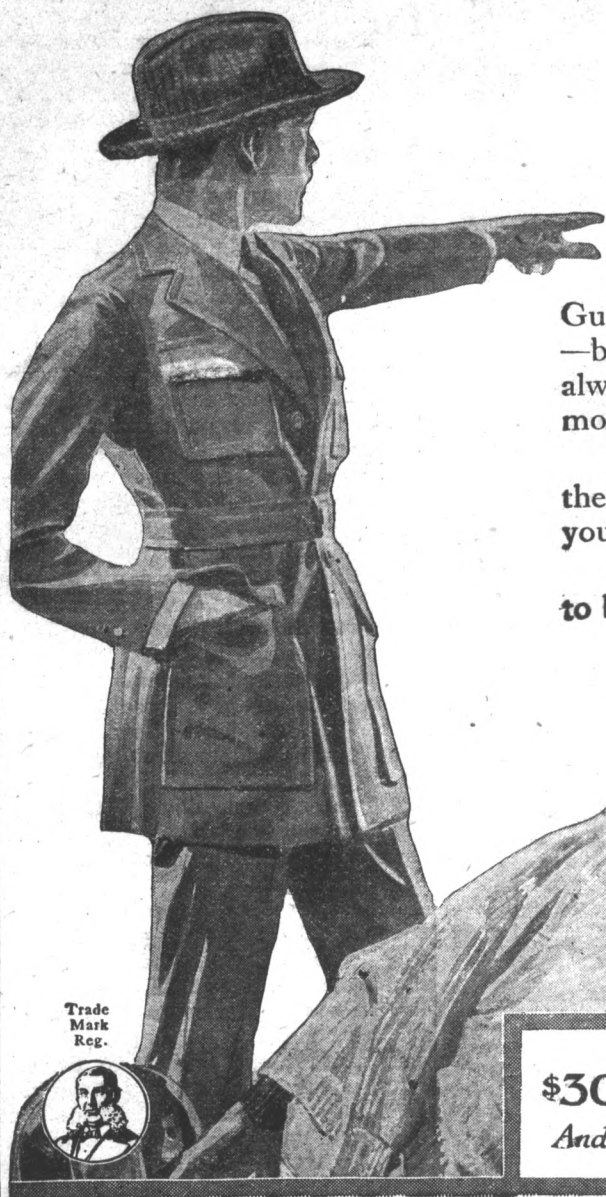
Monday, September 29.

RIOTING followed the lynching of a negro in Omaha, Nebraska, and a race war is anticipated. Troops have been ordered to that city.—The Italian cabinet votes to support the government of Premier Nitti, which means that Italy will probably remain in unity with her allies.—Steel worker leaders rally their followers for a test of strength, while steel companies report that thousands of strikers are returning to their old jobs.—British officials are more optimistic regarding the railway strike situation in that country, where traffic is virtually suspended.—Luxemburg votes in favor of the retention of Grand Duchess Charlotte as ruler and for a customs union with France.

Tuesday, September 30.

THE various railway companies of Great Britain prepare to break the tie-up by greatly increasing railway service.—Federal troops are now protecting Omaha against rioters.—Owners and operators of packing houses in Ontario are ordered to sell pork and pork products at substantially the same prices as prevailed in March, 1919, after October 15.—Since the armistice was signed ninety per cent of the United States army has been demobilized.

STYLEPLUS CLOTHES



They have the winning points!

Styleplus have correct style. All wool-fabrics. Guaranteed quality. Smart suits and overcoats—both in great variety. Styleplus values are always exceptional. The prices are known and moderate. "The sleeve ticket tells the price."

Don't buy clothes before you see them. Buy them in a store. Try them on first. This insures your satisfaction.

Buy more clothes than usual. Prices are sure to be higher next season.

Sold by one leading clothing-merchant in most cities and towns. Write us (Dept. H) for name of local dealer.

HENRY SONNEBORN & CO., INC.
Founded 1849 Baltimore, Md.

Copyright 1919
Henry Sonneborn
& Co., Inc.

The big name in clothes

\$30-\$35-\$40-\$45

And a limited assortment at \$25

Styleplus
Clothes

TRADE MARK P.E.L.

Baldwin

A Name that Stands for Real Worth in
PIANOS and PLAYER PIANOS

The executives responsible for Baldwin policy wish the name to stand for superior musical worth. Every Baldwin workman is imbued with the thought that he is making musical instruments. Art is the life spark of the Baldwin organization ever urging it onward to the goal of satisfaction in pianos and player-pianos.

But with this Art there is combined great industrial strength, making for the most economical production. Raw materials are bought in immense quantities and therefore at the most favorable figures. Two immense factory groups provide the facilities for the manufacture of practically every part, thus eliminating the profits that the maker of an assembled instrument must pay to parts manufacturers. The Baldwin plan of selling direct through exclusive Baldwin dealers does away with jobber and other middlemen, placing the instrument in the home at the lowest possible price.

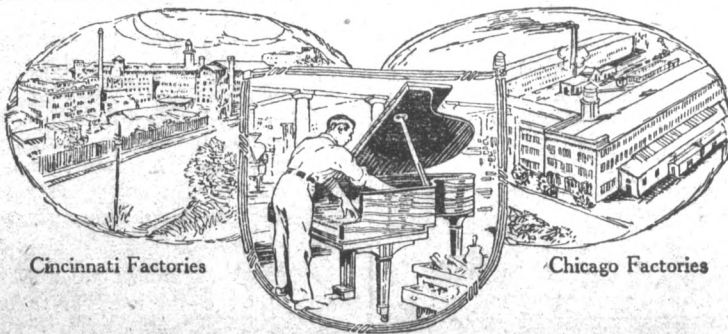
SONG BOOK FREE!

Send your name and address and we will mail you "Songs of Long Ago", words and music complete of 26 favorite songs. We will also tell you how you can hear and try any of the Baldwin-made instruments, the Baldwin, Ellington, Hamilton, or Howard Piano, or the Manual Player-Piano.

Name _____
Address _____
Post Office _____
State _____

The Baldwin Piano Company

CINCINNATI 142 W. Fourth St.
CHICAGO 323 S. Wabash Ave.
ST. LOUIS 1111 Olive St.
NEW YORK 665 Fifth Avenue.
DENVER 1636 California St.
SAN FRANCISCO 310 Sutter St.
INDIANAPOLIS 18 N. Penn'a St.
LOUISVILLE 521 S. Fourth Ave.
DALLAS 1911 Elm St.



Cincinnati Factories

Chicago Factories

Make Horses Comfortable

Clip in the Fall to make horses comfortable. Clipping prevents the itching discomfort of long-matted, vermin-catching hair which irritates horses and puts them in poor condition. Cows should also be clipped around udders and flanks regularly. It keeps the dirt from sticking on and means clean milk. Use a Stewart No. 1 Machine. \$12.75 at your dealer's or direct. Lasts a lifetime. CHICAGO FLEXIBLE SHAFT COMPANY Dept. 127, 12th St. and Central Ave., Chicago

FOR SALE!

Butcher Folding Bushel Crates, practically brand new. 27c each delivered anywhere in Michigan. Cash with order. Special prices in carlots.

A. M. Todd Company, Menasha, Mich.

Man Wanted for work on farm by month or year. Must be good milker and furnish best of references. Good wages for good man. W. H. Knickerbocker, East Lansing, Mich.

Wanted---Heavy Engine Grub Breaker with forecarriage. Voorhees Bros., R. 6, Albion, Mich.

A Good Clubbing Bargain

No. 3.

Michigan Farmer\$1.00
Swine Breeders' Journal..... .50
Today's Housewife 1.00

Regular price, one year.....\$2.50

OUR PRICE ONLY \$1.85

No. 4.

Michigan Farmer\$1.00
People's Home Journal 1.00
American Boy 2.00

Regular price, one year.....\$4.00

OUR PRICE ONLY \$3.15

No. 5.

Michigan Farmer\$1.00
McCall's Magazine 1.00

Regular price, one year.....\$2.00

OUR PRICE ONLY \$1.55

Please Mention The Michigan Farmer When Writing to Advertisers

PRINCE ALBERT

the national joy smoke



Copyright 1919
by R. J. Reynolds
Tobacco Co.

NEVER was such two-fisted-smokejoy as you puff out of a jimmy pipe packed with Prince Albert! That's because P. A. has the quality!

Your taste apparatus certainly cannot be fooled! So, when you smoke Prince Albert and get a lot of delight you know you've got the big first prize on the end of your line!

Prince Albert's quality alone puts it in a class of its own, but when you figure that P. A. is made by our exclusive patented process that cuts out bite and parch—well—you realize why P. A. is so unlike other kinds.

No matter what your past luck has been on pipe smokes you put your confidence in Prince Albert for it certainly makes good every time the clock ticks.



Toppy red bags, tidy red tins, handsome pound and half pound tin humidors—and— that classy, practical pound crystal glass humidor with sponge moistener top that keeps the tobacco in such perfect condition.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

Some Special Clubbing Offers

No. 1.

Michigan Farmer\$1.00
Cloverland Magazine 1.00
Power Farming 1.00

Regular price, one year.....\$3.00

OUR PRICE ONLY \$2.10

No. 2.

Michigan Farmer\$1.00
Hoard's Dairyman 1.00
Woman's Magazine 1.00

Regular price, one year.....\$3.00

OUR PRICE ONLY \$2.50

No. 3.

Michigan Farmer\$1.00
Swine Breeders' Journal..... .50
Today's Housewife 1.00

Regular price, one year.....\$2.50

OUR PRICE ONLY \$1.85

No. 4.

Michigan Farmer\$1.00
People's Home Journal 1.00
American Boy 2.00

Regular price, one year.....\$4.00

OUR PRICE ONLY \$3.15

No. 5.

Michigan Farmer\$1.00
McCall's Magazine 1.00

Regular price, one year.....\$2.00

OUR PRICE ONLY \$1.55

**Your earning power
when it rains is
made sure**

by
TOWER'S

FISH BRAND

**REFLEX
SLICKER**

Look for the
Reflex Edge

A. J. Tower Co.
Established 1936
Boston, Mass.



PREMO

Film Packs

Developed 25c.

Mail us your exposed Film Pack. We develop twelve exposures, sizes 4 x 5 or 3 1/4 x 5 1/2 and smaller, for 25c. Prints on Velox Paper at reasonable prices if desired. The best grade of work.

SWEET, WALLACE & CO., INC.
(Eastman Kodak Company)
133 North Wabash Avenue, CHICAGO, ILL.

BARN PAINT \$1 PER GALLON

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

Characters of Old Farm Days

By George W. Tuttle

The Deacon's Marathon Trainer.

ONE of the characters of old New England farm days was John Babcock, as peaceful a man as the sun of dog days ever shone upon, save as his periodical spells of insanity had their inning, then it was, "Watch out for Babcock!" until the constable could take him in tow. A short confinement in the insane asylum and he would come out perfectly sane until the evil spell of insanity again came upon him.

If a lone woman was left on a farm she hastily fastened doors and windows when the word went round that Babcock had one of his spells. Rumor had it that some lone damsels went into sudden seclusion under the bed—this was not one of the occasions when they said, "My kingdom for a man!"—that is, if the man were to be John Babcock. But, as a matter of fact, Babcock had never harmed a woman. He did, however, give good Deacon Jones excellent marathon training. This was the way that Deacon Jones received his free training:

Deacon Jones was making hay while the sun shone—an innocent and altogether commendable New England habit that he had acquired in the days of his youth.

But Babcock came down, like a wolf on the fold,

To make a square meal of the deacon, we're told.

Babcock grabbed a pitchfork, and shouted, "You killed my grandfather!" The deacon paled but did not wait to be impaled; he saved all of his breath for the marathon race that was staged the next morning. The good deacon only ran for one reason—because he could not fly. Down through the hayfield they swept like a tornado, but the good deacon was seven lengths ahead when he reached the haven of the old farm house—his city of refuge just then. "Yes, yes, it was quite an episode, quite an episode," he said to the reporter of the Weekly Chronicle,

"quite a race. I beat him out, but it was like the woodchuck who climbed the tree—I just had to!"

On another occasion, in one of his crazy spells, Babcock rode his horse at full speed up the steps to the door of the village grocery, and straight into the middle of the store, where he brought his horse to a standstill, glared around for a moment, and then, greatly to the relief of the awed proprietor, rode out again at full speed, clattering down the steps as if the evil one was after him.

When in his right mind he was the personification of good nature and was often the subject of jokes at the village store. On one occasion one villager dropped an egg, unperceived, into Babcock's pocket. Another young man rubbed suddenly up against him and an uncooked pocket omelette was the result. "He laughs best who laughs last," and Babcock said nothing but kept up a powerful lot of thinking. The next time the trick was tried he slipped out the side door as soon as the egg was in his pocket—this last omelette was not of the pocket variety. Did he not know on which side his bread was buttered as well as did the inmate of the insane asylum who was wheeling his wheelbarrow upside down. "What makes you wheel your barrow that way; why don't you turn it over?" said an inquisitive visitor.

"I turned it over yesterday, and they put bricks in it," was the shrewd reply.

Babcock was a kind hearted, peaceful man; a good neighbor until one of these spells of insanity said: "Presto change!" Strange to say, when the constable appeared he always went along peacefully with him. Babcock was a great horse trader and the constable always invited him to go with him to see a horse. Babcock did not even say, when the walls of the asylum loomed up before him once more, "This is a horse of another color."



The Reason Why

"Where is the wind when it is not blowing?" is uncovered the air rushes in and creates a wind in doing so. These air currents are continually pressing against each other to get some place else. They change their direction according to the pressure that is being applied to them. Sometimes the pressure will be very light in one part of the air, many miles away perhaps, and then the air in another part, which is under great pressure, will rush with great force into the part where the pressure is light, and thus form a big wind. When the pressure stops the wind stops.

The answer is, of course, that there isn't any wind then. To understand this perfectly we must study a little and find out what wind is. In plain words, it is nothing more than moving air.

If you make a hole in the bottom of a pail of water, the water will run out slowly. If you knock the whole bottom out of the pail filled with water, the water will rush out before you know it.

That is about what happens to make the wind. The air is constantly full of air currents, like the currents you can see in a river. Down the middle of the river you may notice a softly flowing current going straight. Along the shores there will be little side currents going in all directions, and you may find some little whirlpools. That is exactly what we should see in the air if we could see air currents.

"Where Does the Wind Begin?" The movement of these currents of air leaves many pockets of space where there is no air, and when one of these

(From the Book of Wonders. Published and Copyrighted by the Bureau of Industrial Education, Inc., Washington, D. C.)

"By the Way"

THE BIT O' BLUE.

BY L. W. SNELL.

There's a heap o' satisfaction
In a little bit o' blue,
That your stock or grain has captured
At the fair you took it to.

"Taint so much the prize's value
Nor the fact you've got the best
Colt or heifer in the county,
Makes the warmness in your breast.

"Course you're grateful for the harvest,
When the crops have yielded well
And the granary is loaded
With the things you've got to sell.

But the little bit o' ribbon,
Or the ticket that you've won
At the fair, just seems to sort o'
Put a crown on what you've done.

And you wear your shoulders squarer,
Raise your head a little too,
'Cause you're classed among the winners
And you're bringing home the blue

DID YOU EVER?

A minister, with two lovely girls,
stood entranced by the beauties of a
flowing stream. A fisherman happen-
ing by, and mistaking the minister's
occupation, said, "Ketchin' many, old
pard?"

"I am a fisher of men," answered the
preacher with dignity.

"Well," replied the fisherman, with
an admiring glance at the girls, "you
sure have the right kind of bait."

CHOICE.

I rose with great alacrity
To offer her my seat;
'Twas a question whether she or I
Should stand upon my feet.

RAW.

Willie was in a bad temper. His
mother had just discovered that there
was not a clean nightshirt ready for
him to wear.

"Never mind, Willie," she said con-
solingly. "You will have to put on one
of your sister's nightgowns tonight."

"What, a girl's?" snorted Willie,
drawing himself up haughtily.

"Yes. Why not?" asked the mother,
in surprise.

"I won't wear it!" declared the small
boy. "I'd rather go to bed raw!"

A VALUABLE PATENT.

An old colored minister announced
that he had invented an automatic
collection basket which would be pass-
ed around by the deacons of his
church. "It is so arranged, my breth-
ren," said he, "dat if you drop in a
quartah or half dollah it falls noise-
lessly on a red plush cushion; if you
drop in a nickel it will ring a bell dat
can be distinctly heard by de entiah
congregation; but if you let fall a sus-
pender button, my brethren, it will
flah off a pistol."

TODAY'S RIDDLE

WHAT HAS
ONLY ONE
FOOT?

(ANSWER)



How to Select a Farm Electric Power and Light Plant

There are three vital things to consider in selecting an electric power and light plant. 1st—Motor Efficiency; 2nd Vibration; 3rd—Lubrication.

The motor is the vital part of any plant. So look first to the motor. You can judge motor efficiency by the smoothness and quietness of running.

Then watch for ruinous vibration. Any expert will tell you that severe vibration will quickly shake any motor to pieces—shorten its life. Farmers everywhere who consider efficiency and service above all are installing the

Silent ALAMO

FARM ELECTRIC POWER AND LIGHT PLANT

This Idle Super-Silent, rotating, sleeve-valve motor has no valves, cams or push rods to cause trouble. Valve grinding, carbon troubles and spark plug fouling are eliminated. Fully enclosed and trouble-proof. When oil or cooling water gets low, motor stops. Can't overheat or burn out bearings. Throttle governor controls speed of motor. When batteries are full, motor stops.

Perfect Lubricating System

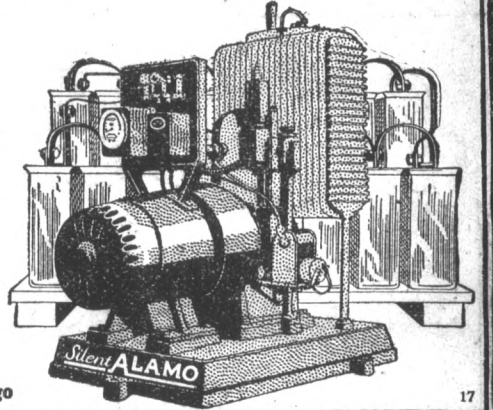
Perfect lubricating system floods each bearing with oil under pressure. Absolutely positive. Perfect balance of parts and quiet-running sleeve-valve motor overcome severe vibration for the first time. The Silent Alamo needs no heavy anchoring or special foundation. Operates quietly—anywhere. These things mean long, economical service.

Motor, generator, switchboard and radiator are a unit—mounted on one solid metal base. Has extra heavy, long-lived batteries. The Silent Alamo is built to highest mechanical standards, which assure many years of dependable service.

Write for the Silent Alamo Book

Gives many valuable pointers that every man should know on selecting a light and power plant. Write for the book today. See the local Alamo man or write us for his name.

Alamo Farm Light Co. (Factory at Hillsdale, Mich.) General Offices 729 Tower Bldg., Chicago



World's Best Roofing Freight Paid

"Reo" Cluster Metal Shingles, V-Crimp, Corrugated, Standing Seam, Painted or Galvanized Roofings, Siding, Wallboard, Paints, etc., direct to you at Rock-Bottom Factory Prices. Positively greatest offer ever made. We Pay the Freight.

Edwards "Reo" Metal Shingles cost less; outlast three ordinary roofs. No painting or repairs. Guaranteed rot, fire, rust, lightning proof.



LOW PRICED GARAGES
Lowest prices on Ready-Made Fire-Proof Steel Garages. Set up any place. Send postal for Garage Book, showing styles.
THE EDWARDS MFG. CO.,
1017-1067 Pike St., Cincinnati, O.

FREE
Samples &
Roofing Book

SEEDS WANTED

Michigan Grown
Winter Vetch, Rye and Vetch, June and Mammoth Clover, Alfalfa, Sweet Clover, Alsike and Field Peas. Known varieties of Garden Peas, Beans and other Garden Seeds, if High Germination and 1919 crop.

Send samples for test.
The C. E. DePuy Co. Pontiac, Mich.

WE WANT VETCH. SEND US SAMPLES.
YOUNG-RANDOLPH SEED CO., Owosso, Mich.

SAFEGUARD YOURSELF BY KEEPING RECORDS

If you don't, the tax man will figure your income tax in his own way. But don't keep incomplete records of your income and expenditures. It gets you in bad with the Income Tax Collector, and may cost you money in increased taxes. Well-kept records will not be disputed. It is easy to keep accurate records by using

The Michigan Farmer Account Book

This book requires no special book-keeping knowledge, but provides for a complete record of all transactions, such as receipts and expenditures, interest, breeding, and planting dates, complete farm inventory, and all other daily information; complete summary of Income Tax Law; and other essential information.

A few minutes a day will provide a record that will be acceptable to the Tax Collector, and valuable, too, because of the interesting information it gives you.

It provides for a year's complete record, and is the most simple farm account book devised. It is better than other systems costing from \$3.00 to \$5.00. It is endorsed by bankers and tax collectors.

Michigan Farmer Account Book
Michigan Farmer (New or Renewal) 1 Year } Only \$1.25

You need this book. Send for it now. If you are now a subscriber your subscription will be extended.

THE MICHIGAN FARMER,

Detroit, Mich.

Keeps Cold Out — Keeps Heat In Double Body Underwear

DOUBLE
FABRIC
OVER
BODY

GIVES PROTECTION WHERE
PROTECTION IS NEEDED

DOUBLE-BODY UNDERWEAR combines maximum protection and comfort with minimum bulk and weight. DOUBLE-BODY UNDERWEAR is constructed with a double thickness of fabric over the chest, abdomen and back. The arms and legs are covered with but a single thickness of fabric. This is the ideal undergarment for those who do not want to hamper their movements by wearing heavy and bulky outer clothing.

Every man, woman or child whose work or play takes them outdoors in cold weather needs the protection DOUBLE-BODY UNDERWEAR affords. It defends the vital parts of the body from cold and helps to prevent winter sickness.

DOUBLE-BODY UNDERWEAR is made in cotton and wool fabrics for men, women and children.

SINGLE
FABRIC
IN
SLEEVES
AND LEGS

Learn more about this superior winter underwear. Write today for Catalog No. 7538M, telling all about the DOUBLE-BODY principle of underwear construction and illustrating the different styles and fabrics in which it is made. Made for and sold exclusively by

Sears, Roebuck and Co.
Chicago



One Man Saws 25 Cords a Day

EASY, now, to cut down standing trees and saw logs into stove or cord wood lengths. This labor saver does the work of ten men. Easy to operate. Economical—uses little gasoline. Quickly moved from log to log and cut to cut without stopping engine. Thousands in use—every owner highly satisfied. Starts easy without cranking in any weather. Strongly built for hard, long dependable service.

Easy To Move
From Log to Log



Geo. E. Long
President

OTTAWA LOG SAW

Cuts Down Trees — Saws Up Logs By Power

Does away with the old, back-breaking way of cutting wood. When not sawing, engine can be easily removed. Direct gear drive—no chains to bother with—no keys or set screw. Automatic friction clutch protects saw allowing slippage. 4-Cycle Hopper Cooled Engine. Oscillator Magneto. Unfailing power.

Direct From Factory

I save you needless profits and delay; ship same day order is received. Famous Ottawa Guarantee insures high quality and your satisfaction. 30 Days Trial. Pays for itself in a few weeks.

GEO. E. LONG,
President.

OTTAWA MFG. CO. 1503 Wood Street,
OTTAWA, KANS.

Free Book

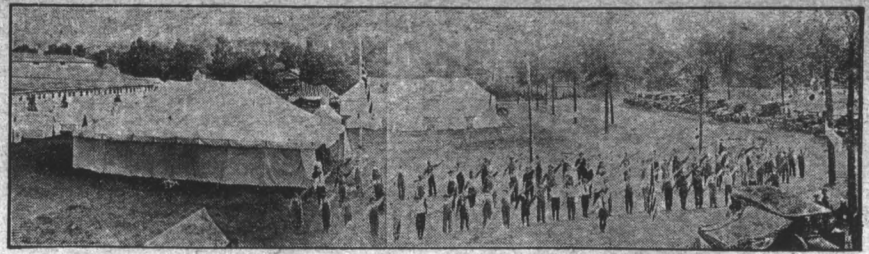
Write at once for Free Book "How to Know Better Log Saws" printed in 3 colors, tells you facts you will want to know and Low Direct-to-You Price. Begin now to saw wood for needed fuel and to sell. A post card brings this Free Book.

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

Milch Goats For Sale. Saanen and Nubian Grades. Nubian Buck for service. J. W. Dasef, Stanton, Mich.

Flemish Giant Rabbits, dark steel black. Garrys 2 months old. \$3.00 & \$2.00 each. Pedigreed stock. DAVID HAY, 709 Norris St., Ypsilanti, Mich.

If you could buy barn paint for 50 cents per gallon, it would still cost nearly twice as much to paint your barn with it, as it would cost to paint the same barn with WEATHERWAX Liquid Paint. Write for free color card and prices. Sold by good dealers everywhere, or direct, freight paid, where we have no dealer. Address, THE REILLY COMPANY, Indianapolis, Indiana.



Boys' State Fair School

By J. H. Brown

GEE, but this has been a great week for me, you bet!"

"Betcher life it has! I have learned more this week at the State Fair than I ever knew before. And that's goin' some, with all the experience I've had. And I've seen a lot, I have, you betcha!"

The last speaker was not an old man with toothless gums and a bald head, who was thinking of the days when he was a kid, but one of the farmer boys at the Michigan State Fair School. It was the last day of their stay in camp on the fair grounds and the two were comparing notes on the benefits which had accrued to them since they left their farm homes somewhere in Michigan.

"I never dreamed I would beat the rest of the bunch in that eighth grade examination in my county. Dad and mother both insisted I should study hard and do my level best; and I rather guess I did."

"Oh, shucks! the examination was not hard," chimed in the other boy. "I never expected to win out, and all our folks and the neighbors were surprised like the dickens when they heard I had won the trip to the State Fair from our county."

There were over six dozen of these State Fair School boys camped on the grounds during the week of the fair. They had a choice location and occupied twenty-eight tents set up on the big square directly west of machinery hall. In the center of the square was the big assembly tent. The tents were lined up along the south, east and north sides of the square.

The Michigan Farmer touring camp headquarters was located in the northwest corner entrance of this square, and the car, dining-room and sleeping tents were lined up true with the boys' tents. This corner really was the main entrance to the boys' school section and was a popular meeting place for the boys, the officers, and all visitors who were interested in the Boys' State Fair School. The Michigan Farmer is and has been greatly interested in the plan which General Manager Dickinson worked out seven years ago to provide this prominent, valuable and eminently successful feature as an important part and parcel of the Michigan State Fair.

The boys came in Monday and that evening, and by Tuesday morning nearly every county in both peninsulas had a boy on hand inside the square of white tents. Some boys came alone

from the upper peninsula and some had never had any experience traveling by rail alone. More than one had never rode on an electric car.

We rose and climbed down from our bed inside the car just before six on Tuesday morning and found all the boys lined up south of the assembly tent by Lieut. E. S. Jones. They were indeed early birds and soon were out, not for worms, but to pick up the hundreds and thousands of pieces of paper scattered the day previous over their section of the grounds by the thousands of Labor Day visitors at the fair.

These State Fair school boys had a fine time of it. They worked and played in a systematic manner each day during the hours they were not asleep in their tents. They had lessons, lectures, took part in the judging of live stock, saw many of the exhibits and had many details thereof explained to them.

One morning they went over to the tractor demonstration ground and heard several experts lecture on the mechanism and principles of operation of gas engines, traction details, plowing, harrowing, etc. No doubt each boy departed for home at the end of the week, knowing more about many things connected with farm life and practice on this mundane sphere than they did before they bid their parents good-bye the Monday previous.

One boy, Bert Whittaker, from Calhoun county, we had assigned to the first tent next to our camp. He was wide awake and on the lookout constantly for any good thing that might be useful to him as a live and energetic citizen. Bert heard something, or at least was moved to look closely at a certain spot in the grass one day as he walked along, wishing he had a little more money to spend. He spotted a five dollar bill in the grass and grabbed it before it could escape. It must have had a good effect on Bert, for he had a smile on his face for a long time afterward. Other boys found two and four bits, but not another five stuck up around anywhere.

E. T. Cameron, of Mt. Pleasant, and J. L. Reigle, of Flint, are sitting on the seat in the picture showing the officers and instructors of the Boys' State Fair School. Mr. Cameron sits on the left and was superintendent of the educational department at the fair. Mr. Reigle had charge of the boys, and Lieut. Jones, of Jackson Y. M. C. A., (Continued on page 426).



Officers and Instructors of the Boys' State Fair School.

THE REASON WHY.

How Did Men Learn to Talk?

TALKING and the words used came into being through the desire of men to communicate with each other. Before words became known and used man talked to those about him by the use of signs, gestures, and other movements of the body. Even today when men meet who cannot talk the same language they will be seen trying to come to an understanding by the use of signs and gestures and generally with fair results. The need of more signs and gestures to express a constantly increasing number of objects and thoughts led to the introduction of sounds or combination of sounds made with the vocal cords to accompany certain signs and gestures. In this way man eventually developed a very considerable faculty for expressing himself. Sign by sign, gesture by gesture and sound by sound, language was slowly developed. A man would be trying to explain something to another by sign or gesture and to make it more clear would make a sound or combination of sounds to put more expression into his efforts. Finally the other man would understand what was meant and he would tell someone else, using the same signs, gestures and sounds. Later on it would develop that to express thus any certain thought, act or the name of a thing, all of the people in the community would make this same combination of sounds, signs and gestures to express the same thing. Finally the gestures and signs would be dropped and it was found that people understood perfectly what was meant when only the sound or combination of sounds was produced. That made a word. All the other words were made in the same way, one at a time, until we had enough words to express all the ordinary things and the combination of words became a language. The children learned the language by hearing their parents talk it, and that is how men learned to talk.

(From the Book of Wonders. Published and Copyrighted by the Bureau of Industrial Education, Inc., Washington, D. C.)

RATHER FLAT.

Medical Officer—"Have you any organic trouble?"

Recruit—"No, sir. I ain't a bit musical."

THE REASON.

Phyllis—"How is it you are always behind time?"

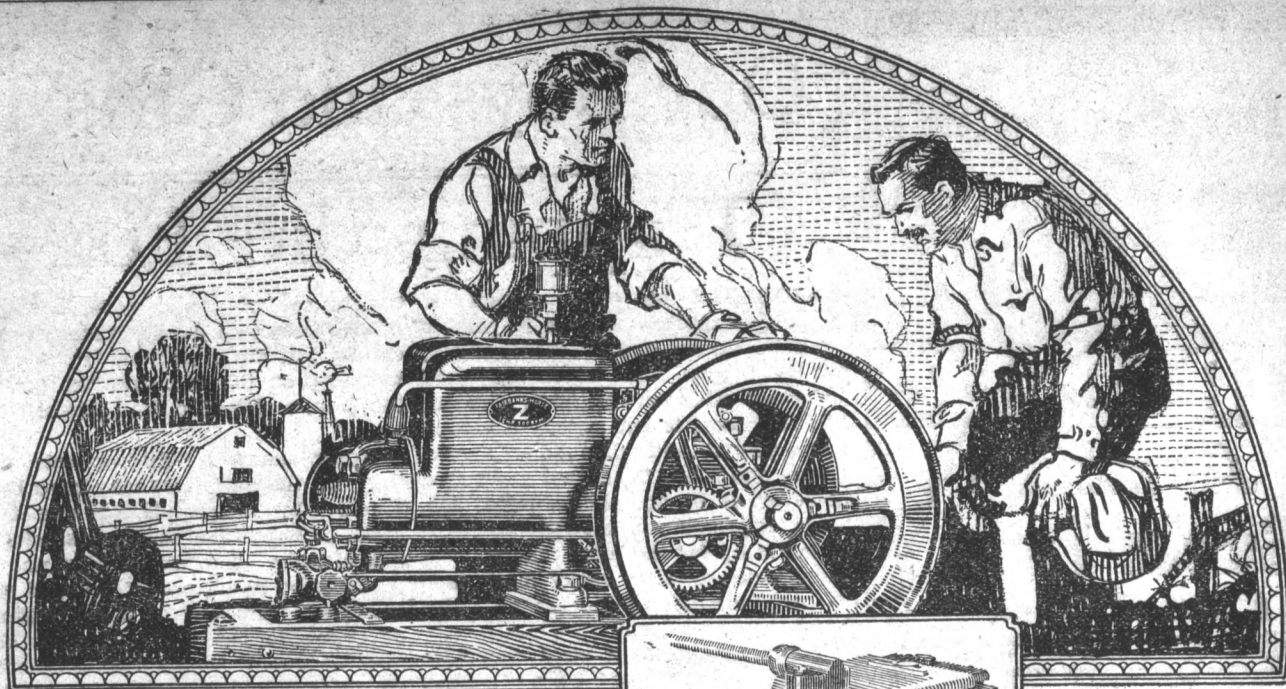
"I always carry a watch."



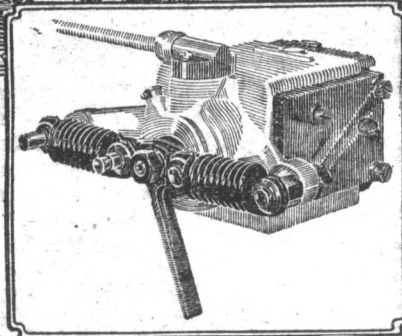
OCTOBER.

In trailing robes of gold and crimson drest,
Serene she walks the woodland paths along;
The purling brooklet threads its course among
Soft, fringing grasses which her feet have prest;
Dame Nature greets the fair autumnal guest
With full, rich melody of wild bird's song;
While at her feet, a meekly reverent throng,
Each lowly aster bows its purple crest.
Beneath the steadfast gaze of her clear eye
The ivy blushes scarlet; all abroad
The maple lift their flaming torches high
To light her way where late the summer trod;
So, 'mid green fern and plumed golden-rod,
October walks 'neath autumn's calm blue sky.

IDA M. BUDD.



Fairbanks-Morse
"Z" Engine with
Bosch Magneto



Farm Engine Supremacy

THE famous "Z" Engine and the Bosch high tension, oscillating magneto combine to make the one SUPREME farm engine. ¶ The dependability of the Bosch in delivering a steady succession of hot, intensive sparks is well known and adds the one possible betterment to the "Z"—always recognized as America's foremost farm engine. ¶ Call on your "Z" Engine dealer and see the result of this newest combination—FAIRBANKS-MORSE "Z" WITH BOSCH MAGNETO. ¶ Over 200 Bosch Service Stations assist our dealers in delivering maximum engine service. ¶ Prices—1½ H. P., \$75.00—3 H. P., \$125.00—6 H. P., \$200.00—all F. O. B. Factory.

Fairbanks, Morse & Co.

MANUFACTURERS CHICAGO

Direct To You From Shoe Market of the World



Why pay \$6 or \$7 when you can get this solid leather workshoe for only \$3.95 by dealing with us DIRECT. Upper is everlasting, sole made of heavy, solid, durable leather. Built for rough wear.

yet dressy, comfortable and soft on the foot. SAVE UNNECESSARY PROFITS. Order your pair now. Supply limited at this price. GUARANTEE: A new pair FREE if these fail to give satisfactory wear because of defect in workmanship or material.

Klubock, Smith Co., Boston, Mass.
Send my pair on approval. My money back double quick if I want it. I risk nothing.

Name..... Size.....
Address..... Color.....

SHEEP

HAMPSHIRE

One of the best bred flocks in America. Home of the International Champion ewe of 1918. Rams of all ages for sale. Write me your wants or come and see them. Harley R. Emmons, Elsie, Mich.

Shropshires Am offering 16 yearling rams and 8 yearling ewes of Senator Bibby breed. O. J. THOMPSON, Rockford, Mich.

BUY A SHEEP

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

300 Breeding Ewes

Choice Michigan Natives. Black faces and delaines 1 to 4 years old. Mostly 2 year olds in good condition in lots of 10 to a carload. Almond B. Chapman, South Rockwood, Mich. Telegraph Address Rockwood.

Mr. Shropshire Breeder. Do you need a real sire? I have a few rams that are in a class by themselves. Type quality, carcass and fleece. With Cooper and Buttar Breeding. No cold blooded stuff here. First ten \$100.00 to \$400.00 Balance including some cracking Hampshires \$50.00 up. No Fairs this year but believe me we have the sheep. Good roads to the farms. Kope Kon, Coldwater, Mich., S. L. Wing, Prop.

Ingleside Farm Offers

80 recorded Shropshires—12 flock headers, 25 yearling rams for range or grade use, 43 ewes—mostly yearlings. Herbert E. Powell, Ionia, Mich.

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

Shropshires—Rams bred from McKerrrow's Holker 275014259R/377379 English strain. Dan Booher, R. 4, Ewart, Mich.

For Shropshire Yearling Rams write or call on ARMSTRONG BROS., R. 3, Fowlerville, Mich.

80 Reg. Shropshire Ewes yearling and ram lambs for sale. Jno. Grieve, Fowlerville, Mich. R. F. D. No. 3.

Maple Lawn Farm Shropshires. Rams and ram lambs. High bred, well woolled and registered. A. E. Bacon & Son, R. 4, Sheridan, Mich.

40 Registered one and two year old Shropshire ewes mostly two's, also large, vigorous ram lambs ready for service, priced to sell. Flock established 1890. C. Lemen, Dexter, Mich.

Registered Shropshire sheep, 30 rams and 40 ewes. HARRY POTTER & SON, Davison, Mich.

Reg. Shropshire Ram Lambs with both size and quality. C. K. Topliff, Eaton Rapids, Mich.

For Sale Reg. Shropshire Rams and Ram lambs of quality. Also 6 ewes 2 to 4 yrs. old. Write R. J. & C. A. WILLIAMS, Middleville, Mich.

Reg. Shropshires Yearling Rams and ram lambs. Special price on lots of two or more. B. D. KELLY & SON, Ypsilanti, Mich.

HAVING sold my farm I must sell my entire flock of Oxford Down ewes. They are fine big hearty sheep of choicest breeding. Also my stock of rams weighing 300 lbs. with 17-lb. fleece. A good bankable note accepted. John P. Lee, Hope, Mich.

For Sale. Registered Oxford rams, 2 ram lambs 1, 2 and 3 years old, beauties. Geo. T. Abbott, Phone Deckerville, 78-3 R. 2, Palms, Mich.

For Sale Registered Oxford Down yearling rams and lambs also a few choice ewes. D. P. Beasore, R. F. D. No. 1 Eaton Rapids, Mich.

Four Reg. Oxford Ram Lambs, extra choice Price \$35 and \$40 each Reg. and Del. Sire an imp. Ram. J. Robert Hicks, St. Johns, Mich.

Oxford Yearling Rams For Sale
H. B. PETERS, Carland, Mich.

CHOICE delaine rams, also 2" B" type stock rams of high quality, large, oily fleeces, shearers, write. S. H. Sanders R. No. 2, Ashtabula, O.

For Sale Lincoln Rams 6 extra good yearling rams and 1 two year old. R. J. Knight, Cass City, Mich.

A nice lot of Registered Lincoln Rams also a few good ewes for sale. D. T. KNIGHT, Marietta, Mich.

Cotswolds Yearling rams, and ram lambs, ewes all premiums at the Lenawee Co. Fair. A. M. Bortel, Britton, Mich.

For Sale Six two-year-old and seven yearling Registered Rambouillet Rams. Good ones and heavy shearers. Prices right. J. W. GRAHAM, Davisburg, Mich.



TRAPPERS

Abraham Smoke Pump Drives 'Em Out

Something new. Get all the facts about Abraham Smoke Pump. You will want one of these pumps. Greatest smoker ever invented. Makes most smoke. Drives 'em out from longest logs or deepest dens. Just say you are interested and we will have something to say to you. Don't miss this.

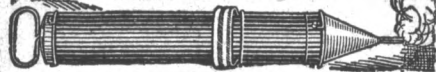
FREE Fur Facts and Trappers' Supply Catalog

You must have this new book "Fur Facts." Contains good trapping stories by Geo. J. Theissen and others and valuable information. You get our new catalog free also. Best hunters and trappers' guide published. Not a penny to pay for it. Gives you lowest prices on supplies—Traps, Guns, Knives, Hunting Coats, Heavy Coats, Suits for all weather, Fox Horns, Turkey and Duck Calls—everything you want for trapping.

Weekly Reports—Also Free

We will put your name on our mailing list for Abraham's Weekly Reports. They keep you posted—right up-to-date on prices, etc. Just a post card—that's all you need to get all this—FREE—Fur Facts, the Catalog and the Weekly Reports. And don't forget the Pump. Ask for offer on that. Now, get your post card into the mail—quick.

Abraham Fur Co.
213-15 North Main Street, Dept. 51
St. Louis, U.S.A.
"Ship your furs to Abraham"



BARRELS FOR SALE

Also whiskey and wine half-barrels and kegs.
Krell Brothers, 12th & Antoinette St., Detroit, Mich.

Our Boys' and Girls' Department

Trapping the Fox---By H. F. Grinstead

PROBABLY no other animal so nearly approaches man in point of intelligence, and to outwit a wily fox the trapper must be on his guard and ready with new methods. The fox, like the 'coon, is not strictly a carnivorous animal, and will feed on apples, grapes and other fruit. His chief diet, however, is birds, rabbits, mice, fish, frogs, eggs and poultry. The red fox, which is by far the most numerous of the species, dens in rocky bluffs, and in sections where there are no rocks, burrow in hillsides.

The standard No. 2 steel trap with double springs should be used when trapping the fox, though the No. 1½ used for 'coon and mink will usually hold him if the chain is fastened to a heavy drag instead of a stake. If the traps are buried for a few days in hen manure, the odor of metal will be replaced by one more attractive to the fox.

The water set is simple, and may be easily managed by the inexperienced trapper. Early in the season this method may be followed most anywhere, but after ponds and streams freeze over, a spring at least four feet in diameter must be found.

The trapper should use rubber boots and wade in some distance above or below where the set is to be made. Place a large stone or chunk of wood in the water about eighteen inches from the shore, so that a few inches will show above the surface. Half way between this and the shore the trap should be set on a flat stone or mound of earth so that it will be half an inch under water. On top of the trap place some moss or a piece of sod, but not enough solid material to clog the jaws when the trap is sprung. This should be made to resemble a

tuft of sod or a moss-covered stone. Place the bait on the large stone farther out. In order to reach it, the fox will step on the tuft over the pan of the trap, and land a foot between the jaws.

Water should be thrown over anything on the bank that may have been touched by the hands. If the trap could be set where similar tussocks of sod already exist, the fox is not so likely to be suspicious of changed surroundings. Instead of using a stone or chunk to put the bait on, a bird may be stuck on the end of a stick which is thrust into the mud till the bird appears to float on the water. No part of the stick should show.

If you have ever noticed a fox running across the country, you have seen him run upon a fallen tree or along a rail fence or over a mound in order to get a better view of his pursuers and the land ahead of him. He will do the same thing when he catches a scent in the woods, and this suggests a place to set traps.

Take a live chicken, preferably a young rooster that is fond of hearing his own voice, put it in a coop and hang it in a tree about six feet from the ground, where it is hidden by the lower limbs. If a fox should be prowling about within a quarter of a mile, he will either get the scent or hear the rooster crow, and will at once begin an investigation. The fox will suspect a trap, and will be too cunning to approach closer than twenty or thirty steps, where he will get on the highest point he can reach, and regale his nostrils with the pleasing odor of chicken. If there should be a fallen tree, a large stump or a high knoll anywhere within a hundred yards of the bait, a trap should be set on all such places and well camouflaged. It would be well to set these traps two or three

days before putting out the bait. Of course, these traps with chain and drag should be hidden, either by covering with earth or if on a log or stump, by burying it in a deep notch cut for the purpose and covering with rotten wood.

In a settled country the fox does not fear the human scent, and will follow a trail where a man has passed but a short time before. When there is a deep snow on, trails that have been tramped out will be followed by the fox, and if traps are set in such trails at night, and lightly covered with snow there is a good chance to take one of the animals. While a fox may follow your trail, he becomes suspicious when you turn in your tracks. When the trapper has made a set, he should continue on as if he had merely stopped for a moment. When visiting your traps go only close enough to determine whether or not the trap has been sprung, and pass on without turning.

Do not depend on one or two sets just because they happen to be good ones; but try different methods and in different places. Very much like men, foxes differ in their individual views as to what constitutes danger.

The fox should be skinned in the same manner as the mink by cutting down the back of the hind legs, and peeling the skin from the legs and body so that it resembles a long pocket with the flesh side out. Stretch thus with the flesh side out over a board of suitable size and shape, and with a dull knife remove surplus fat and flesh by scraping from the tail toward the nose. Let the skin dry in the shade where the air circulates freely. When dry, turn the skin with the fur side out, and do not pack them in the same bundle with the skins of mink and skunk, which have the flesh side out.

Boys' State Fair School

(Continued from page 424).

was the military instructor. Lieut. Jones has been on this job for seven years, with the exception of last year, when he was in France. He is one of the best officers for such a job we ever met. The boys all like him and he has tact, gumption, ability to impart instruction to the minutest detail, and secure ready obedience and respect from the boys every day and hour. We noticed several boys one morning watching the Goss Company men driving a big tent stake. They had never seen five men pounding a stake at once and their eyes stuck out a little bit. As that company furnishes the grounds and puts up the boys' tents every year, we took the opportunity to set up our camera and got Mr. Rulison to put on a moving picture on purpose for the boys to look at in the Michigan Farmer. The lens and shutter in our camera is quite fast, so that it caught the five men at work and shows the exact position of each sledge when the exposure was made. The panorama picture we took the first evening after the boys came in and all were present. It shows a goodly portion of the boys' tents, the assembly tent, the Michigan Farmer headquarters camp, and the big tent of the tent company. On the right side in the distance are a few of the the hundreds of tents used on the fair grounds and puts up the boys' tents thousands each one of several days of the fair.

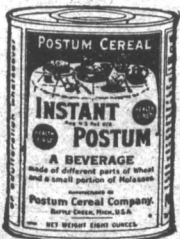


Coffee Costs Too Much

Usually in Money—
Frequently in Health

Instant Postum

is a delicious drink, of
coffee-like flavor, made
instantly in the cup.



Economical—Healthful

No Raise in Price

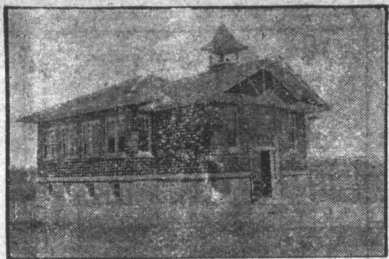
50-cup tins 30c

100-cup tins 50c

Made by

POSTUM CEREAL COMPANY
Battle Creek, Mich.

Sold by Grocers and General Stores



Our Prize Contest

FIRST PRIZE.

My First Day at School.

Hurrah! September the second was here again.

The day before was Labor Day and I had a lot of fun riding on the ferris wheel and the ocean wave and going to the side show, etc., but I am always glad when school begins again.

I live just outside of the city limits of Sturgis, Michigan, but I and my two sisters have always gone to the town school. This year I am entering the eighth grade. We have a fine school building. It has just been built about two years and it has about thirty-five rooms.

Eight-thirty found everyone in their seats and gazing around at all the new things.

We went to the auditorium for chapel, and our kind professor told each grade where their new session rooms and class rooms were.

I have four teachers and take history, arithmetic, grammar, spelling, music, and we are reading Longfellow's Evangeline, which is very interesting.

We went to the wrong session rooms a few times, but that didn't matter because everyone did that.

We then went home to a good dinner which made us feel better. We came back in the afternoon and got pretty well straightened out and acquainted with the teachers and pupils and our lessons assigned. Presently the piano began to play and school was dismissed for the first day.—Mildred Gang, Sturgis, Michigan. Age thirteen.

HONORABLE MENTION.

The First Day of School.

My first day of school was full of fun, as it always is. We were glad to see our old schoolmates again. Our teacher was the same as we had last year. We hadn't seen her since last June. When we all got to school she called school to order. Since she was the teacher we had last year she knew more about our ways. She called the school first. She had us give the flag salute. After that she asked us if we cleaned our teeth; about one-half did. I was one that did. We had some of our books there so we had some lessons in them. Last year she had three girls in the fourth grade. They passed into the fifth grade. She calls them fourth-graders. We correct her this year, when last year she corrected us.

When school was over we hurried home to tell our mothers about the school and about the improvements.—Evelyn Webber, Leslie, Michigan. Age eleven years.

HONORABLE MENTION.

The First Day of School.

The first day of school we did not have any work to do, but we had reading and the teacher gave out our lessons for the next day. The title of our first lesson was "Daniel Webster's First Speech." It was a good story. It was about a woodchuck. At noon we ate our dinner outside because it was so hot in the school house. We ate it under a shade tree. Our teacher's name is Miss Gimmell. She is a nice teacher. I am in the fourth grade.—Francis Schell, Wilmet, Mich. Age eight years.

Nothing Can Beat Improvement

LIKE THE fabled tortoise that outran the hare, persistent improvement in any service is bound to win—"Good enough" develops speed, but somehow never keeps going. And here you have one of the main reasons why Remington UMC modern guns and ammunition are so popular.

Remington UMC has contributed more improvements to the development of shooting than any other manufacturer. The most recent of them is the wonderful Wetproof process by which shot shells are for the first time made completely waterproof in body, crimp and top wad.

The hardest rain, the longest ducking, the worst of storage, can not affect the perfect shooting of the shot shells you buy if they are Remington UMC Wetproof—"Arrow" or "Nitro Club" loaded with smokeless or "New Club" with black powder.

They will not swell up, scuff, wilt at the crimp and jam. Instead, they will work through your modern Remington UMC autoloading or pump gun as perfectly as if taken direct from the loading machine. And fire just as surely and with the same always superior Remington UMC speed, pattern and penetration.

There are more than 82,700 leading sporting goods and hardware dealers in the United States who sell Remington UMC. That also means best service to shooters.

For Sale In Your Nearest Town.

Use Rem Oil to clean and oil your gun, the best combination Powder Solvent, Lubricant and Rust Preventive.

THE REMINGTON ARMS UNION METALLIC CARTRIDGE COMPANY, Inc.
Largest Manufacturers of Firearms and Ammunition in the World
WOOLWORTH BUILDING NEW YORK

Concerning Raw Furs



Blustein needs quick shipments this season. We'll pay the highest prices that were ever known in the Raw Fur industry. The wonderful

Blustein guarantee has always stood for the most money, the quickest money and the surest money, but this season

Blustein will surprise you. When you ship to Blustein this season you'll know you're getting some real money.

Blustein charges no commissions, allows the most liberal gradings and does business with shippers on the profit sharing idea that's why

Blustein gets the Furs. How about yours? Send for Blustein's New Price list—quick. The quick shipments get the big money this season. Take it from

Blustein
David Blustein & Bro., 188 West 27th St., New York—the center of the world's fur industry.

WITTE

2 H.P. Pulls 2 1/2 tons

Big Value—Big Surplus power. Immediate Shipment. Offer includes engine on skids—ready to use. Life guarantee against defects.

LOW PRICES—DIRECT

Any size—2 to 30 H.P.—Stationary, Portable or Saw-Bit. New book, latest list FREE.—Ed. R. Witte, Pres.

WITTE ENGINE WORKS
2192 Oakland Avenue KANSAS CITY, MO.
2192 Empire Building PITTSBURGH, PA.

\$39.95 NOW

9 CORDS IN 10 HOURS

RUNS EASY No Backache weighs only 46 lbs.

SAWS DOWN TREES EASILY CARRIED

BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B 44 showing low price and latest improvements. First order gets agency.

Folding Sawing Machine Co., 161 West Harrison St., Chicago, Ill.

FOR SALE: A few cars alfalfa hay. Choice of first and second cuttings. Write or call W. N. Lister, Ypsilanti, Mich.

TRAPPERS

Let me give you these Stretching Board Patterns FREE

Get ready for a big money-making trapping season. Old timers will tell you that they never dreamed of prices like you will get this year. Let me send you FREE my set of Stretching Board Patterns—just what you need to make your furs worth every possible dollar. Properly stretched furs always worth 10% to 50% more. Be ready with plenty of good stretching boards—and ship to

RUMBAUGH
DES MOINES, IA.

I pay top prices—I mail returns in a few hours after I get your shipment—I grade fair—I do not charge commissions, but give you 100 cents for every dollar's worth—and GUARANTEE TO HOLD YOUR FURS SEP. ARATE on request and return them if you are not satisfied.

Mail me the names and addresses today of two trapper friends and get my Stretching Board patterns and game laws for your state by return mail—also RUMBAUGH'S up-to-the-minute market reports, which will keep you posted all season on what your furs will bring. Write today.

W. R. RUMBAUGH
393 S. W. Fifth St.
Des Moines Iowa

Go After FURS

Furs bring highest prices ever known—get ready.

Rogers pays highest prices, grades fair—no dickering, pays cash and shipping charges on furs.

and make big money. Start right, get Rogers' Improved Trapper's Guide—Free—the best ever out. Complete prices on traps and trapper supplies. Send today, get in line for market reports and prices. Get the biggest money for your catch.

Address Dept. 170

ROGERS FUR CO.
ST. LOUIS

Dalion
with the
Instrumentized
Tone Throat



Plays All Records

NO MATTER what make of record holds captive the soul-stirring selections you like to hear, the Dalion liberates the imprisoned music. It is the universal interpreter, playing all makes of records without the use of extra attachments or adapters.

The wonderful instrumentized tone throat, built of seasoned wood, as is a fine violin, brings out every delicate tone shade, every quality of voice, or timbre, or touch that was thrown into the original rendition. It is a triumph of instrument acoustics.

Five Models, \$97.50 to \$300

A Dalion for every home and all with the same wonderful tonal qualities. Write for name of our nearest dealer so you may hear the Dalion play all makes of records.

Handsome booklet, sent on request, tells you how to judge phonograph values.

Milwaukee Talking Machine Mfg. Co.
Milwaukee, Wis.



Vaseline
Reg. U. S. Pat. Off.

PETROLEUM JELLY

For all irritations of the skin—cuts, sores, etc.
Healing and softening.

Booklet describing the many uses of "Vaseline" Jelly free on request.



For Sale at all
druggists and gen-
eral stores—10c.

CHESEBROUGH MFG. CO.
(Consolidated)
27 State Street New York

NERO COFFEE
Michigan's most popular coffee
ASK YOUR GROCER

When writing to advertisers
please mention the Michigan
Farmer.

Woman's Interests

Can Your Daughter Earn Her Living?

LAST June your boy or your girl finished the eighth grade. The diploma given by the county board is neatly framed and hanging in the bedroom. School in the country is done.

According to your ideas, school is done with for good. The child now has a great deal more book learning than you ever had, and you've got along and made money. There's no sense in sending children to high school unless they are going to teach. You might send a boy if he wanted to take up a profession and just wouldn't stay on the farm, but a girl—what's the sense of her going to high school or college and getting a lot of high-falutin' notions that just turn her head and make her feel above her family? If she would go on and do something afterwards you might do it, but she'll only get married and there's all that money thrown away.

This is your line of argument. But what of the child? Is your child perfectly contented with the very, very little bit she knows? For the work in the eight grades is really not even a drop in the bucket. Is she perfectly satisfied with the future you have mapped out for her—to stay at home and help mother until some boy asks her to marry him and she goes into a home of her own? Or has she ideas of a life a little fuller than one concerned merely with material things, money, clothes and food? Does she love books, pictures, music? Has she a mania for taking care of sick folks and animals?

Has she been "nagging" you to send her to high school so that she may be able to do the thing she likes best? Is she ambitious for something outside the kitchen? Of course, we want her to know all about home-making, but does she crave something more?

And is her expressed desire for higher education based on a real desire for knowledge, or does she just want to go because her chum is going and they can have a gay time in town, free from parental eyes? If she is sincere in her desire, what are you going to do about it? Are you going to arbitrarily refuse her the opportunity, because you never cared for such things yourself, or are you going to give her all the help you can to improve her God-given talent? Are you going to let her be herself, help her to be herself, or are you going to force her into a mold of your liking, a life of material things, the making of money, cooking of food, things entirely of the earth earthy?

Is she to grow into the sort of woman God meant her to be or the sort of woman you think she ought to be? Isn't she entitled to a choice of the sort of life she'll live? After all, she will have to live it. You may die in five years, during which time you have spoiled her life. Will you die more cheerfully knowing that her life-long thought will be, "If father and mother had only let me follow my natural bent how much better life would have been."

The idea that because a girl is to marry and become a home-maker, her education is wasted, is really so absurd it should have died long ago. But like all bad things, it dies hard. Isn't it true in your case that the more

you learn about everything the better you are able to do your own line of work? The broader your knowledge the greater your success. And doesn't it follow that an educated woman is better fitted to bring up the right sort of citizens than the uneducated one? Would you rather your son would marry a girl who left school at the third



This brown velvet tam embroidered with heavy silk thread in a lighter shade, will find many youthful admirers.

grade, or one with a high school education? Wouldn't you feel that the last girl would, other things being equal, make him the better helpmeet? Hasn't your prospective son-in-law a right to demand that you do as much for his wife as you want someone to do for your son's wife?

Is a woman a poorer mother because she can select the best in books

and music for her children. Will it be better for the children to hear Beethoven or ragtime? To hear the grand old music, or "I've got the alcoholic blues?" Won't you feel prouder to have your grandchildren choose such works as Shakespeare than to have them turn to "Deadwood Dick?" Is money wasted which helps a girl to make better men and women out of her children?

If you want a more practical reason, there's the very good one that every girl should be able to earn her own living before she is allowed to get married. If she could, there would be fewer widows left stranded. Just a typical instance. There's the college woman who teaches Latin in our school. Her father thought it was all nonsense to send a girl to college, or beyond the eighth grade, she'd only get married. But this particular girl knew how to handle her father and she got her education. Then she got married, just as he said she would. But shortly after the arrival of her only son the husband contracted tuberculosis. If father had not educated his daughter he would have had the three to care for. As it was, the young wife went into the school room, cared for her husband until his death, and is now sending her boy through the University. Father admitted several times that his judgment about educating girls was not of the best.

If your boy or girl shows talent, help bring it out. Give them their chance now, rather than an inheritance later. We can't take material things into the Beyond, but the things of the spirit live always. That is partly what Christ meant when he said, "Lay up for yourselves treasures in Heaven."

DEBORAH.

Cold Water vs. the Doctor

FEW people realize the value to the general health of the habit of drinking plenty of pure fresh water. It is said that to make up for the liquid waste of the body, about three pints should be drunk every day.

Often one will get up in the morning with a dull headache; the digestive system is in some way out of order. Often a glass or two of water will in a little while relieve the trouble. Again in the morning the stomach is full of mucus which makes it unfit for the immediate reception of food. This mucus would only mingle with the food and hinder digestion. A glass or two of water, drank on getting up, will wash this mucus out of the stomach and leave it ready for breakfast. And, by washing out the system daily, it will surely prevent headache and derangement of the liver and kidneys.

It is said that the sipping of hot water has a most beneficial effect on the heart action and that it regulates the flow of the bile. But, especially in the hurried American life, early in the morning very few people have time to sit up and sip at a cup of hot water. Busy people will surely never adopt this habit; there is too much pressing to be done.

Neither should the water be drunk cold because this will lower the temperature of the stomach too much. The water is perhaps best heated to a little higher than the blood temperature,

for then one may pause from other activities from time to time to take a swallow. If a little salt is added to the water, its beneficial qualities will be enhanced and the flavor will be less unpleasant. Better still would be a few teaspoonfuls of lemon juice with no sugar. The lemon juice acts on the liver. Yet, if one has plenty of time, there is no good reason why he may not sip hot water to his heart's content and get out of it the full physical benefit. The thing necessary is that in some manner a cup or two of hot or warm water should be taken into the system the first thing in the morning. Water should not be drunk in any large quantity with or just after a hearty meal, because it thins the gastric juice and thus hinders digestion.

When one feels a cold coming on, one of the best preventives is the drinking of plenty of cold water. This stimulates the system, opens the pores and helps to wash out the poisons which have formed in the body.

For a simple sore throat one of the best remedies is the cold pack. This consists of a cloth wet with cold water and applied to the throat. Over this must be fastened a dry woolen cloth to prevent the wetting of the clothing and the chilling of the body. One night of this treatment will often end a sore throat. If the water is used hot, this is an excellent treatment for a child with the croup. For

this renew the hot water application every five minutes. This hot water compress is recommended also for headache, toothache, and neuralgia. Here it is to be applied to that part of the face or head affected.

As a first aid for a bad sprain there is nothing better than the application of hot water. The sprained part should be placed over a bowl or vessel. Then from a considerable height water as hot as can be borne should be poured on the sprain. The process should be continued for an hour or two, or until danger of inflammation seems to be past. This will often save the patient from becoming crippled with a permanently bad joint.

There is nothing better for cuts, bruises of any kind, or congestion of the lungs, than an application of hot water. Where it is possible, the parts should be put into the hot water, as hot as can be borne. The swelling will quickly subside. But when the hot water application has been removed from the throat, or the lungs, bathe the parts with tepid water and rub dry. Then cover with dry flannel.

When doctors' bills are so exorbitant and such a sovereign remedy so available, why not make the remedy serve us and save the doctors' bills?

CHARLOTTE BIRD.

SWEET POTATOES.

Boiled, baked or fried, the sweet potato is delicious, but there are sometimes left-overs, and the sweet potato unlike its lowly brother, the Irish potato, can not be reheated by being dropped in hot water or returned to the oven.

Sweet Potato Omelet.

Mash three small sweet potatoes with a wire potato masher, add enough milk to make them creamy and beat with a fork for two or three minutes. Heat the sweet potato and set on back of stove. Make an egg omelet, using four or five eggs. When ready to turn, pour the sweet potato on half of it, turn the other half over, being careful not to break it, and put in a hot oven to set.

Sweet Potato Puff.

Mash enough sweet potatoes to make a cupful. Add one-half cupful of hot milk, two teaspoonfuls of butter, one well beaten egg and a little salt and beat until light. Fill buttered custard cups nearly to top with the mixture and bake in a hot oven.

Sweet Potato Nut Loaf.

To one cupful of mashed sweet potatoes add two well beaten eggs, one heaping tablespoonful of chopped celery, one-half cupful of chopped walnut meats, or two-thirds of a cupful of chopped peanuts; one tablespoonful of melted butter and the juice of a good-sized onion, one-half teaspoonful salt, a sprinkling of pepper, and enough bread crumbs to make a stiff mixture. Form into a loaf and bake in greased pan in a hot oven for twenty minutes. Serve with a tomato sauce.

Glazed Sweet Potatoes.

Take the required number of sweet potatoes, two eggs, two heaping tablespoons of sugar, one of butter and a little salt. Pare and cut the potatoes into strips, steam until done but not soft; remove from fire and cool. Dip first into the beaten egg seasoned with the salt, then roll in the sugar until each piece is coated, place in a pan with the butter and bake a rich even brown, taking care not to scorch the potatoes.

Sweet Potatoes with Egg Dressing.

Steam enough sweet potatoes to make three cupfuls when mashed, add pepper, salt, and a spoonful of sugar; mash perfectly soft with a tablespoon each of cream and melted butter, (or use milk and more butter), put in a baking dish, pour over one beaten egg and brown in the oven.—Mrs. L. T.

Lily White

"The Flour the Best Cooks Use"

The method of blending the choicest varieties of wheat gives it a most delicious flavor which is imparted to everything baked from it.

The wheat is all cleaned three times, scoured three times and actually washed once before going onto the rolls for the first break.

The result is perfectly pure, clean flour. And it is perfectly ground with the utmost uniformity.

Those are the reasons why we guarantee LILY WHITE.

Your money back if you do not find it as good or better than any flour you have ever used.

VALLEY CITY MILLING COMPANY

GRAND RAPIDS, MICHIGAN.

MICHIGAN FARMER PATTERNS.

Any of the patterns illustrated may be secured by sending order to Pattern Department, Michigan Farmer, Detroit, enclosing the amount set opposite the patterns wanted.

No. 2962—Practical Work Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5½ yards of 36-inch material. Width of dress at lower edge is about 2¼ yards. Price 10c.



No. 2947—Ladies' Apron. Cut in four sizes, small, medium, large, and extra large. Size medium requires 4½ yards of 36-inch material. Price 10c.



No. 2956—Ladies' Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5¾ yards of 44-inch material. Price 10 cents.

No. 2950—A Stylish Frock. Cut in three sizes, 16, 18 and 20 years. Size 18 will require 4¾ yards of 44-inch material. Width of skirt at lower edge is about 1½ yards. Price 10c.



No. 2958—Maternity or Invalid Skirt. Cut in four sizes: Small 22-24; medium 26-28; large 30-32; extra large 34-36 inches waist measure. Size medium will require 3½ yards of 40-inch material. Price 10c.

No. 2949—Ladies' Shirt Waist. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 2¾ yards of 36-inch material. Price 10c.



No. 2928—One-Piece Dress. Cut in three sizes, 16, 18 and 20 years. Size 18 will require 4½ yards of 44-inch material. Width of skirt at the lower edge is about 1½ yards. Price 10c.

No. 2964-6891—A Pretty Costume. Waist 2964 cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 2891 cut in seven sizes, 22, 24, 26, 28, 30, 32 and 34 inches waist measure. To make this design for a guimpe. Price 10c.



No. 2770—A Simple Apron. Cut in four sizes: Small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. Size medium will require five yards of 36-inch material. Price 10c.

No. 2779—Ladies' House Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 5½ yards of 36-inch material. Width at the lower edge is about 2¼ yards. Price 10c.



No. 2795—Girls' Dress. Cut in three sizes, 12, 14 and 16 years. Size 14 will require 4½ yards of 36-inch material. Price 10c.

No. 2952—Girls' Dress. Cut in four sizes, 8, 10, 12 and 14 years. Size 12 requires 3¾ yards of 36-inch material for the dress, and 1¾ yards for the guimpe. Price 10c.



GALLOWAY'S SPECIAL 30-DAY HARVEST SALE SPREADERS

Note These Sale Prices

Here's your chance to buy a famous Galloway Manure Spreader at before-the-war prices. This low direct-from-the-factory price will save you much of your spreader money. Investigate. Find out what other spreaders cost. Then you will see how much you can actually save when you buy direct from Galloway.

Buy a GALLOWAY for QUALITY

The Galloway low prices are attractive. There is no other fine quality spreader that can compare with the Galloway at the price. But the price is not the only reason that you should consider the Galloway. Buy of Galloway for quality because it pays in the long run to get the best spreader made and that is the Galloway. Galloway Spreaders are built for service. The best materials that money can buy go into them.

Equipped with New Whirlwind Distributer

Galloway Spreaders now come with this new wide spreading attachment—the greatest spreader improvement in years. Absolutely pulverizes every bit of manure and scatters it six to seven feet, saving time and labor in spreading. Remember that Galloway has eleven other great features that enable the Galloway Spreader to spread more land with less effort—less horse and man power—than any other method known.

Write Today GET YOUR ORDER IN EARLY for a Galloway Spreader at these remarkable money-saving prices. Do not wait. This is Galloway's final marked-down price. First come first served. The present stock won't last long. Write today and get the full facts with complete descriptions. Near by shipping points save you on the freight.

Wm. Galloway Co. 139 Galloway Station
WATERLOO, IOWA

The New No. 8 Model
70 Bu. Cap'y — Best Galloway Makes

\$154⁷⁵

The Galloway No. 5
65 Bu. Capacity — An Ideal Machine

\$147²⁵

The Galloway No. 1 A
60 Bu. Capacity — A Great Value

\$139⁷⁵



**DIRECT FROM
THE FACTORY
Makes These Low
Prices Possible**

Breed Better Dairy Machines

By D. D. Aitken, President of Holstein Friesian Association of America

I FEEL that the time is most momentous in the dairy industry, that the Holstein-Friesian breeders and dairymen generally must meet a condition that is going to require their best thought, skill and patience if they hope to surmount the difficulties and emerge unscathed from the present embarrassing conditions.

The times are momentous. We all feel uncertain of the future, and while we may express opinions of the rosy outlook and may congratulate our neighbor upon his future to keep our own courage up, the fact remains that each one of us is in a peculiar state of mind. I am not prepared to say what the cause is, but it is a fact that we feel uncertain, we are worried, and the more we read the newspapers and see what is going on the world over, the calamities that are anticipated, and the unfortunate industrial unrest that is in existence, we wonder what the future has in store for us. The more we think and the more we try to solve it, the less we are satisfied.

The government through its representatives, and the states through their representatives, have seemingly satisfied themselves that the whole trouble grows out of the high cost of living, and their whole effort is extended to reduce the price of food products notwithstanding the fact that the world is short of food, it is only good prices that stimulate production, and I am afraid of the effect on production of this persistent and everywhere present effort of reducing the price of what the farmer has to sell. I believe we must forget their agitation and lend every possible effort to increasing the acreage of food plants in order that the world may be fed, and that the unrest may not be increased by a scarcity of food.

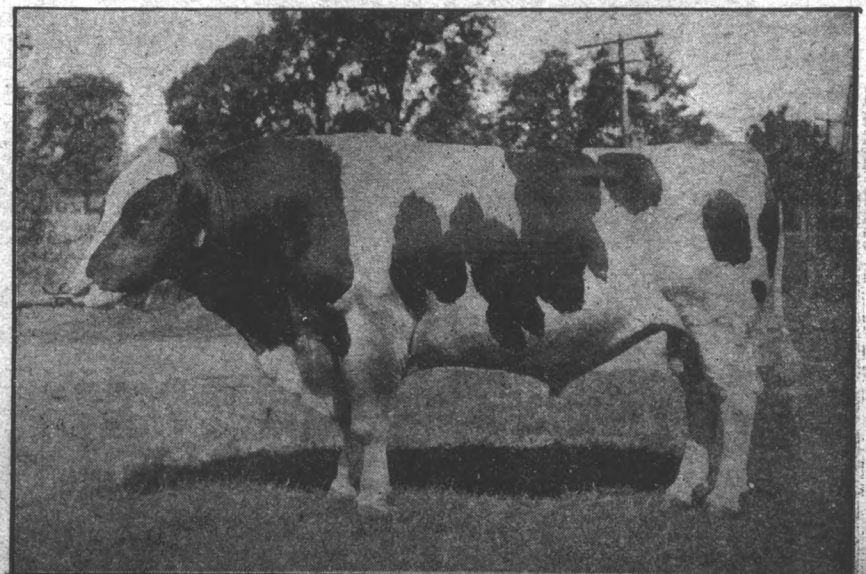
The pure-bred dairy live stock breeders, and the dairymen are perhaps the most affected by the present condition of mind of the consuming public. People cannot realize why milk should be fifteen or eighteen cents a quart, who bought it five or six years ago for ten or twelve cents a quart, notwithstanding if they are wage earners they are getting two or three times the wage they did, and if they are merchants they are receiving several times the profits that they previously received, and I am at a loss to understand how it is going to be possible for the dairyman to produce milk and sell it to the distributors for \$3.50 to \$5.00 per hundred if he has to pay from \$45 to \$55 a ton for bran, \$85 to \$90 a ton for cottonseed meal, \$100 a ton for oil meal, and other feeds in about like proportion. I can remember, as a youth, on the farm when we used to purchase bran in the summer

months at \$8.00 a ton and store for winter use, and corn and other products were worth in about like proportion.

The great bulk of the public who labor with their hands are earning two or three times the number of dollars that they were earning five years ago, and they are spending it like drunken sailors, with never a thought for the future. They are increasing the demand for everything that is consumable, and merchants and professional men are largely engaged in the same practice, and then wondering why the prices are so high when the producing ability of the country is less than normal. Some claim that it is the tremendous redundancy of currency and of credit that makes the high prices, others that it is the scarcity of products, but the fact remains that it is the unchecked demand of every person to gratify their then present desire without any regard to the cost or the effect it has upon prices. I am thoroughly convinced if every man, woman and child would only buy what it was necessary for him to have for reasonable comfort, it would not be six months before prices would be reduced, and while we will never again get down to the low scale of wage and product price it is certain to be hoped that we will not continue to swell like a dead toad in the sun, because if it continues the result will be the same as with the toad.

I believe we must work out a plan of efficiency in the production of the dairy products; we must realize we are manufacturers as well as breeders of pure-bred live stock, and dairymen; that milk, butter and cheese are the products we are engaged in manufacturing, and we must use machinery that is the most economical in the production of it. In those early days when bran was \$8.00 or \$10.00 a ton, corn thirty or forty cents a bushel, and oats twenty cents, you could use machinery that was wasteful in its manufacture, you could use a scrub machine called a dairy cow that could only turn out twenty pounds of milk a day at her very best, and with the very low prices of products and the very low price of labor, the loss might not be so apparent, but the man who feeds an inferior milking machine, the ordinary wasteful scrub cow, cottonseed meal at \$85 a ton, corn meal at \$75 a ton, and bran at \$50 a ton, will go busted if he keeps very many of that sort of machines in operation. In my opinion there is no excuse for asking the public to pay prices commensurate with a profit, or even the cost of production of milk under such conditions.

I have requested Professor H. W. Norton, of the Agricultural College of



Dudley E. Waters' Herd Bull is Awarded Grand Championship Honors.

CONE-SHAPE GRINDERS

IT PAYS TO GRIND ALL GRAINS

Look to the Grinders. They do the work! Bowsher's Cone-Shape grinders are the correct principle in Feed Mill construction. They mean larger grinding surface close to center of shaft; thus more capacity, lighter draft, longer life.

"Desire to express my appreciation of the long-lasting, trouble-proof Bowsher. Have used a No. 4 ten years with less than One Dollar per year for repairs." R. W. Watt, Jacobburg, O.

10 sizes; 2 to 25 H. P. Write for free catalogue. G. D. N. P. BOWSHER CO., SOUTH BEND, IND.

FENCE

Direct to Farmer at Wire Mill Prices

CATALOG FREE

KITSELMAN BROS. DEPT. 278 MUNCIE, INDIANA

American Fence

Full gauge wires; full weight; full length rolls. Superior quality galvanizing, proof against hardest weather conditions. Special Book Sent Free. Dealers Everywhere.

AMERICAN STEEL AND WIRE CO.
CHICAGO NEW YORK

LEARN AUCTIONEERING

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

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

**Gombault's
Caustic Balsam**

IT HAS NO EQUAL

For Human Body — It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions. CAUSTIC BALSAM has no equal as a Liniment.

Perfectly Safe and Reliable Remedy for
**Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and all Stiff Joints**

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills."
OTTO A. BEYER.
Price \$1.75 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

Only \$2 DOWN ONE YEAR TO PAY

\$38 Buys the New Butterfly Jr., No. 2 1/2.
Light running, easy cleaning, close skimming, durable.
NEW BUTTERFLY
Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on 30 Days' FREE TRIAL, and on a plan whereby they earn their own cost and more by what they save. Postal prices Free Catalog Folder. Buy from the manufacturer and save money. (5)
Albaugh-Dover Co., 2155 Marshall St., Chicago



Michigan, a director in the Holstein-Friesian Association, who is greatly interested in the subject and has done a large amount of research work along similar lines, to prepare for the Holstein-Friesian Association an article based on the experience of the Michigan Agricultural College and the agricultural colleges of other states in experiments of improving the dairy herds by the use of pure-bred dairy sires, and I am sure that all dairymen will be interested. I make this prophecy that that experience will show that the third pure-bred cross has resulted in the production of a machine of twice the productive ability as the original scrub from which the breeding started, and that the cost per pound of milk, or per pound of butter, have been reduced by more than forty per cent. This seems to me now to be the duty of every dairyman and of every breeder to take up, interest himself, and help bring about a condition that will make possible the production of these necessary dairy products at the lowest possible cost to the consuming public. I made a prophecy at the state meeting of those interested in animal industry, at Indianapolis a year and a half ago, that the farmers and dairymen would be the first persons that would be called upon to reduce the cost, to reduce the price of their product, and one of the orators, a gentleman very high up in the federal galaxy of administrators, scouted the idea that there would ever be a time when there would be any thought of reducing the price of the products of the farm and the price of farm foods because of the great demand there was for them. Notwithstanding that, in the state next east of Indiana—Ohio—they have had the dairymen indicted down there because they were attempting to work out a plan to more economically handle their products by making it possible for one representative to bargain for the product of the many in marketing the milk. There were none of them astute politicians, who thought it was worth while to take up the question of profiteering in the foods those people had to buy to feed their cows. I will venture the assertion that in the state of Ohio, as in Michigan, they are not averaging to pay over \$2.10 for wheat, notwithstanding the price is \$2.26 fixed by the government. I will venture the further assertion that the dairymen of the state of Ohio are paying on an average \$50 per ton for bran when the price was fixed at \$27.50 by the federal government at the time the government was handling the wheat and flour products.

It would seem the only thing that the city man can interest himself in is the cost of milk for his children. He will pay \$80 to \$100 for a suit of clothes for himself to wear, like he used to buy for \$35, and his wife will pay \$100 for a gown that she used to buy for \$40, but when it comes to milk for the children then the wail comes forth, a mighty noise is made, and it is the dairyman who has to bear the brunt of the onslaught. The man who gets up at four o'clock in the morning and works until dark, or as much longer as his strength will permit, with his family largely his only assistance, has to be made the goat for the city-well-to-do, or for the city mechanic who gets from \$5.00 to \$15.00 a day and works eight hours.

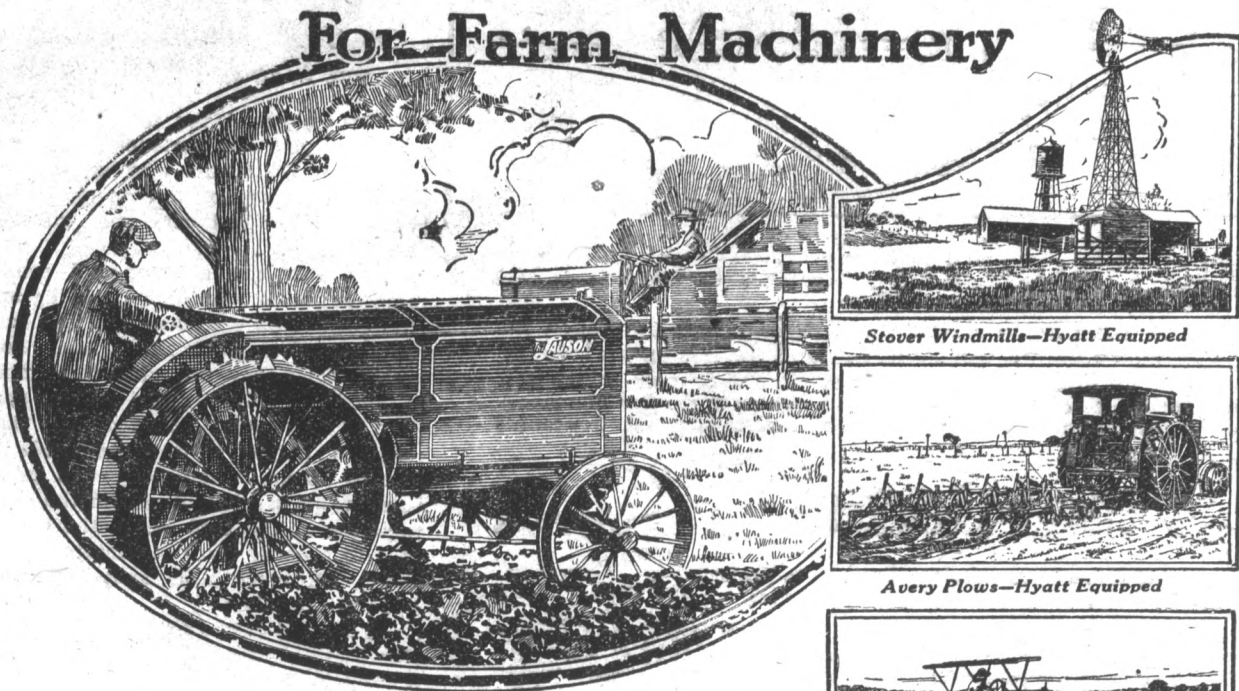
I will admit it gets on my nerves, that I permit myself to get wrought up over the situation. Still I realize that we must put up with this thing.

(Continued on page 436).

HYATT

ROLLER BEARINGS

For Farm Machinery



A Greater Agriculture

OVER 38,000,000 acres were added last year to productive acreage of American farms, in spite of the great shortage of labor. A twenty-billion dollar crop was raised.

The factor largely responsible for this remarkable showing is the farm tractor and power farming machinery. The tractor has given the farm dependable power, requires attention only when in use, accomplishes far more work in less time, and is capable of being used 24 hours a day every month in the year, if necessary.

The part the Hyatt bearings have played in producing this remarkable farm power unit, has been to provide an efficient and life-long protection for axles, shafts and other points of wear. Hyatt bearings make possible the delivery of more power at the drawbar and belt, at a saving of fuel and never require adjustment.

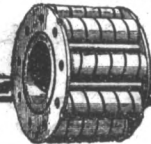
Hyatt bearings are now being used in nearly all of the best tractors built, in threshers, grain-binders, plows and other farm machinery, enabling them to provide a vitally important contribution to the making of a still greater agriculture.

HYATT ROLLER BEARING COMPANY

Motor Bearings Division
Detroit, Mich.

Tractor Bearings Division
CHICAGO

Industrial Bearings Div.
New York City



Stover Windmills—Hyatt Equipped

Avery Plows—Hyatt Equipped

Moline Binders—Hyatt Equipped

Aultman-Taylor Threshers—Hyatt Equipped

Hochenauer Alfalfa Grinders—Hyatt Equipped

A HORSE CAN TRAVEL WHERE AN AUTOMOBILE CANNOT GO

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



Neverslip
Red Tip
Horse
Shoe
Calk

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

THE NEVERSLIP WORKS
New Brunswick, N. J.

DICKEY GLAZED TILE SILOS

"The Fruit Jar of the Field"

Read what Dickey silo owners have to say. Send for Catalog No. 9

W. S. DICKEY CLAY MFG. CO.,

MACOMB, ILL.

Kansas City, Mo.

Chattanooga, Tenn.

Our Reliance Berry Spoon



Handsome Berry Spoon of the well known Community Silver Reliance Plate. A ten-year guarantee by the Oneida Community, with every spoon. Packed in suitable, individual cases. Popular rose design. Length, nine inches.

Sent postpaid for two subscriptions, or for one subscription and 60 cents.

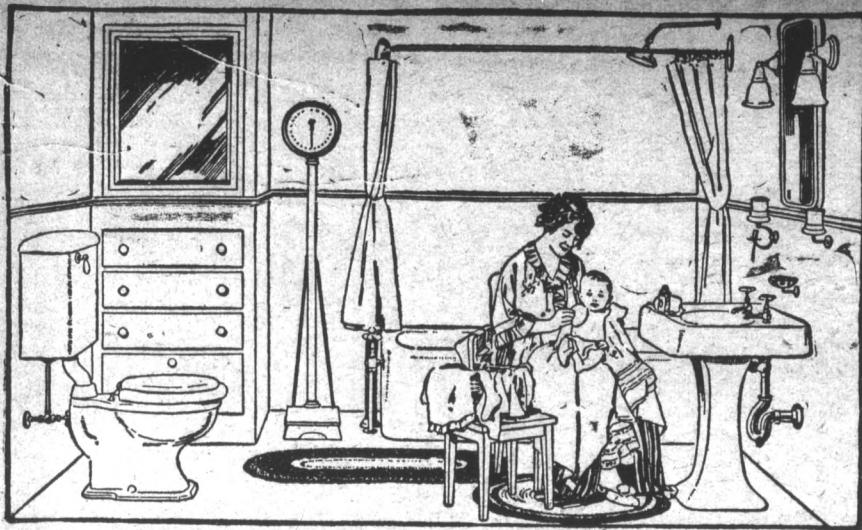
The Michigan Farmer, Detroit, Mich.

MAKE PIN MONEY IN SPARE TIME

The Michigan Farmer makes attractive offers to lady representatives who will get subscriptions from their friends

The Michigan Farmer, Circulation Dept., Detroit

When You Write to Advertisers Please Mention This Paper.



Good plumbing is not a luxury

EVERY farm home should have it. It means too much in genuine comfort, family health and saving in work to try to get along without. Have plenty of hot or cold water in a nicely fitted bathroom, kitchen and laundry—ready at the turn of a faucet. Nowadays no home is really complete without modern plumbing. You can get

"Standard" Plumbing Fixtures

for any kind of home from the small cottage to the large mansion. Many designs at a wide range of price.

Send for This Book showing "Standard" Fixtures especially adapted for farm homes. Beautiful bathroom fixtures, one-piece kitchen sinks, work-saving laundry tubs, etc.

You can always tell "Standard" Fixtures by the green and gold label. Backed with 44 years' manufacturing experience and nation-wide service. Write today for our booklet.

Standard Sanitary Mfg. Co., Pittsburgh

Permanent Exhibits in the Following Cities:

NEW YORK.....35 W. 31ST
BOSTON.....186 DEVONSHIRE
PHILADELPHIA.....1215 WALNUT
WASHINGTON.....SOUTHERN BLDG.
PITTSBURGH.....439-449 WATER
PITTSBURGH.....106 SIXTH
PITTSBURGH (E. E.).....6273 PENN AVE.
CHICAGO.....14 N. PEARIA
ST. LOUIS.....810 N. SECOND
EAST ST. LOUIS.....15 N. COLLINGSVILLE
CLEVELAND.....4409 EUCLID
CINCINNATI.....633 WALNUT

TOLEDO.....311-321 ERIE
COLUMBUS.....243-255 S. THIRD
CANTON.....1106 SECOND ST. N. E.
YOUNGSTOWN.....488 W. FEDERAL
WHEELING.....3120-30 JACOB
HUNTINGTON, 2ND AVE. & TENTH ST.
ERIE.....128 W. TWELFTH
ALTOONA.....918 11TH
MILWAUKEE.....426 BROADWAY
MILWAUKEE.....311-315 FIFTH ST.
LOUISVILLE.....321-323 W. MAIN
NASHVILLE.....815 TENTH AVE. S.

NEW ORLEANS.....846 BARONNE
HOUSTON.....COR. PRESTON & SMITH
DALLAS.....1200-1206 JACKSON
SAN ANTONIO.....212 LOSOYA
FORT WORTH.....828-830 MONROE
KANSAS CITY.....207 RIDGE ARCADE
SAN FRANCISCO.....149-55 BLUXOME
LOS ANGELES.....216-224 S. CENTRAL
DETROIT OFFICE.....414 HAMMOND BLDG.
CHICAGO OFFICE.....1010 KARPEN BLDG.



Growing Onions on Muck

Mr. C. E. Downing of Eaton County Tells Truck Growers at Recent National Convention How He Produces Big Onion Crops

I DO not want you to take what I am saying too seriously, as I am just an old farmer who has improved eighty acres of swamp waste which I have had very good success with onions.

Soils that are suitable and profitable for commercial onion growing are the ones to be considered. I will confine myself to muck soils. Muck soil varies more than upland in its composition as it is built up of various species of vegetation and sediment that has been carried on to the lowlands by water. The subsoil has in a great measure a great influence on the composition of the surface, as the under-soil to a certain extent contains crawfish. All muck soils look alike and that is the joker.

In looking over different onion areas for the last three years, I found good onions just here and there. In some places even where the culture was poor, good onions were obtained, and in other places failure was the result of good care. This has brought me to the conclusion that two-thirds of the onion acreage is planted on soils that will only give good yields in favorable seasons, and the most scientific and painstaking culture will not bring success on lands of poor structure and physical condition to mature 350 to 400 bushels to the acre in dry seasons and from 600 to 1000 in favorable seasons. There are plenty of the better lands in the Great Lake Basin.

My System of Cultivation.

I clean up all trash left on the field as soon as possible after onions are harvested, then plow, using a good jointer to get the top soil well under, so as to bury as many insects as possible. The ground is made firm with a heavy roller and this is followed with a leveler, as onions do much better on level ground. This saves work in the spring. Drag the land in the spring as soon as the frost is out two or three inches. The soil loosened will usually freeze again nights, but this will have a wonderful effect in making the soil fine and fluffy. Frequent working hastens the frost out of the ground, and early working when the muck is moist helps to pack the soil. A firm seed bed should always be the aim for any crop on muck. When the frost is out put on the fertilizer and thoroughly work it in. I practice putting on one thousand pounds of ten-ten phosphate and potash to the acre, to be followed by dressings of nitrate of soda later in the season.

After this is done roll and level again, and in case there are sticks and other rubbish on the field it should be hand-raked, for it is necessary to have the ground free from everything that will obstruct the drill or other tools.

Now stretch a wire across the field and stake it, and after it is stretched snap it a few times and it will make a perfect line. I use a small roller made of an eight-inch pulley with handles. This is weighted and I use it to run over the wire. When the stakes are removed, together with the wire, a distinct harrow mark is left to drill by.

The seed should be carefully tested before planting, and if ninety per cent germinates quickly, and the seed is in perfect condition and the drill distributes evenly, two pounds of seed is plenty to the acre. But you must be sure that the drill is sowing evenly

and that the seed is good. If you are not sure, it is wise to use three pounds. Onions should stand from six to nine plants to the foot, depending upon the variety of onions. Three or four days after seeding I drag the field with a small drag pulled by hand, the teeth being made of twenty-penny spikes and so arranged that they can be set at a desired slant. One man can easily drag four acres a day. By going over the field both ways with this drag before the sprouts get started on the onion seed, the weeds that would appear at the time the onions get above ground will be destroyed.

As soon as the rows of onions can be followed, cultivate with a wheel hoe, with knives set as close as possible without damaging the young plants, follow this with a drag crossways with the teeth set at an angle that won't drag out the plants. This will remove the crust in the row and destroy the small germinating weeds. This should be repeated in a few days before the onions get so large that they would be broken down. Aim to stir the ground often to destroy weeds before they become noticeable. This is the cheapest and the only way.

A Point in Running the Cultivator.

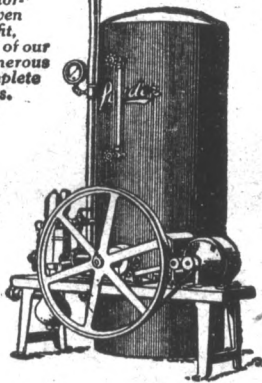
Suspend a sack between the handles and sew it up in order that it will not swing with the motion of the cultivator. Compel the operator, even if it is yourself, to pull all the weeds that the cultivator misses. These can be put into the sack and dumped at the end of the field. It will surprise you how soon the operator learns to catch most of the weeds with the cultivator. If the culture is carried on properly, there will be no necessity for resorting to general hand-weeding. I want to impress this idea of weeds. Fighting weeds on moist muck is like fighting fire—it must be done quickly. There are people who can not learn to cultivate until they are able to see weeds to kill. Such people will always have weeds and have trouble.

About the time the bulbs begin to form we shove dirt to them. It seems to keep the plants growing longer, and we get larger bulbs. It protects them from the sun, thereby preserving their quality and color. Onions exposed to the sun become changed in texture very similarly to the way a potato changes when it is exposed to the sun. Consumption is lessened with inferior quality, and since demand and consumption go hand in hand, the demand for inferior quality is decreased. Increased demand caused better prices. It is the rubbish that is thrown on the market that takes the profit out of the business.

Keep up cultivation as long as possible. If bulbing properly the leaves will alternately and freely break away from the main neck and form layers on the bulb. When the lower leaves die without parting at the base it signifies that corresponding layers are not being formed on the bulb, and the tendency is that the bulb is becoming a scullion or bottle-neck. This may be caused by the lack of available plant food.

This is the critical period. I sow seventy-five to one hundred pounds of nitrate of soda to the acre and work up a good dust mulch even if it is necessary to do it with a narrow, straight-toothed garden rake cut off so as to

An ideal Motor-Driven outfit, one of our numerous complete units.



"Everybody knows Leader-Traher Water Systems"

Everybody knows Leader-Traher water systems because of the completeness of the Leader-Traher line. For every imaginable need, in storing and pumping water, there is a Leader-Traher Product.

The Leader-Traher line of Tanks, Pumps, Power Equipment, and Complete Water Systems, electric motor or gas engine drives, for deep or shallow wells—any capacity—is the most comprehensive in America.

"Everybody knows"

Leader-Traher
Water Systems

Everybody knows Leader-Traher water systems for the perfection of their units. Highest quality, highest durability—these are the factors that have given satisfaction to all Leader-Traher customers and universal fame to the Leader-Traher line.

Everybody knows Leader-Traher water systems because of the unflinching cooperation between their manufacturer and their distributor, to give the customer just what he wants for his local needs.

If you want a water system to last a lifetime, write us today.

Kerr Machinery Corporation,
Detroit, Mich.

Please Mention this Paper When Writing to Our Advertisers

be used conveniently between the rows. Vigor can be attained in this way and a good crop produced. Neglect at this period would cause the crop to be a failure.

Don't be afraid of large tops. They mean large bulbs. Push the dust to them to cover them and protect them from the frost when late to ripen. If placed in the proper constructed place to cure the bulbs will absorb the juices from the large green tops. The result being excellent onions with good color and small necks.

When the tops are mostly down and most of them have lost their color we pull and place in crates. These are stacked five high in a single row and covered with boards. After two or three days, we run them over a one and five-eighth-inch screen and place them in the storage bins with the tops on. Onions will not keep well if topped before the neck is thoroughly shriveled so as to close out the air and keep fungus molds from getting in. They should not be left on the ground to cure any length of time, because dampness causes the bulbs that are ripe to start a second growth. This will not be noticeable for some time. By cutting onions that have been allowed to remain on the ground a small green second-growth can be detected. Bulbs may look sound and sell, but if they are allowed to remain on the ground they are sure to sprout within a few weeks. No process of storing except solid freezing will keep these onions, and even then when the frost comes out, the sprouts will start.

Onions must be handled with care. A bruised onion will always try to reproduce itself and send out a second growth. The chief cause of the unsightly onions seen in a grocery store is due to poor handling.

For the storing of the onions we have been using a long, narrow, V-shaped building. The sides of this building are made up of a series of lapping doors. In pleasant weather these doors are always kept open so as to give ventilation, while in cool or damp weather they are closed. Our bins are enclosed with chicken wire instead of slats. This permits a freer ventilation and is cheaper.

In the winter the lapping doors are covered with peat. Due to peat containing about ninety per cent of water which freezes in the winter, the house is practically enclosed in ice. Thus an even temperature is assured for the winter and the onions can be easily kept until along in May when they are almost certain to bring a fair price.

VEGETABLE GROWERS' MEETING.

(Continued from page 412).

Kalamazoo have never taken up the possibilities of cooperation with the celery growers, and the result is that large buyers from other Michigan cities, and even from New York, have come in to control the celery market. It is unfortunate that, due to various causes, Kalamazoo celery is losing its reputation on the market."

In the discussion which followed, it was brought out that the best seed now obtainable comes from France, but in this country owing to labor conditions, we cannot afford to use the labor necessary to care for the crop. Delegates also discussed the characteristics of various celery varieties. The golden varieties seem to be in the greatest demand, and if a grower does not have to contend with celery diseases in his soil, there is a splendid opportunity to grow the golden varieties. Mr. Levin closed the talk by advising growers not to buy plants from the Kalamazoo region, owing to the danger of the spread of root rot.

Mr. C. E. Downing, of Vermontville, who has had unusual success in growing onions on muck land, gave a detailed account of his methods, which may be found on the preceding page.

Studebaker

THE LIGHT-SIX

A BEAUTIFUL, clean-cut car of 119-inch wheelbase with plenty of room for five passengers, and a 50-horsepower motor that takes you over country roads at top speed and climbs the steepest grades without effort.

On its mahogany-finished instrument board are conveniently grouped a speedometer, oil pressure gauge, ammeter, lighting and ignition switches; upholstery is genuine leather. Gypsy-type top with plate glass windows in the back.

Its power and staying qualities have been extraordinarily demonstrated in the hands of thousands of enthusiastic owners.

Studebaker builds complete in its own factories practically every vital part of this beautiful LIGHT-SIX, thus reducing middlemen's profits to a minimum and making possible such sterling high quality at its unusually low price.

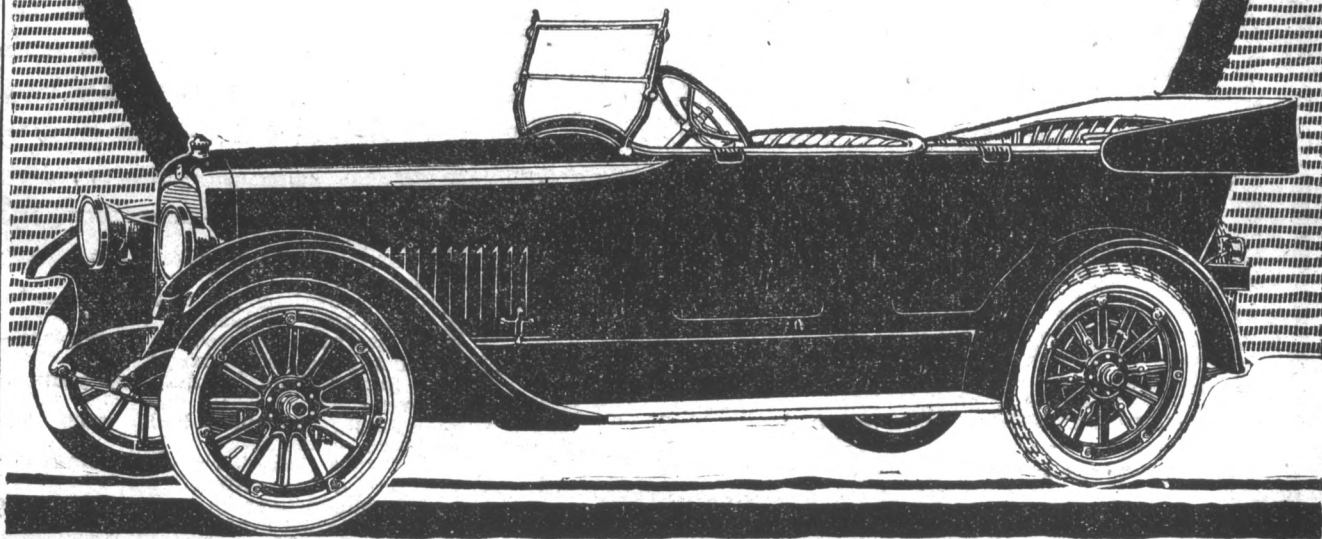
THE LIGHT-SIX
\$1685

THE BIG-SIX
\$2135

All prices f. o. b. Detroit

The Studebaker Corporation of America
Detroit, Mich. SOUTH BEND, IND. Walkerville, Canada
Address all correspondence to South Bend

Ask any Studebaker dealer for a demonstration ride in this New LIGHT-SIX



Universal
Bagholder

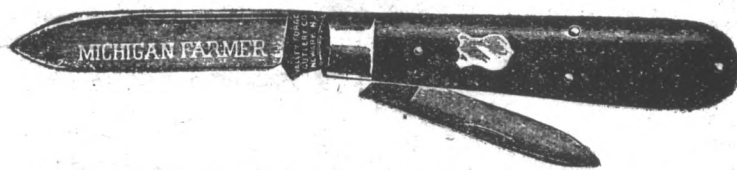


Handle Your Produce
the Easiest Way.

Buy the latest improved bag holder now—it pays for itself many times over in time and labor saved. Quickest to operate. Sacks cannot slip off. Will last ten years to a lifetime. Represents a cost of less than 50 cents a year—considering the high cost of labor you cannot afford to be without one. Price \$5.00 Duluth. If your hardware or implement dealer cannot supply you, we will ship same to you by express prepaid for 50c extra. Farmer agents wanted. Universal Bag Holder Co., Dept. M Duluth, Minn.

Seed Wheat No. 1 Red Champion. The Hardest, strongest, most productive variety, with the least foulness of any wheat on the market. For sale by W. J. Merriam, Almont, Mich.

Our Quality Knife



Made by the famous Valley Forge Cutlery Company. Two blades made of best razor steel. Ebony handle. Brass lined and well finished throughout. Guaranteed to give satisfaction. High-grade every way.

These knives were bought at pre-war prices, otherwise we could not make the attractive offers below. They are extra good value.

Sent prepaid for two yearly subscriptions to the Michigan Farmer at \$1.00 each, or for one subscription and 50 cents additional.

Cash for Your Spare Time

Put your spare time to pleasant and profitable use by cooperating with us in the securing of Michigan Farmer subscriptions.

A good way to get money for Thrift Stamps, Liberty Bonds, or to help in the high cost of living. From two to three dollars a week can be earned with little effort.

Details furnished upon request.

The Michigan Farmer,

Detroit, Mich.



No Moisture

You are not buying water, but just soft velvety flakes of salt when you order

COLONIAL SPECIAL FARMER'S SALT

Compare a 70-lb. sack of our salt with a 100-lb. sack of common salt and you will note that ours is larger.

It will pay you to try Colonial Special Farmer's Salt, and if your dealer hasn't got it, write us.

THE COLONIAL SALT COMPANY
AKRON, OHIO

Chicago, Ill. Buffalo, N. Y. Boston, Mass. Atlanta, Ga.

Stock Awards at West Mich. Fair

(Continued from page 415).

Junior bull calf—Lessiter's Sons, 1st; Bowditch & Sons, 2d.

Cow three years or over, with nursing calf by side—Lessiter's Sons, 1st; Bowditch & Sons, 2d and 3d.

Heifer two years old—Lessiter's Sons, 1st and 2d; Bowditch & Sons, 3d.

Heifer one year old—Lessiter's Sons, 1st and 3d; Bowditch & Sons, 2nd.

Senior heifer calf—Laylin, 1st and 2d; Bowditch & Sons, 3d.

Junior heifer calf—Lessiter's Sons, 1st and 2d.

Exhibitor's herd—Lessiter's Sons, 1st; Bowditch & Sons, 2d.

Breeder's herd—Lessiter's Sons, 1st.

Four animals, get of one sire—Lessiter's Sons, 1st.

Two animals, produce of one cow—Lessiter's Sons, 1st.

Senior champion bull, two years or over—Lessiter's Sons.

Junior champion bull, under two years—Lessiter's Sons.

Senior champion cow or heifer, two years or over—Lessiter's Sons.

Junior champion heifer, under two years—Lessiter's Sons.

Grand champion bull—Lessiter's Sons.

Grand champion cow or heifer—Lessiter's Sons.

Polled Durhams.

Bull three years or over—S. C. Kelly, Plymouth, Mich., 1st.

Bull one year old—B. D. Kelly & Son, 1st.

Senior bull calf—S. C. Kelly, 1st.

Junior bull calf—Kelly & Son, 1st.

Cow three years old or over—Kelly & Son, 1st; S. C. Kelly, 2d and 3d.

Heifer two years old—S. C. Kelly, 1st; Kelly & Son, 2d.

Heifer one year old—Kelly & Son, 1st; S. C. Kelly, 2d and 3d.

Senior heifer calf—Kelly & Son, 1st; S. C. Kelly, 2d.

Junior heifer calf—S. C. Kelly, 1st.

Exhibitor's herd—S. C. Kelly, 1st.

Breeder's herd—S. C. Kelly, 1st.

Four animals, get of one sire—S. C. Kelly, 1st; Kelly & Son, 2d.

Two animals, produce of one cow—S. C. Kelly, 1st; Kelly & Son, 2d.

Herefords.

Bull, three years old or over—Tony F. Fox, Pawam, 1st; Allen Brothers, Paw Paw, Mich., 2d and 3d.

Bull, two years old—Fox, 1st.

Bull, one year old—Allen Bros., 1st.

Senior bull calf—Fox, 1st.

Junior bull calf—Allen Bros., 1st; Fox, 2d.

Cow three years old or over—Allen Bros., 1st; Fox, 2d and 3d.

Heifer two years old—Allen Bros., 1st; Fox, 2d and 3d.

Senior heifer calf—Allen Bros., 1st and 2d; Fox, 3d and 4th.

Junior heifer calf—Allen Bros., 1st; Fox, 2d.

Exhibitor's herd—Allen Bros., 1st; Fox, 2d.

Breeder's herd—Allen Bros., 1st; Fox, 2d.

Four animals, get of one sire—Allen Bros., 1st; Fox, 2d.

Two animals, produce of one cow—Allen Bros., 1st; Fox, 2d.

Senior champion bull, two years or over—Fox.

Junior champion bull, under two years—Allen Bros.

Senior champion cow or heifer, two years or over—Allen Bros.

Junior champion heifer under two years—Allen Bros.

Grand champion bull—Fox.

Grand champion cow or heifer—Allen Bros.

HORSES.

Percherons.

Stallion four years old or over—Lonzo McClain, Lima, O., 1st and 3d; Ireton Brothers, Volo, O., 2d and 4th.

Stallion three years and under four—McClain, 1st; Ireton, 2d.

Stallion two years and under three—Michigan Agricultural College, 1st and 3d; McClain, 2d; Ireton, 4th.

Mare four years or over—McClain, 1st and 3d; M. A. C., 2d.

Mare, three years and under four—Ireton, 1st.

Michigan mare, three years or over—M. A. C., 1st.

Mare, two years and under three—Ireton, 1st.

Mare, one year and under two—McClain, 1st and 2d.

Mare and two of her colts—McClain, 1st and 2d; Ireton, 3d.

Stallion and four of his get—McClain, 1st; Ireton, 2d.

Breeder's herd—McClain, 1st; Ireton, 2d.

SPECIAL PRIZES.

The following are winners of the special prize medals offered at the fair by the Percheron Society of America:

Stallion three years old or over, bred

and owned by exhibitor—McClain, 1st prize of sterling silver medal.

Stallion under three years—McClain, 1st; M. A. C., 2d.

Champion stallion—McClain.

Mare three years or over—McClain.

Mare under three years—McClain, 1st and 2d; Ireton, 3d.

Champion mare—McClain, st; Ireton, 2d.

Four colts, get of same stallion—McClain.

Two colts, produce of same mare—McClain.

Champion stud, consisting of stallion and four mares—McClain.

Five stallions owned by exhibitor—McClain.

Best three mares—McClain.

Champion stallion, open class—McClain, 1st; M. A. C., 2d.

Champion mare, open class—McClain, 1st; M. A. C., 2d.

SHEEP.

American Merino.

Ram two years or over—Nye & Calhoun, Jonesville, 1st and 2d; Carl Moeckel, Munith, 3d and 4th.

Ram one year old—Nye & Calhoun, 1st and 3d; Moeckel, 2d and 4th.

Ram lamb—Nye & Calhoun, 1st and 2d; Moeckel, 3d and 4th.

Ewe, two years old or over—Nye & Calhoun, 1st and 3d; Moeckel, 2d and 4th.

Ewe one year old—Moeckel, 1st and 4th; Nye & Calhoun, 2d and 3d.

Ewe lamb—Nye & Calhoun, 1st and 2d; Moeckel, 3d and 4th.

Flock of four—Nye & Calhoun, 1st and 3d; Moeckel, 2d.

Pen of four lambs—Nye & Calhoun, 1st and 3d; Moeckel, 2d.

Champion ram, two years old or over—Nye & Calhoun.

Champion ram, under two years—Nye & Calhoun.

Champion ewe, two years or over—Nye & Calhoun.

Champion ewe, under two years—Moeckel.

Grand champion ram—Nye & Calhoun.

Grand champion ewe—Nye & Calhoun.

Pen of three yearling ewes—Nye & Calhoun.

Pen of three yearling rams—Nye & Calhoun.

Delaine.

Ram, two years or older—Nye & Calhoun, 1st and 3d; Moeckel, 2d and 4th.

Ram one year old—Nye & Calhoun, 1st and 3d; Moeckel, 2d and 4th.

Ram lamb—Nye & Calhoun, 1st and 2d; Moeckel, 3d and 4th.

Ewe two years or over—Nye & Calhoun, 1st; Moeckel, 2d and 3d; Robt. Ackerson, Munith, 4th.

Ewe, one year old—Nye & Calhoun, 1st and 3d; Moeckel, 2d and 4th.

Ewe lamb—Nye & Calhoun, 1st and 2d; Moeckel, 3d and 4th.

Flock of four—Nye & Calhoun, 1st and 3d; Moeckel, 2d.

Pen of four lambs—Nye & Calhoun, 1st; Moeckel, 2d; Ackerson, 3d.

Champion ram, two years or over—Nye & Calhoun.

Champion ram, under two years—Nye & Calhoun.

Champion ewe, two years or over—Nye & Calhoun.

Champion ewe, under two years—Nye & Calhoun.

Grand champion ram—Nye & Calhoun.

Grand champion ewe—Nye & Calhoun.

Pen of three yearling ewes—Nye & Calhoun.

Pen of three yearling rams—Nye & Calhoun.

Rambouillet.

Ram, two years or over—Nye & Calhoun, 1st; Moeckel, 2d and 3d; Ackerson, 4th.

Ram one year old—Moeckel, 1st and 3d; Nye & Calhoun, 2d; Ackerson, 3d.

Ram lamb—Moeckel, 1st and 2d; Nye & Calhoun, 3d and 4th.

Ewe two years or over—Moeckel, 1st and 2d; Ackerson, 3d and 4th.

Ewe one year old—Moeckel, 1st and 3d; Nye & Calhoun, 2d; Ackerson, 4th.

Ewe lamb—Moeckel, 1st and 2d; Nye & Calhoun, 3d; Ackerson, 4th.

Flock of four—Moeckel, 1st and 2d; Ackerson, 3d.

Pen of four lambs—Moeckel, 1st and 2d; Ackerson, 3d.

Champion ram, two years old—Nye & Calhoun.

Champion ram, under two years—Moeckel.

Champion ewe, two years or over—Moeckel.

Champion ewe, under two years—Moeckel.

Grand champion ram—Nye & Calhoun.

Grand champion ewe—Nye & Calhoun.

Grand champion ram—Nye & Calhoun.

Grand champion ewe—Nye & Calhoun.

AMERICA'S LEADING FUR HOUSE

TRAUGOTT SCHMIDT AND SONS

GET MORE MONEY FOR YOUR FURS

Our plant is the most complete in America. Established 1888, Capital \$1,100,000.

Ship to us and make sure of getting "The market's highest mark." WE DO NOT QUOTE A "SLIDING SCALE" OF PRICES. Instead we quote one dependable price so you POSITIVELY KNOW what your collection will bring. We charge no commission—pay all transportation charges and send money same day furs arrive.

FREE!

Write for valuable booklet, "Successful Trapping", price list, market report, shipping tags, etc.

TRAUGOTT SCHMIDT & SONS.
199 Monroe Ave., Detroit, Mich.

LET US TAN YOUR HIDE.

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

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

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

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

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

BOOK ON DOG DISEASES And How to Feed

Mailed free to any address by the Author

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

America's Pioneer Dog Remedies

Please mention the Michigan Farmer when writing to advertisers.

JUDD FUR CO. CHICAGO

Get a Guaranteed Check For Your FURS

Ship direct to Judd Fur Co., Chicago, the Best Fur House in the Great Central Market—and get a Guaranteed Check for all your furs—a printed and signed guarantee that protects you and thousands of other trappers in U. S. and Canada. Here no commission charges or grading fees come out of your check. You get it all—by return mail. You also get the benefit of the

Judd Standard System of Higher Grading

which means extra money in your pocket. Ship to Judd. Have the satisfaction of dealing with a reliable house. Get more money by return mail, and a Guaranteed Check. Over \$1,000,000 Capital.

Investigate!

WRITE TODAY for Extra Profits Fur Price List and exclusive information on the fur market And Ship Now to

JUDD FUR CO.
1121N—West 35th Street Chicago, Ill.

Guarantee

JUDD FUR CO. CHICAGO, ILL.

Pay to the order of _____ Dollars

By _____

CHICAGO, ILL.

Most He Ever Got for MUSKRAT was from

Silberman and Sons

The House With a Million Friends

That's what Clarence Carpenter, Clayton, Mich., wrote when he got his check from us. Thousands of other trappers say the same thing. Andy Hofer, Cisma Park, Ill., writes he did not expect half as much as he received. Wm. White, Danvers, Ill., thanks us for our liberal grading and liberal prices. Dal Funnell, Kidder, Mo., got fifteen dollars more than he expected.

Try Our Market—Ship Today

and see for yourself why we have won the Seal of Approval from Trappers everywhere. Our business record of 59 years satisfying shippers; over \$2,000,000 capital assures you of more money and prompt returns. Write for Price List.

SEAL OF APPROVAL

S. Silberman & Sons
THE LEADING HOUSE IN THE BEST MARKET
1118N—West 35th St. Chicago Ills.

Grand champion ewe—Moeckel.
Pen of three yearling ewes—Moeckel.
Pen of three yearling rams—Moeckel.

Shropshires.

Ram two years old or over—Herbert E. Powell, Ionia, 1st and 4th; R. J. Williams, Middleton, 2d; D. B. Kelly & Son, Ypsilanti, 3d.
Ram one year old—Powell, 1st and 2d; Williams, 3d; Kelly & Son, 4th.
Ram lamb—Powell, 1st and 3d; Kelly & Son, 2d and 4th.

Ewe two years or over—Powell, 1st and 2d; Kelly & Son, 3d; Williams 4th.
Ewe one year old—Powell, 1st and 2d; Kelly & Son, 3d; Williams, 4th.
Ewe lamb—Powell, 1st and 2d; Kelly & Son, 3d; Williams, 4th.
Flock of four—Powell, 1st; Kelly & Son, 2d; Williams, 3d.

Pen of four lambs—Powell, 1st; Kelly & Son, 2d; Williams, 3d.
Champion ram, two years or over—Powell.
Champion ram, under two years—Powell.
Champion ewe, two years or over—Powell.
Champion ewe, under two years—Powell.
Grand champion ram—Powell.
Grand champion ewe—Powell.
Pen of three yearling ewes—Powell.

Pen of three yearling rams—Powell.

Hampshires.

Ram two years or over—A. M. Welch & Sons, Ionia, 1st and 3d; Wm. Newton, St. Clair, 3d.
Ram, one year old—Welch, 1st and 2d; Newton, 3d and 4th.
Ram lamb—Welch, 1st and 2d; Newton, 3d and 4th.

Ewe two years or over—Welch, 1st and 2d; Newton, 3d and 4th.
Ewe one year old—Welch & Sons, 1st and 2d; Newton, 3d and 4th.
Ewe lamb—Welch & Sons, 1st and 2d; Newton, 3d and 4th.

Flock of four—Welch & Sons, 1st and 2d; Newton, 3d.
Pen of four lambs—Welch & Sons, 1st and 2d; Newton, 3d.

Champion ram, two years or over—Welch & Sons.
Champion ram, under two years—Welch & Sons.
Champion ewe, two years or over—Welch & Sons.

Champion ewe, under two years—Welch & Sons.
Grand champion ram—Welch & Sons.

Grand champion ewe—Welch & Sons.
Pen of three yearling ewes—Welch & Sons.

Pen of three yearling rams—Welch & Sons.

Lincolns.

Ram two years or over—A. H. McLean, Kerwood, Ont., 1st and 2d; Angus McLean, Kerwood, Ont., 3d and 4th.

Ewe one year old—A. H. McLean, 1st and Angus McLean, 3d and 4th.
Ram lamb—A. H. McLean, 1st and 2d; Angus McLean, 3d and 4th.

Ewe two years old or over—A. H. McLean, 1st and 2d; Angus McLean, 3d and 4th.

Ewe one year old—A. H. McLean, 1st and 2d; Angus McLean, 3d and 4th.

Ewe lamb—A. H. McLean, 1st and 2d; Angus McLean, 3d and 4th.
Flock of four—A. H. McLean, 1st; Angus McLean, 2d; Newton, 3d.

Pen of four lambs—A. H. McLean, 1st and 2d; Newton, 3d.
Champion ram, two years or over—A. H. McLean.

Champion ram, under two years—A. H. McLean.
Champion ewe, two years or over—A. H. McLean.

Champion ewe, under two years—A. H. McLean.
Grand champion ram—A. H. McLean.

Grand champion ewe—A. H. McLean.
Pen of three yearling ewes—A. H. McLean.

Pen of three yearling rams—A. H. McLean.

Oxfords.

Ram two years or over—W. E. Gardner, Morley, 1st; Newton, 2d; Powell, 3d and 4th.

Ram one year old—Powell, 1st and 2d; George W. Heskett & Son, Fulton, O., 3d.
Ram lamb—Heskett & Son, 1st; Powell, 2d and 4th; Gardner, 3d.

Ewe, two years or over—Powell, 1st; Gardner, 2d; Heskett & Son, 3d; Newton, 4th.
Ewe one year old—Powell, 1st; Gardner, 2d and 3d.

Ewe lamb—Heskett & Son, 1st; Powell, 2d and 3d; Gardner, 4th.

Flock of four—Powell, 1st; Gardner, 2d; Newton, 3d.
Pen of four lambs—Powell, 1st; Gardner, 2d.
Champion ram, two years or over—Gardner.
Champion ram, under two years—Powell.
Champion ewe, under two years—Powell.
Grand champion ram—Powell.
Grand champion ewe—Powell.
Pen of three yearling ewes—Powell.
Pen of three yearling rams—Powell.

Southdowns.

Ram, two years or over—Newton, 1st.
Ram one year old—S. C. Kelly, Plymouth, 1st; Newton, 2d.

Ewe, two years or over—Kelly, 1st; Newton, 2d.
Ewe, one year old—Kelly, 1st; Newton, 2d.

Ewe lamb—Kelly, 1st; Newton, 2d.
Flock of four—Kelly, 1st; Newton, 2nd.

Pen of four lambs—Newton, 1st.
Champion ram, two years or over—Kelly.

Champion ram, under two years—Kelly.
Champion ewe, two years or over—Kelly.

Champion ewe, under two years—Kelly.
Grand champion ram—Kelly.
Grand champion ewe—Kelly.

ADDITIONAL CATTLE.**Aberdeen-Angus.**

Aged bull—W. E. Scripps, Orion, Mich., 1st; M. Kelly, 2d.
Two-year-old bull—Woodcote Stock Farm.

Yearling bull—Woodcote, 1st and 2d; Kelly, 3d and 4th.
Senior bull calf—Scripps, 1st; Woodcote, 2d.

Junior bull calf—Woodcote.
Aged cow—Woodcote, 1st and 2d; Scripps, 3d; Kelly, 4th.

Two-year-old cow—Woodcote, 1st; Scripps, 2d; Woodcote, 3d; Kelly, 4th.
Yearling—Scripps, 1st; Woodcote, 2d; Scripps, 3d; Woodcote, 4th.

Senior heifer calf—Woodcote, 1st; Scripps, 2d and 3d; Kelly, 4th.
Junior heifer calf—Woodcote, 1st; Scripps, 2d; Kelly, 3d.

Aged herd—Scripps, 1st; Woodcote, 2d; Kelly, 3d.
Young herd—Woodcote, 1st; Kelly, 2nd.

Get of sire—Woodcote, 1st; Scripps, 2d; Kelly, 3d.
Produce of cow—Woodcote, 1st; Scripps, 2d; Kelly, 3d.

Senior champion and grand champion female—Woodcote.
Junior champion female—Woodcote.
Senior champion bull—Scripps.
Grand champion bull—Woodcote.

THE KIND OF ANIMALS THE BUYER WANTS.

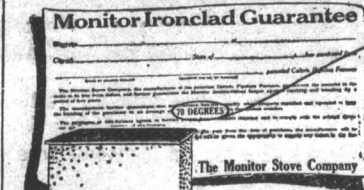
(Continued from page 406).

ed pastures, and at all times plenty of room should be allowed for hogs that are maturing. It is a mistake to think the hog should be closely confined in order to put on meat. In the winter warm, dry shelter should be provided where possible, and plenty of clean straw kept on hand to bed the hogs to keep them from getting stiff or rheumatic.

Feed the hogs until they weigh around two hundred pounds as they will then command the best price, and at no time should hogs be marketed until they weigh at least one hundred and fifty pounds. Hogs that are light or thin and unfinished sell from one to three dollars per hundred pounds under the price of "select" hogs, and in most cases are bought to go to other farms for further feeding. Which means the first feeder pays a high price for his one hundred and fifty pounds of meat while the finisher pays but little to add fifty to seventy-five pounds.

A leading buyer for a large packing house recently said: "I will say that the packers and butchers want most, and are willing to pay the most for, well finished, smooth, high-yielding hogs, and the more care given in the raising and feeding of hogs, the more they will bring on the open market. Buyers soon learn which man's hogs yield the best, and they are always willing to pay top prices for his animals."

Back of Every CALORIC This Binding Guarantee



70 Degrees Temperature -or Your Money Back!

THE CALORIC Pipeless Furnace is sold on the

basis of actual satisfactory service to you---in your own home. Only when service is proved do we consider the sale completed. For the CALORIC Ironclad Guarantee is a pledge as binding as a Government Bond.

When the CALORIC Heating Engineers say your house is adapted to CALORIC heating, you can depend upon absolutely successful results. After their O. K. is secured, whether your home has one room or eighteen, our guarantee protects you absolutely---70 degrees or your money back.



More Than 76,000 in Use

The CALORIC heats all your home through one register---without pipes. It sends a volume of moist, balmy air circulating into every corner of every room---giving the whole house a comfortable, springtime warmth that is cheery and healthful.

Most Practical for You

The CALORIC is installed in old homes or new, almost as easily as a stove. No bother. No tearing up of walls or floors. No pipes. And once installed, it will heat every room in your home perfectly---at a fuel saving of one-third to one-half.

How To Get The CALORIC

Within one or two days' time and at a surprisingly small cost, you can have this better heating system installed. See the CALORIC dealer in your town. If you don't know him, write to us direct. But be sure you get full information about the CALORIC now.

The coupon below will bring you the large illustrated CALORIC catalog free of charge. Clip, sign and mail it today.

See the CALORIC at State and County Fairs.

THE MONITOR STOVE COMPANY

In Business *The Monitor Family* **Pioneers of**
100 Years **100 Years** **BRANCH HOME:** **Pipeless Heating**
625 E. Michigan Ave., Lansing, Mich.
110 Woodrow Street **CINCINNATI, OHIO**

The Monitor Stove Co.
Cincinnati, Ohio

Gentlemen:—Please send your CALORIC Catalog—and dealer's name:

Name _____

Address _____

Farms and Farm Lands For Sale

160 Acre Middle West Farm, Income Last Year \$7,000.
Sacrificed for continued money-making: on improved road, 2 miles hustling R. R. town. 100 acres high cultivation tillage, raising 300 bu. potatoes the year, 65 bu. oats &c., producing more than \$7000 income last year; wire-fenced, 35-cow pasture, variety fruit, 8-room main house, tenant house, 90-cow basement barn, corn houses, granary, pig, poultry, tool houses. Owner made his money here, wishing to retire, to sell at once includes corn, grain binders, long list complete machinery, implements, wagons, everything for \$12,000, easy terms. Details page 83 Fall Catalog farm bargains Maine to Florida and west to Nebraska; copy free. STROUT FARM AGENCY, 814 B C, Ford Bldg., Detroit, Mich.

I Have One-Half Section of Best Virgin Soil
Lumbered about six years. Can be fitted for plough and 30 per acre. Timber to build all buildings and fuel for life-time. Have cleared 80 acres in two years. Forty acres almost ready for next year. Expect my potato crop this year to pay over one-half of it. High altitude and free from frost. Two and half miles from market on stone road. Will sell all or divide at \$25 acre cash or \$30 on terms. Should be looked over this fall while potato crop is still in the ground.
Ernest C. Smith, Owner, Kalkaska, Michigan.

For Sale
Ideal Sheep Land in heart of lower Michigan. Clover Seed Belt, where settlers are paying for land with clover seed. Fertile soil that grows wheat, corn, oats, barley, peas, clover, alfalfa, vetch, fruits and vegetables. Ten to Fifteen Dollars an acre. One Dollar an acre down. Long time for balance at 6%.

John G. Krauth,
Millersburg, Presque Isle County, Michigan.

105-Acre Dairy Farm at Hadley, Michigan
FIRST-CLASS, level, tile drained, dark clay loam productive soil. Ten acres good hardwood, 30 meadow, part alfalfa, 10 wheat. Elegant 8-room bungalow, heated 3pc. Bath. Finished maple floors throughout. Tinted walls, Gambrel roofed barn 30x32 feet, with silo and steel ranchions. Thirty rods to creamery, also on whole milk route. Half-mile to grade High School. Sacrificed at \$9,000—\$1,500 cash.
Holman Real Estate Agency, Lapeer, Mich.

Wanted—To hear from owners of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

10-Acres Berry Farm

Strawberries bearing now. Produced over \$1300.00 per acre so far this season. 9-room house, hardwood floors, all conveniences. Fine barn, garage. Three lots inside corporation. Water for our Skinner Irrigation System furnished by trout stream across farm. A rare buy for \$4000. Terms. Investigate this. Hugh Kephart, Ewart, Michigan.

Splendid 70 Acre Farm Home

Adjoining Milling, Mich. No. 1 level, clay loam soil, 35 meadow, 5 wheat, no woods. Fine 11-room house, 3 pc modern bath, cement porch 16 x 25 with covered drive way. Plenty outbuildings. All kinds fruit. Fine water privileges. 120 rods 12 grade High School, 1/4 mile Elevator and depot. \$100 the acre, third cash. Holman Real Estate Agency, Lapeer, Mich.

A 309-Acre Stock and Dairy Farm at \$75 per acre. A good 10-room house, beautifully located; full basement barn equipped with stanchions for 20 cows and other stock; capacity for 100 tons hay; 2 silos; good well with water piped to barn; market for milk and cream comes to the door. Address the owner, George W. Earle, Middleville, Mich.

127 Acres. House, two barns; in small town. Land—some level, some side hill. Lumber and wood on 40 acres to pay for all—only \$1,600. \$800 cash. Man working it for half lives on it. 5 mi. to R. R. town, 16 mi. to City of Corning, N. Y. If you want a farm for mere nothing, here it is. HALL'S FARM AGENCY, 33 Market Street, Corning, N. Y.

Farm for Sale 240 Acres in Washtenaw County, Saleem Twp., 7 miles North of Ypsilanti, price \$75 per acre, terms reasonable; buildings alone are worth price asked for farm. John Wagner, 1161 Helen Avenue, Detroit, Mich.

OHIO FARMS

I have over 400 farms any size and price I want. Free catalogs. H. H. Masters, Agent, Cambridge, O.

For Sale--Fruit Farm

of 120 acres: 1200 cherry trees, 900 apple trees. Good buildings. Trees bearing. Price \$7,500. Address Box 8-194, Michigan Farmer, Detroit, Mich.

Beautiful Central Mich. Farm, 148 acres, \$100 per acre. Extra fine buildings. Ernest LaFleur, Vermontville, Mich.

Rich Michigan Farms. Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan

Fruit and poultry farm for sale in Oakland county. 120 young apple trees. 1000 Leghorn chicks. Write F. J. Barrett, Detroit, Mich.

SUCCESS MILKERS LEAD IN

SERVICE—

Always ready for use. No complicated mechanism to get out of repair. Does not ask a holiday!

SAVING—

TIME—Takes only about thirty minutes to milk 15 cows and your little boy can do the job. You know how long it would take three hired men and what you would have to pay them.

LABOR—One man, woman or child can run Three Success Units and milk 15 cows in half an hour.

MONEY—No wages, board, room, etc., to be paid the Success Milker each week, while you are milking more cows and marketing more milk, which means more money in the Bank for you.

SIMPLICITY—

Only two parts of the Success Machine move while milking. That means dependability, durability and longer life. Success Milkers surpass all others in simplicity, lightness to handle and low cost of upkeep.

SAFETY—

Only two moving parts. Every inclosed surface easily made openly available. All can be thoroughly scalded and flushed in a few minutes.

SATISFACTION—

Are you satisfied when you have saved time? When your cows are in a prime producing condition? When you are able to sell more milk and make more money? Success Milkers are sold under an absolute guarantee to make you satisfied! A satisfied Success owner is our best advertisement.

SUCCESS—

Thousands of Units working twice a day for satisfied owners spell Success. You will find that we are very sincerely interested, not merely in selling you a Milker, but in seeing that it meets your requirements, gives you no trouble, more profit, and proves true to its name—

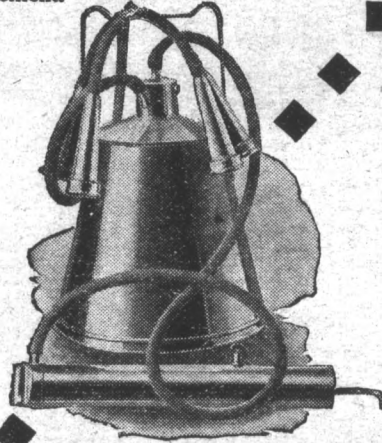
"A SUCCESS MILKER"

Write at once for catalogue and prices. Now is none too soon to get a Success Milker working for you.

ANDERSON SALES COMPANY

1035 Winnebago St.

Milwaukee, Wis.



BREEDERS' DIRECTORY

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

A bull calf, sired by our imported "EDGAR of DALMENY"

recently sold in Scotland at the Perth Bull Sale for the record price of 2,100 guineas, or \$10,584.00 in our money. This goes to show the quality of the

ABERDEEN ANGUS

that Mr. Scripps is breeding. He enjoys seeing good stock on "Wildwood" and believes that THE BEST IS NONE TOO GOOD.

"Edgar of Dalmeny" won the Michigan Grand Championship last September at the Michigan State Fair and was a winner in his class at the Chicago International last December.

We have a few females with calves at foot and re-bred to "Edgar of Dalmeny" that Mr. Scripps has consented to sell to reduce the fast growing herd.

WILDWOOD FARMS

ORION, MICHIGAN

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

WOODCOTE ANGUS

Established in 1900.

TYPE—QUALITY—BREEDING

The herd (tested annually) is absolutely free from tuberculosis.

A few bulls (no females) for sale

WOODCOTE STOCK FARM, Ionia, Mich.

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

REGISTERED GUERNSEYS

Young bulls of quality for sale, backed by generations of large producers. All tuberculin tested. Come and look them over.

AVONDALE STOCK FARM,
WAYNE, MICH.

OCTOBER 23, 1919

Howell Sales Co. of Livingston Co.

SIXTH ANNUAL SALE

At Howell, Mich.

80 HEAD OF REG. HOLSTEINS

The consignments to this sale are about 90% fresh cows or cows soon to freshen and a few good bulls. Watch for ad. later. Catalog ready Oct. 10.

JAY B. TOOLEY, Sec'y., Howell, Mich.

GUERNSEYS

196-368 These figures represent the average butter fat production of a grade herd in Minnesota before and after the use of a pure bred Guernsey bull. The improved herd brought the owner prosperity—the original only drudgery. Write to breeders for descriptions and prices and send for our free booklet, "The Grade Guernsey." The American Guernsey Cattle Club, Box 1-35 Peterboro, N. H.

Registered Guernseys

Two choice two year old Guernseys bred—\$500.
J. M. WILLIAMS, North Adams, Mich.

Guernsey Bull Barly of Strawberry Hill No. 52161 born April 24th 1917. Price \$300.00. Sire King Bell of Briarbank No. 28808; Dam Daisy Deep Dale No. 56428. Walter Phipps Farm, 80 Alfred St., Detroit.

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

GUERNSEYS must reduce herd, so offer a few choice females of Glenwood breeding also bulls, all stock of A. B. breeding, herd tuberculin tested.
T. V. HICKS, Battle Creek, Mich.

For Sale: Guernsey bull calf fawn and white, 10 months old, a beauty, Nancy's Sequel 56738; Sire, Halcyon Sequel 22326; Dam, Nancy's Nancy 54002.
Dr. W. R. Baker, 1380 West Fort St. Detroit, Mich.

Guernsey Bulls For Sale—St. Austell Dalton, 43028; born December, 1915. Sired by Don Diavolo of Linda Vista; Dam Langwater Suffragette. A. W. 2346 Class A 555.88 butterfat. Also Niavara 2nds Duke, 50564; born December, 1917. F. E. Robson, Room 377 M.C.R. Depot Bldg. Detroit.

FOR SALE Ten grade Guernsey cows all to freshen soon. Purebred Guernsey bull calf 6 mos. old.
Thos. B. Woodman, Paw Paw, Mich.

To avoid inbreeding will sell Binnie of years old, Dan Trixy of the Ridge No. 41837 three E. Granddam Abbie of Riverside B. F. 816.12 Champion Guernsey cow of Mich. want to sell into a registered herd where A. R. testing will be done.
E. J. Smallidge, Eau Claire, Mich.

\$75 gets 1 1/2 mo. old gdson Maplecrest Korn. Heng. and 27 lb. daughter of Johan Heng. Lad. and 18.48 lb. daughter of Cal. Jane Paul A. Dam is my best milk. er. Terms, M. L. McLAULIN, Redford, Michigan.

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

NO more bull calves to offer until next fall. Place your order for one from next fall's crop. My herd is on the state and federal accredited herd list.
A. F. LOOMIS, Owosso, 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.

Hatch Herd Ypsilanti, Michigan. (State and Federal Tested). Offers King Lunde Pontiac Korndyke 15th. No. 142487 out of a choice daughter of Pontiac Korndyke and a 30 pound son of King of the Pontiacs and Lunde Korndyke; over 1000 pounds of butter and 28,000 pounds of milk in year.

Registered Holstein heifers bred to a double grand R. son of the great May Echo Sylvia 41 lbs. butter and 1006 lbs. milk in 7 days. O. H. Giddings, Gobleville, Mich.

BREED BETTER DAIRY MACHINES.

(Continued from page 431).

and that the whole matter can be remedied by education, and by education alone. It is not because the city man, whether banker, professional man, or mechanic, wants to be unjust or wants to be unfair. It is because he is not informed and does not know anything about the conditions that confront the producers of food.

I shall be very glad indeed to have some practical dairyman, or some breeder of registered dairy stock, advise me how it is possible to make milk at \$4.00 per hundred, pay the wages they have to pay now, and buy bran at \$50 a ton and cottonseed meal at \$85 a ton. Still there is not fifteen per cent of the farmers or dairymen of the United States who are getting anywhere near \$4.00 per hundred for their milk.

What I fear is discouragement on the part of the dairyman, and I believe, men, that the only thing in the world for you to do, if you have not the best machinery for producing milk then breed into better machines. It may take a few years but this struggle is going to last for several years, and we will all be in better condition to meet the demand upon us when we are in possession of and operating, the most economical and efficient machinery for producing our products.

You may say it is a difficult and expensive problem for you to grade up your herds, that you have to pay tremendous prices for pure-bred dairy sires, but such is not the fact. I will venture the assertion that a great many carloads of pure-bred registered Holstein-Friesian bull calves can be purchased in the eastern dairy states at a very low price because there are as many bull calves born as heifers practically, and there is only a demand for about one-twentieth as many. The surplus in thousands of cases is used for veal because the breeders are not equipped to raise the calves, and because in certain localities the great bulk of Holstein-Friesians are bred and raised by dairymen. They use them as milking machines and they want an outlet for the bull calves. A county agent in the state of New York could interchange views with the county agent in Kansas and arrange for picking up and transporting a carload of calves that would be a credit to the dairy industry and at the end of the third generation would increase beyond your wildest expectations the production of your herd. The same thing would be true between the county agents of New Jersey and Pennsylvania with Missouri and Nebraska. It is simply a question of getting busy and not talking about it but doing something. It does not cost any more to raise this pure-bred bull calf after you have him than it does a scrub. There have been a great many pure-bred aged bulls of the Holstein-Friesian breed that sold as beef in the last year and a half for more than \$150 so you would have something in the end to count on to pay you back for any small investment that you made at the outset to improve your own factory production.

TO SUPERINTEND BIG GRAIN AND HAY SHOW.

PROF. CHRISTIE, who is in charge of the agricultural extension work in Indiana, has been appointed superintendent of the National Grain and Hay Show to be held at Chicago November 29-December 6, in connection with this year's International Live Stock Exposition. Professor Christie's association with the National Corn Exposition since its inception, both as a director and judge peculiarly qualifies him to take charge of this big grain and hay show.

If you want cows that will be a pride to your farm — get Jerseys.
If you want prize cows of unquestionable, pure-bred breed and championship calibre — get Jerseys.
If you want cows that feed for their udder, the profit part of a cow, and not for beef and bone — get Jerseys.

JERSEYS
The Pride-Prize-Profit-Breed

Jersey Milk is the richest, averaging 5.37% butter fat. Jerseys thrive in any climate. Butter and cheese made from Jersey Milk is the world's finest and makes big money for farmers.
Write today for "Profitable Facts About Jerseys."

The American Jersey Cattle Club, 322-MW, 23rd St., New York, N. Y.
An institution for the benefit of every Jersey owner

O. I. C. BOARS FOR SALE

One of the Best Herds in Michigan
Big type, growthy boars of all ages. I ship C. O. D., pay express and register in buyer's name. If you want a real choice boar, guaranteed right in every way, write me.
J. CARL JEWETT, R. 5, Mason, Michigan.



Holsteins Digest Coarse Feeds

Prof. Carlyle, while at the Wisconsin Experiment Station, asserts that "It will be readily seen that the Holstein cow has the ability to digest coarse feeds and work them over to a better advantage than Jerseys and Guernseys, and this is a strong point, in which I contend that the Holstein has a great advantage over any of our smaller breeds, and it is a point which is going to appeal to the farmer in the future far more than it has in the past." There's big money in the "Black and White" Holsteins.

HOLSTEIN CATTLE

Send for our booklets—they contain much valuable information.
THE HOLSTEIN FRIESIAN ASSOCIATION OF AMERICA Box 164, Brattleboro, Vt.

"Top-Notch" HOLSTEINS

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

"Winwood Herd" REGISTERED Holstein-Friesian Cattle

FLINT MAPLECREST BOY
His sire is Maplecrest Korndyke Hengerveld. His three nearest dams each over 80 lbs. of butter in 7 days. His dam and granddam both made over 1200 lbs. of butter in one year. It is the yearly cow we are looking for to deliver the goods. Flint Maplecrest Boy's Dam is Gluck Vassar Bell, 30.57 lbs. of butter in 7 days and 121 lbs. in 30 days. Her butter fat test is 5.27. We have a few choice bull calves about ready for service and one or two ready. Remember we are breeders and not dealers in cattle. Our price is right, breeding considered. Write us your wants, or come and look this herd over before you buy, and see for yourself. You will be glad you came. Herd tuberculosis tested.
JOHN H. WINN, Inc., Roscommon, Mich. Reference Roscommon State Bank.

FIVE HEAD OF Registered Shorthorns and Two Head of Registered Polled Durhams AT AUCTION.

At my farm 1/2 mile east and 1 1/2 miles south of Pigeon, Mich., Friday, Oct. 10th, at 1 p. m. One Roan Bull, 3 years old, weight 2200 lbs.; 1 Roan Cow, 3 years old, due Jan. 5th; 1 Roan Cow, 3 years old, bred Sept. 4th; 1 Red Bull Calf, 8 months old; one White Bull Calf, 4 months old. These cattle are of the Sultan and Gloster strain. 1 Spotted Polled Durham Cow, 7 years old, bred Sept. 21st; 1 Red Polled Durham Bull Calf, 7 months old. Also 5 good grade Shorthorn Cows; 10 head of young stock. Reg. O. I. C. Swine. One Boar and Brood Sow 18 months old; 2 Boar pigs 6 months old; also 20 grade pigs, and about 250 Pure-bred Barred Plymouth Rock Chickens; 3 fine Horses and all Farm Implements.
Reuben Zimmer, R. 2, Pigeon, Mich.

Shorthorns—Holsteins and Jerseys

If your community needs a pure-bred bull, write us for our cooperative breeding service plan, and we will see what can be done to place one there. We specialize on Milking Shorthorn bulls.

Palmer Bros., Orleans, Michigan.

FOR Sale. Four Registered Holstein Heifers, eight to ten mos. old. Two granddaughters of Maple Crest Korndyke Hengerveld. Price \$800 come and see them or write W. C. HENDEE & SON, Pinckney, Mich.

Wah-Be-Me-Me Farms

Pure Bred Registered
Holstein-Friesian Cattle

Herd Headed by
Segis Pontiac De Nijlander

A 32 lb. grandson of Michigan's great 35 lb. champion cow, Pontiac De Nijlander. His dam, Oak Valley Korndyke Heifer, Segis Farm, 32.00, also a Michigan prize winner last year and a prize winner in the National Ass'n. all classes, as a 4 year old last year. Her dam is a granddaughter of King Segis and as a 5 yr. old has 31.5 lbs. milk, 29.47 lbs. butter in 7 days and 2348.4 lbs. milk, 136.9 lbs. butter in 30 days. Segis Pontiac De Nijlander's dam as four year old (she is 5 yrs. now) made 122.1 lbs. butter and 221 lbs. milk in 30 days. Write for list of bull calves from 18 lb. 2 year olds to over 30 lb. dams. Have a five year old son of Hag Apple Korndyke 8th, a half brother to the \$125,000 bull for sale. Also Big Type Poland China hogs sired by a litter mate to the Illinois Grand Champion, Albert G. Wade, Prop. White Pigeon, Michigan.

THE HOLSTEINS

At Maple Avenue Stock Farm are under Government supervision. The entire herd have just been tuberculin tested and none reactor. A good place to buy that bull you are looking for, and I have two very fine, richly bred, and splendid individuals ready for any amount of service. I want to answer any question you may ask about them.
L. E. CONNELL, Fayette, Ohio

CLUNY STOCK FARM

100--REGISTERED HOLSTEINS--100
When you need a herd sire remember that we have one of the best herds in Michigan, kept under strict sanitary conditions. Every individual over 6 mos. old regularly tuberculin tested. We have size, quality, and production records backed by the best strains of breeding.
Write us your wants.
R. BRUCE McPHERSON, Howell, Mich.

HOLSTEINS OF QUALITY

Aldoz, fine, large cows for sale from three to six years old. Pontiac Korndyke, and Colantha Fourth-Johanna breeding. Also four heifers just being bred to one of Michigan's best young sires. All have just been Federal tested.
E. A. HARDY, Rochester, Mich.

For Sale Seven grade Holstein cows due to freshen in October and November; also two heifers.
HERBERT SHEPHERD, Bonnie Brae Farm, Byron Center, Michigan, R. 3.

For Sale: Jersey bull, Glory's Majesty No. 167066 dropped May 6, 1918. Solid color, black tongue and switch. His sire Majesty's Oxford Fox No. 13424. His dam, Noble's Glory No. 301015 Imp. with a R. M. record of over 400 lbs. butter with first calf. Will ship C. O. D., no females for sale at present.
Newman's Stock Farm, R. 1, Marlette, Mich.

LILLIE Farmstead Jerseys. A few heifers bred to freshen this fall, also yearling heifers; and two or three R. of M. cows. Colon C. Lillie, Coopersville, Mich.

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

Maple Lane R. of M. Jersey herd. Bull and heifer calves sired by a nephew the new World's Champion, Sophie's Agnes. Also R. of M. Red eggs and chicks.
IRVIN FOX, Allegan, Mich.

For Sale Registered Jersey bulls ready for service and bull calves.
SMITH & PARKER, R. 4, Howell, Mich.

The Wildwood Jersey Farm
Bulls for sale by Majesty's Oxford Fox 13424 and Emment-Lady's Majesty 150934, and out of R. of M. Majesty dams.
ALVIN BALDEN, Capac, Mich.

HARWOOD HEREFORDS

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

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

Herefords Polled and Horned blood lines embrace Fairfax. Polled Perfection and Prime Lad 9th breeding. Prices reasonable.
COLE & GARDNER, Hudson, Mich.

Herefords Bob Fairfax 494027 at head of herd. Stock for sale, either sex, polled or horned, any age. Priced right. **EARL C. McCARTY, Sec'y. H. B. Ass'n. Bad Axe, Mich.**

Hereford ton bull, 4 yrs. old, Perfection Bred; 12, 3 yr. old selected grade heifers, bred to bull, Fair Price. Write or come and see them. **OLEAR CREEK RANCH, Lake, Mich.**

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

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

BIDWELL SHORTHORNS

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

BIDWELL STOCK FARM
Box B, Tecumseh, Mich.

Richland Stock Farm SHORTHORNS

HOME OF THE MICH. CHAMPIONS
We offer for sale a few good dual purpose cows with calves at foot. Also two three year old bulls suitable for range purposes. We invite inspection.
C. H. PRESCOTT & SONS,
Office at Tawas City, Mich. Herds at Prescott, Mich.

Shorthorns Scotch and Scotch Topped cows and heifers, priced right. Come and see them or write **W. B. McQUILLAN, R. 7, Howell, Mich.**

Scotch Topped Cows For Sale. Bred by the Mich. M. V. Butler, Williamston, Mich.

Shorthorns New list, 27 bulls; 28 females. Feb. list all sold. Central Mich. Shorthorn Breeders' Assn., Oscar Skinner, Secy., Gowen, Mich.

The Kent Co. Shorthorn Breeders have both males and females for sale. Ask about them.
L. H. LEONARD Sec., Caledonia, Mich.

SHORTHORNS A young Mary cow and calf, also a young bull for sale. **Louis Babbitt, Williamston, Mich.**

Meadow Hills Shorthorns—For sale females of all ages, including one aged cow at bargain; also one roan bull ready for service. **Geo. D. Doster, Doster, Mich.**

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

Special Offer Shorthorns—Cows \$250 to \$300. Bulls \$200 to \$250.
Wm. J. Bell, Rose City, Mich.

SHORTHORN BULL CALVES FOR SALE. **Chas. Metzel & Sons, Ithaca, Mich.**

Milking Shorthorns of best Bates breeding 2 and 7 months old for sale. **E. H. Kurtz, Mason, Mich.**

Red Polled Bulls For Sale
also cows and heifers. **G. A. Cathoon, Bronson, Mich.**

HOGS

Registered Berkshire Boars: ready for service. A few gilts and sows bred for May and June farrow. Also spring pigs. **CHASE STOCK FARM, Marlette, Mich.**

REG. Berkshire boar past 1 yr old for \$75.00. Late spring pigs at \$40 each. No sows for sale.
B. B. REAVEY, Akron, Mich.

Big Growthy Berkshire Pigs
Registered. **W. H. Every, Manchester, Mich.**

Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him. It paid this man to use one of our boars it will pay you.

We have several that we are offering at prices which appeal to the small breeder who must of necessity be a conservative buyer. We have a few that are priced enough to be used in high class herds at breeding. Money invested in a good herd boar very speedily increases the value not only of what you sell but what you keep. Send for price list or better, visit the farm.

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

FREE DUROCS

To introduce the merits of our pure bred Durocs, we will give the following away.

No. 1. sow pig 8 weeks or over for heaviest pig either sex purchased from us, weight reported at 9 mos. of age.

No. 2. Boar 8 weeks or over for largest order of 8 weeks weaning pigs taken by one customer before Jan. 1, 1920.

No. 3. Gilt bred to farrow for largest order of 6 mos. or over pigs, not less than \$200 before March 1, 1920.

We ship C. O. D. and guarantee satisfaction.

EAGER BROS., HOWELL, MICH.

DUROC-JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

Attention Breeders and Farmers Now is the time to buy that Duroc Boar for fall service. We have some Corkers. March pigs will weigh 100 lbs. July list. Inspection Solicited. Prices very reasonable.
RUSH BROS., Oakwood Farm, Romeo, Michigan.

DUROC SOWS

sired by Walt's King 92949, the sire of 1st. prize winners last year, and bred to Orion's Fancy King the real big type Duroc. **NEWTON BARNHART, St. Johns, Mich.**

DUROC JERSEYS

CAREY U. EDMUNDS, Hastings, Mich.

DUROC Jersey spring boars sired by Orion Cherry King Col. 2nd. with size and feeding qualities.
W. C. Taylor, Milan, Michigan.

Registered Duroc Boars

We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 18478. Ira Jackson selected this boar to head our herd. Our prices are within every farmer's reach. **The Jennings Farms, Bailey, Mich., R. F. D. No. 1**

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

Michigan Farm Durocs Quality with size. You can't before buying breeding stock. Perfect satisfaction guaranteed. **O. F. FOSTER, Mgr., Pavilion, Mich.**

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

8734 Hampshires recorded from Jan. 1 to Apr. 1, 1919. Did you get one? Boar pigs only for sale now.
JOHN W. SNYDER, R. 1, St. Johns, Mich.

THE WORLD'S CHAMPION

big type O.I.C.S. Stock of all ages for sale. Herd headed by Calloway Edd, the World's Champion O. I. C. boar assisted by C. O. Schoolmaster, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. O. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Grandell's prize hogs, Cass City, Michigan.

O.I.C. One very choice 9 months old boar and 6 spring pigs sired by Grandell's Big Bone, (68928). **Glenwood Stock Farm, Zeeland, Mich.**

O. I. C. and Chester White Swine

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

O. I. C's One very good yearling boar, and this spring pigs to offer, registered free. 1/2 mile west of Depot. **Citizens Phone 124. OTTO B. SCHULZE, Nashville, Mich.**

O. I. C. 20 Choice Young Boars and a few fine gilts.
Clover Leaf Stock Farm, R. 1, Monroe, Mich.

O. I. C's 6 fine spring boars, 4 gilts and two sows. Orders looked for fall pigs. **John O. Wilk, R. 2 Alma, Mich.**

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

Raise Chester Whites
Like This
the original big producers

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

Chester White Boars of quality ready for service. Priced right and shipped on approval. **Floyd Banister, Springport, Mich.**

Big Type Poland Chinas

Sired by Smooth Mastodon a son of A's Mastodon and litter mate to the Illinois Grand Champion. Boar pigs and gilts, bred sows from above sire and Big Bob dams, the big boned, deep, long bodied kind at farmer's prices.

Wah-be-me-me Farms
White Pigeon, Michigan.

POLAND CHINAS

Spring boars and gilts for sale sired by our 900 lb. boar at 24 months old and their dams weigh 700 lb. These are the best lot of young boars and gilts we have ever raised.

We can furnish pairs and trios not related, inspection invited.

ALLEN BROS.

PAW PAW, MICH.

For 25 Years We have been breeding Big Type Poland China hogs of the most approved blood lines. Our new herd boar "Michigan Buster" is a mighty good son of the great "Giant Buster" dam "Mouw's Miss Queen 2." Some breeding! Litter of 14. We are offering some sows bred for fall farrow.
J. C. BUTLER, Portland, Mich.

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

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

Big Type Poland Chinas with quality Pigs for out of Upsome Matron 240346, and by Upsome Lad 9556, out of Eureka Giantess 241026. New herd header P's Bonanza Joe 100992, by Bower's Mammoth Joe 7441. **G. A. BAUMGARDNER, R. 2, Middleville, Mich.**

Sale of Big Type Poland Chinas Nov. 5th
Choice offering of individuals sired by Mammoth Ben, Gerstale Jones, The Giansman, Gerstale King and from dams carrying blood of Big Bob, Giant Ben, King of Wonders, etc. **Wesley Hile, R. 6, Ionia, Mich.**

L. S. P. C. A few good gilts left for Sep-
H. O. SWARTZ, Schoolcraft, Michigan

Big Bob Mastodon Sire is Caldwell Big Bob Champion at Iowa State Fair. Boars ready to ship. **C. E. Garnant, Eaton Rapids, Mich.**

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

For Sale Medium T. P. C. Hogs
All sizes. **J. E. Mygrants, St. Johns, Mich.**

SALE—72 MEDIUM P. C.
All ages. Nov. 12, 1919. **Tony B. Fox, Pewamo, Mich.**

Big Type P. C. Choice bred sows from Iowas greatest herds, the big bone prolific kind with size and quality.
E. J. MATHEWSON, Burr Oak, Mich.

Big Type P. C. Spring Pigs
Either sex. **A. A. WOOD & SON, Saline, Mich.**

Leonards Big Type Poland China boars, all ages fall boar pigs at a bargain, none better. Call or write, **E. B. Leonard, St. Louis, Mich.**

B. T. P. C. Some of the best males I ever raised. Two October Boars extra good. April pigs weigh 100 lbs. Price reasonable. **JOHN D. WILEY, Schoolcraft, Mich.**

Additional Stock Ads. on Page 439

LATEST MARKET REPORTS

SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, October 2.

WHEAT.

A further decline in the foreign exchange rates and an order to cancel sailings of ships now in America for Europe have resulted in general bearish feeling throughout the grain markets. Notwithstanding this, however, wheat prices are firm and quoted a cent higher than those ruling a week ago. The visible supply of this grain in the United States shows an increase of 3,695,000 bushels the past week. One year ago No. 2 red wheat sold on the local market at \$2.22 per bushel. Present Detroit prices are:

No. 1 red	\$2.26
No. 1 mixed	2.24
No. 1 white	2.24
No. 2 red	2.23
No. 3 red	2.19

CORN.

With a large amount of grain for the United Kingdom waiting at the seaboard, and with the new loading of vessels prohibited, it was impossible to hold prices. It is known, however, that the derangement is merely temporary, and that as soon as the grain can be moved the demand should be keener by reason of this interruption. The visible supply of corn increased 300,000 bushels the past week. It is reported that new corn is being purchased in Indiana on a \$1 basis. Eastern buyers are taking advantage of the cessation of foreign shipments to lay in their supplies for the coming winter. One year ago No. 3 corn was quoted on the local market at \$1.35 a bushel. At Chicago No. 2 mixed is now quoted at \$1.41½@1.42½; No. 2 yellow at \$1.41½@1.45; December at \$1.26½; May \$1.24½. Trading in Detroit is a little firmer on the following basis:

Cash No. 3	\$1.49
No. 3 yellow	1.51
No. 4 yellow	1.49
No. 5 yellow	1.48

OATS.

Oat values are up from the prices quoted a week ago but the weakness noted in corn is reflected here. Some foreign buying was noted in Chicago on Monday, presumably for export to countries where labor difficulties have not paralyzed traffic. The visible supply of oats in this country decreased 675,000 bushels during the week, a bullish factor in our markets. A year ago standard oats were quoted at 72½c. Present Detroit prices are:

No. 2 white	74
No. 3 white	72½@73
No. 4 white	71½@72

RYE.

This grain is steady at the higher figure quoted a week ago. At Detroit cash No. 2 is quoted at \$1.42 a bushel.

BARLEY.

Dealers through the state are handling some barley, although the volume is relatively small. The Detroit board quotes the grain at \$2.40@2.50 per cwt. for cash No. 3.

BEANS.

A very quiet market for the new crop of pea beans prevails. Dealers contend that it is impossible to sell the product at this time and consequently they are obliged to reduce the quotations. During the past week five million pounds of foreign beans were received at San Francisco for distribution in this country. There is a general demand among bean growers in the important producing states for tariff protection to prevent the destruction of the bean industry through competition with cheaply grown products from the Orient. In New York choice pea beans are quoted at \$8.25; do common to fair \$7@8 per cwt. At Detroit the market is active and there is a fair demand, immediate and prompt shipment being quoted at \$7.15 per cwt.

FEEDS.

The mill feed market in the east is quiet and buyers there continue to hold off in anticipation of lower prices. Western bran is selling in New York City at \$42@42.50, and middlings at \$56@58 per ton in sacks. At Detroit

quotations are unchanged as follows: Bran \$44; standard middlings \$56@57; fine middlings \$65; coarse corn meal \$64; cracked corn \$65; corn and oat chop \$55 per ton.

SEEDS

A considerable volume of seed is now being moved, and the market is active and steady. In Toledo prime new seed is quoted at \$29.80; alsike at \$26.50; timothy \$5.70. At Detroit the prime red clover is quoted at \$29.50; alsike \$25.75; timothy \$5.50.

HAY.

The local hay market is firm and the product is in good demand. Offerings are increasing but shippers complain of a scarcity of cars. Quotations are: No. 1 timothy \$29.50@30; standard \$28.50@29; No. 2 timothy \$27.50@28; No. 1 mixed \$24@25; No. 1 clover \$24@25.

Pittsburgh.—Clover and clover mixed hay is exceedingly scarce while all other grades are readily disposed of on arrival at top prices. Quotations are: No. 1 timothy \$30@31; No. 1 light mixed \$29.50@30; No. 1 clover mixed and No. 1 clover \$31.50@32.

POTATOES.

The potato market situation is somewhat mixed. At Detroit the trade is operating on a lower basis with the demand and movement slow and the market weak. Michigan round whites are selling here in 150-lb. sacks at

\$4.00. In Pittsburgh the market is unsettled with Michigan stock at \$4.50 per 150-lb. sack. A steady market prevails in New York, while in Philadelphia the demand and movement are good and the market stronger. Cleveland has a weak trade with Wisconsin stock held at \$4.40@4.50 per 150-lb. sack. In Chicago there was a brisk demand on Wednesday with the trade strong and prices steady. Wisconsin round whites are selling there at \$2.40@2.50 per cwt. In Minnesota farmers are receiving \$1.95@2.10 per cwt. for white varieties delivered at side track.

BUTTER.

A general advance is noted in butter prices since a week ago. Supplies are less liberal, especially of the higher grades. At Detroit the fresh creamery stock is now quoted at 57½c, and the same grades in one-pound bricks at 57½@62c. In Chicago the trade is unsettled, with creamery stock bringing 49@62½c. The New York trade is firm with the range from 54@65c for creamery grades, while Philadelphia is buying western creamery extras at 65c per pound.

CHEESE.

No important changes are noted in the cheese market, in fact the tone appears steadier than a week ago. The Canadian markets have been exporting, and prices are higher and generally above the British commission's 25c bid. At Detroit Michigan flats of

June make are jobbing at 33c; single daisies 30c; bricks 33½c. Whole milk specials bring 30½@31¼c in New York and do average run 30@30½. Philadelphia trade is paying 30@32c for full milks.

EGGS.

Higher egg markets prevail with the situation strong, due to a normal demand and decreasing production. At Detroit fresh eggs bring 48@52c, according to quality. Higher quotations obtain in Chicago as follows: Firsts 51@53½c; ordinary firsts 44@45c; storage packed firsts 54@55c. In Philadelphia the price for western extra firsts and firsts has advanced to \$15.90@17.10 per case.

DETROIT CITY MARKET

An easier tone prevailed in potato marketing on the city markets this week. The price range was from \$1.60 1.75 per bushel; apples sold at \$2.25 @3 for No. 1, and \$1.50@2 for No. 2; cabbage 75c@81; grapes \$2.75@3; melons \$1.50@2.50; onions \$2.25@2.50; peaches \$3.50@4.50; pears \$3@4.50; tomatoes 75c@81; hens 30c per lb; springers 27@31c; fresh eggs 55@57c per dozen.

WOOL

The receipts of wool at Boston show a steady gain for the past several weeks in arrivals of both foreign and domestic shipments. The total receipts, however, since January 1 are 8,121,568 lbs. below that for the corresponding period in 1918. Medium wools are a little easier, while the urgent demand of manufacturers for the best stock keeps the latter wools firm to higher in price. At the London wool sales prices advanced fifteen per cent above those of the former series, these prices breaking all former records. American buyers were active in these sales. Arrangements have been made through the British government for the sale of 50,000 bales of Australian and New Zealand wools in Boston by auction during December. All fine wools are firm on a steady basis. Half-blood fleeces are quoted at 81c in Boston, and fine unwashed clothing at 72@73c; fine unwashed delaine at 83@84c per pound.

GRAND RAPIDS

Sales of timothy seed this fall have been the largest in several years. The two inches of rain recently enabled farmers to seed many acres. Little or no clover has been sown, due to the extreme scarcity and high prices. Reports from all sections in western Michigan are that the clover seed crop is a failure, due to the dry weather. The price of potatoes declined to \$1.35 last week, owing to the great quantity shipped in from points 60 miles distant including Greenville, which in former years has been a potato market. Even the price of \$1.35 a bushel, equivalent to \$2.25 per cwt, is above the paying price at outside points of \$1.90@2 per hundred. The Michigan Potato Association has issued a statement that the late crop will fall 4,000 cars short of last year, due to weather conditions. The estimated shipment this year is 7,000 cars. There was a further decline in the price of Michigan white beans to growers to \$6.25 per hundred. Threshing is general and late planted indicates better yield than the reports made a month ago.

LIVE STOCK NEWS.

The Live Stock Commission's first horse and mule sale held in their barn in Bloomington, Illinois, recently, was considered a success. Prices paid were not high, but they were as good as foreign dealers could afford to pay. The sale opened with 115 horses and 75 mules offered. A Chicago man bought the highest priced horse for \$245, and the highest priced mule was sold for \$302.50. Another sale will be held in three weeks.

Illinois farmers desiring to move sheep or lambs from the public stock yards to points within the state for purposes other than slaughter will have to have the stock dipped, according to a ruling made by the state department of agriculture.

Numerous stockmen have been looking for light steers in the Chicago market recently with a view of roughing through the winter on alfalfa hay and a little corn, putting them on grass on a ration of corn next spring.

Live Stock Market Service

Reports for Thursday, October 2nd

BUFFALO.

On our market today hog prices are generally lower, pigs going at \$16@16.50; heavy hogs \$17; mixed lots at \$17.25@17.35. Lambs are higher at \$16.75, while the best calves are bringing \$23.50.

DETROIT

Cattle.

Receipts 2,085. Market steady. Best heavy steers \$11.00@12.00; Best handy wt bu steers 9.00@10.00; Mixed steers and heifers 7.50@8.50; Handy light butchers 7.50@8.00; Light butchers 6.50@7.00; Best cows 9.00; Butcher cows 7.00@8.00; Cutters 5.75@6.00; Canners 5.00@5.50; Best heavy bulls 8.00; Bologna bulls 7.00@7.50; Stock bulls 6.00@7.00; Feeders 8.50@9.50; Stockers 7.00@8.00; Milkers and springers \$6@125

Veal Calves.

Receipts 1,178. Market steady. Best \$22.50@23.00; Others 8.00@18.00

Sheep and Lambs.

Receipts 7,173. Market steady. Best lambs \$15.00@15.50; Fair lambs 12.50@14.00; Light to common 9.00@11.50; Fair to good sheep 6.50@7.25; Culls 3.00@4.50

Hogs.

Receipts 6,221. Market is 25@35c lower. Pigs \$16.00; Mixed hogs 16.00@16.25

CHICAGO.

Hogs.

Estimated receipts today are 25,000; holdover 5,493. Market 25@50c lower. Bulk of sales \$14@16.25; tops \$16.35; heavy 250 lbs up medium, good and choice \$14.50@16; medium 200 to 250 lbs medium, good and choice at \$15@16.25; light 150 to 200 lbs common, medium, good and choice \$15.50@16.35; light lights 130 to 150 lbs common, medium, good and choice at \$15@16; heavy packing sows 250 lbs up, smooth \$13.75@14.25; packing sows 200 lbs up rough \$13.25@13.75; pigs 130 lbs down medium, good and choice at \$14.75@15.50.

Cattle.

Estimated receipts today are 13,000. Market steady to strong; calves are 50c lower. Beef steers, medium and heavy weights 1100 lbs up, choice and prime \$16.50@18.25; do medium and good \$11.25@16.50; do common \$8.50

@11.25; light weight 1100 lbs down, good and choice \$15@18.15; do common and medium \$8@15; butcher cattle, heifers, common, medium, good and choice \$6.50@14.75; cows, common, medium, good and choice \$6.50@13.50; bulls, bologna and beef \$6.75@11.75; canners and cutters, cows and heifers \$5.50@6.50; do canner steers \$5.75@8.25; veal calves, light and handyweight, medium, good and choice \$19.50@20.75; feeder steers, common, medium, good and choice \$7@12.50; stocker steers, common, medium, good and choice \$6.25@10; do cows and heifers, common, medium, good and choice \$6@8; stocker calves, common, medium, good and choice \$8@10; western range cattle, beef steers, medium, good and choice \$11@15; do cows and heifers, medium, good and choice at \$7.75@13.

Sheep and Lambs.

Estimated receipts today are 32,000. Market is steady to a shade higher. Lambs 84 lbs down, medium, good, choice and prime \$13.75@16.15; do culls and common \$9@13.25; spring lambs, medium, good choice and prime \$9.50@11.75; ewes, medium, good and choice \$6.75@8; ewes, cull and common \$3@6.25; breeding ewes, full mouths to yearlings \$7@13.25; yearling wethers, medium, good and choice \$11.25@13.25.

BUFFALO.

October 1, 1919.

Cattle.

Receipts five cars. Steady; prime heavy steers \$15@16; best shipping steers \$16; medium shipping steers \$12.50@13.50; best native yearlings, 950 to 1000 lbs \$14@15; light yearlings good quality \$11.50@12.50; best handy steers \$12.50@13; fair to good kinds \$10.50@11; handy steers and heifers mixed \$10@11; western heifers \$10@11; best fat cows \$9.50@10.75; butchering cows \$7@8; cutters \$6@6.50; canners \$4@5; fancy bulls \$9@10.50; butchering bulls \$7.50@8.50; common bulls \$6@7; best feeding steers, 900 to 1000 lbs \$9@10; medium feeders \$8@9; best stockers \$7@8; light to common \$6@7; best milkers and springers \$75@150.

Hogs.

Receipts five cars, 50c lower; heavy and yorkers \$17.75@18; pigs and lights \$16.75@17.25.

Sheep and Lambs.

Receipts two cars; 50c higher; top lambs \$16.50; yearlings \$9.50@10.50; wethers \$8.50@9; ewes \$7@7.50.

Calves.

Receipts 900; market steady; tops at \$23; grass calves \$7@9.

NEW YORK PRODUCE MARKET.

Butter.—Butter of desirable quality seems to be getting more and more scarce. The shrinkage in total receipts at this market during this week has been 12,000 tubs, as compared to receipts of last week. Demand for high-quality butter continues unprecedented but the demand for under-grade stocks is very limited. However, it can be said that buyers are taking more under-grade butter than for some time and in consequence receivers are feeling a greater optimism over the situation. There has been considerable export inquiry but the purchases have been small. There seems to be a real desire on the part of exporters to secure butter, however, and it is expected that there may be considerable such trade in the near future. The price of high-quality butter has advanced better than three cents since last Saturday. While there has been some gain in quotation of medium quality goods it has not been in the same ratio as for extras or higher scoring butter. Established quotations at the close Friday were as follows: Extras 62c; higher scoring than extras 62½c; firsts 53½c; seconds 50½c.

Cheese.—While warehouse statistics show better than 12,000,000 pounds more cheese in storage than this time last year the market seems to be gaining strength. Local demand throughout the week has been strong. Receipts, however, have been less by about 5,000 boxes than for last week. There is practically no export demand but it is very apparent that local consumption is considerably above normal. Quotations are as follows: Common to good 26@29½c; average run 30@30½c; specials 30½@31½c.

Eggs.—Egg receipts have decreased very materially during the past week. Undoubtedly that is due to the natural decrease in production at this season of the year. The quality of stock being received continues poor and there is scarcely enough high quality stock among the arrivals to meet the demand. Values have increased somewhat during the week, especially those of high-quality stock. Medium to under-grade eggs have moved very slowly during the week. Quotations are as follows: Firsts 53@56c; extra firsts 57@59c; extras 60@61c.

Poultry.—The first part of the week witnessed a considerable activity but because of the Jewish holidays the business decreased very markedly. Receipts were less by about 50 cars than those of last week. Quotations are as follows: Chickens 31@33c; fowls 32@35c; old roosters 19c; ducks 35@38c.

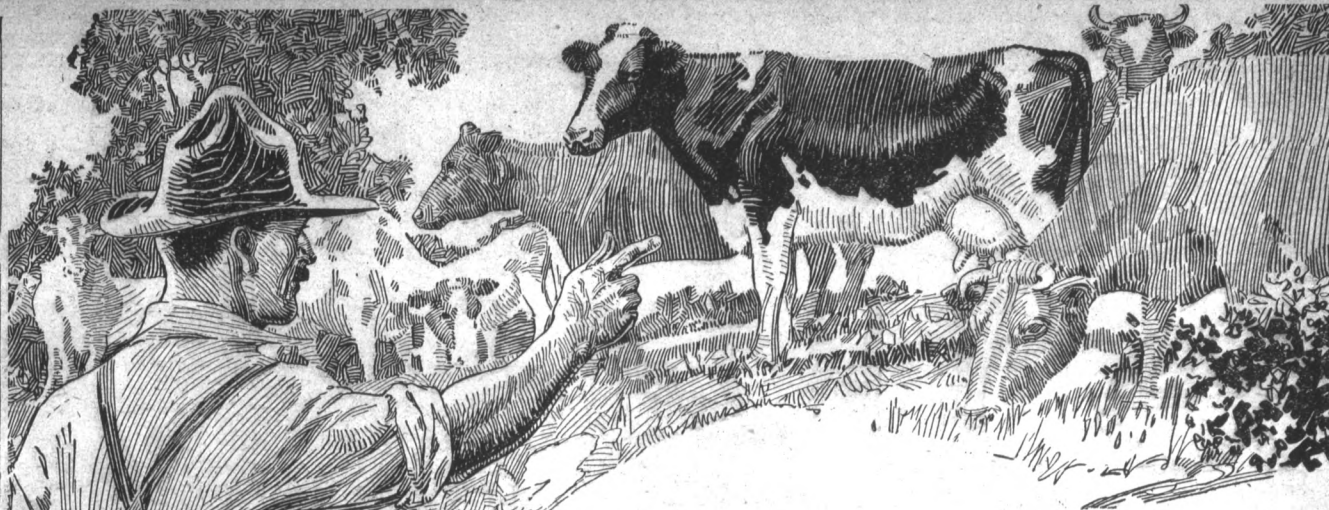
VETERINARY.

Rheumatism.—I have a brood sow that raised a litter of pigs ready to wean. A few days ago she went lame in one hind leg and then in a day or two it shifted to the other hind quarter. Now it seems to affect her all over. Our local veterinary thought it was caused by feeding too much skim-milk. C. W., Morley, Mich.—Your sow suffers from rheumatism and she should be kept in a dry, comfortable pen. Give her 19 grains of sodium salicylate and three grains of potassium iodide in feed three times a day.

Cannibal Sow.—I have a thoroughbred sow that had a litter of 12 pigs. She killed and ate all but four. The last one was three weeks old when she devoured it. Is there any preventative? E. O. L., Wayne Co.—Many different theories are advanced as causes for sows eating their young, such as feeding her an unbalanced ration, failing to supply her with tankage, vegetables and roots. Sows suffering from high temperature, becoming delirious, frequently eat their pigs while deranged. It is also claimed that sows fed much meat during pregnancy develop an appetite for flesh and when it is not supplied devour their offspring.

Capped Hock.—I have a two-year-old filly which has capped hock, and I would like to know the remedy for this ailment. L. R., McMillan, Mich.—In the treatment of capped hock it is well to keep in mind that it is usually the result of a bruise, and, of course, if you know the cause it should be removed, in order to prevent future trouble. Apply equal parts tincture of iodine and spirits of camphor every day or two.

Tuberculosis.—I have a number of rabbits (Belgian and Flemish). They appear perfectly healthy, but several have died. I found small white spots on the liver. What ails them? E. E. R., Spring Lake, Mich.—Your rabbits die as the result of tuberculosis, an incurable disease in rabbits. Have your cows suffered from above disease? If so have them tuberculin tested, discontinue using their milk and fatten them for beef.



Pick Out One Cow

Two Sacks of Larro-feed Must Increase Her Milk Yield or You Get Your Money Back

Pick out one cow—any cow you choose—and let the gain in her milk yield prove the Larro-feed guarantee.

First carefully record the production of the cow for a week. Next begin to give her Larro-feed (slowly at first allowing her a week to gradually make the change) and after that make another record of her production—comparing the total with the figure established before you started feeding Larro!

If you aren't getting more milk than you were before or if for any other reason you are dissatisfied take the two empty sacks back to your dealer and your money will be refunded immediately.

This Guarantee Has Stood Back of Larro-feed for Seven Years

This is the same guarantee of more milk which has stood back of Larro-feed for seven years. To the man who is not yet a Larro user it is an absolute promise of better results from his cows—to the veteran Larro user it is double assurance that Larro-feed today is the same as it was at the beginning—that its quality will never be changed.

You get more milk with Larro-feed because

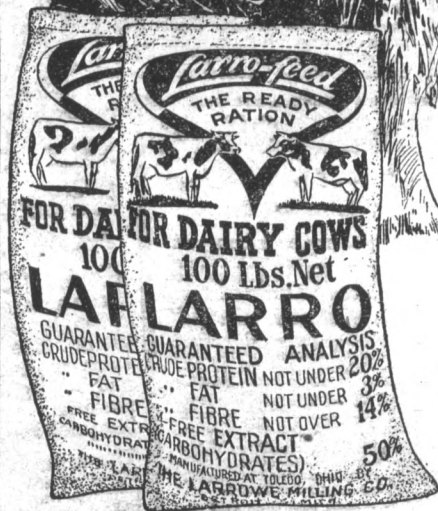
it isn't a one-sided ration, but a nutritious, balanced food.

The cows like Larro-feed because it's palatable—tastes so good—and it's so digestible that an unusually high percentage is utilized in actual milk production.

See the Larro-feed Dealer at Once

The Larro-feed guarantee means just what it says—you get more milk or Money Back—and the Larro dealer is ready to supply you at once. No matter how much milk your cows are producing on their present ration, Larro-feed is guaranteed to make them produce more. If your local dealer does not have Larro-feed in stock write us for complete information.

The Larrofe Milling Co., 501 Larrofe Bldg., Detroit, U. S. A.



GUARANTEED
LARROFE
PRODUCTS

DEALERS: The same guarantee which assures more milk for your customers means more sales for you. Write for detailed proposition.

Larro-feed

THE READY RATION FOR DAIRY COWS

Great Hog Profits



Hustles Heavy Hogs to Market

Cuts your feeding costs. Have bigger pigs, fatter hogs. Get them ready for market in far less time. You can do it. Prove at our risk that Milkoline is the surest farm money maker known.

Guaranteed Trial Offer We will ship you ten gallons, half a barrel, or a barrel. Take 30 days—feed half to your hogs and poultry. If not absolutely satisfied return the unused part and we will refund every cent you paid us—no charge for the half you used.

Milkoline has a base of Pure Modified Buttermilk to which essential fats and acids are added. Milkoline comes in condensed form. Will keep indefinitely in any climate. Will not mold, sour or rot. Flies will not come near it.

2c a Gallon For feeding mix one part Milkoline with 50 parts water or swirl and feed with your usual grain feeds. It helps keep hogs healthy, their appetites keen and makes more pork per bushel of grain. Stop buying buttermilk of uncertain quality. Use Milkoline and you will always be sure of uniform quality, and at a cost of 2c a gallon or less when fed as directed. Many users say Milkoline saves them one-third on feed bills because it makes their hogs and poultry assimilate all their feed.

1400% Profit W. H. Graham, Middleton, Mo., writes that he got an extra \$420 worth of pork from 300 worth of Milkoline in a sixty day feed. He made an actual test of this lot of hogs in comparison with another bunch. We could quote hundreds of testimonials, but the best proof is that we legally guarantee Milkoline to be satisfactory or refund your money (you are the judge) and refer you to S. W. Blvd. Bank of Kansas City, Mo., and R. G. Dunn & Co., Milkoline is just as good for Poultry as for Hogs.

Order from Nearest Dealer or Direct from this Ad. Send check or money order and ask for free booklet, "Hustles Heavy Hogs to Market."

5 Gals. at Creamery	\$1.50 per gal.	\$7.50
10 "	1.25 "	12.50
15 "	1.10 "	16.50
32 "	1.00 "	32.00
55 "	.90 "	49.50

No charge for hogs or barrels. Prices F. O. B. Nearest Dealer or Kansas City, Mo.

THE MILKOLINE MFG. CO. 360 Creamery Bldg. KANSAS CITY, MO.
Distributed by
Schwartz Bros., Saginaw, Mich.

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons,
623-625 Wabash Bldg. Pittsburgh Pa.

Save Auto Repair Bills

Every car-owner should learn how to avoid engine and all other auto troubles and how to cure them by reading the "Trouble Department" of AUTOMOBILE DEALER AND REPAIRER, a 100-page illustrated magazine, the only journal especially devoted to the practical and mechanical side of motoring. Our EXPERT SERVICE Department is free to all subscribers. You can ask questions and get answers promptly about any difficulty with your car. One article in one number was worth \$25 to one car owner. Send 25 cents stamps or silver for three months' trial subscription to Motor Vehicle Publishing Company, Dept. E, 73 Murray Street, New York. Regular subscription price, \$1.50 per year.

Mr. POULTRY FARMER:

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

GEO. R. ELDRIDGE CO.
494-18th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment.

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

EGGS

October 11th. Watch our price each week.
American Butter & Cheese Company, Detroit, Mich.

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

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

Two gilts for sale, sired by C. A. King Joe. Dam is sired by Great Big Half Ton, by Big Half Ton and out of a Dishier's Giant Sow. (Breeding.) Bred to Monster Big Bob by Luken's Big Bob (same breeding as the Grand Champion of the World, Caldwell's Big Bob). A very valuable litter to possess. Fall pigs farrowing now. Book orders early. C. A. Boone, Blanchard, Mich.

Big type Poland China boars for sale. Sired by Big Giant No. 26757 O's Orange No. 33023 and Reich's Col. Jack No. 32597. L. L. Chamberlain, Marcellus, Mich.

YORKSHIRES FOR SALE

Gilts bred for October farrowing. WATERMAN & WATERMAN Meadowland Farm, Ann Arbor, Mich.

Fairview Stock Farms Tamworths. Registered spring pigs for sale, either sex, from massive ancestors. W. H. Warner, Concord, Mich.

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

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

Sheep ads will be Found on Page 425

Some Special Clubbing Offers

No. 1.
Michigan Farmer\$1.00
Cloverland Magazine 1.00
Power Farming 1.00

Regular price, one year.....\$3.00
OUR PRICE ONLY \$2.10

No. 2.
Michigan Farmer\$1.00
Hoard's Dairyman 1.00
Woman's Magazine 1.00

Regular price, one year.....\$3.00
OUR PRICE ONLY \$2.50

Please Mention The Michigan Farmer
When Writing to Advertisers.

CHICAGO HOUSE WRECKING CO.

MASSIVE BARGAINS

HARRIS Home
No. KA-1018

HARRIS
BROTHERS
CO.
Owners
The Great
"Price-
Wreckers"

for The FALL of 1919



HARRIS "Ready-Cut" Homes At Low Cost

This is a Harris Home No. KA-1018. 5 rooms and bath, beautiful design. Material shipped "Ready-Cut" under our improved Ready-Cut and bundling system. Erect it yourself. One of a hundred Harris Homes fully described in new FREE Edition Plan Book. Write for it.

Build the Harris Way and Save Money!

Presto-Up Bolt Together Houses and garages, quickly set up, taken down or moved. Handsome catalogue FREE.

Harris Fresh Air Canvas Houses for summer health and comfort. Easy to put up and take down in fall. Investigate our fresh air canvas houses. Save you money.

27 Years of Honest Dealings—Complete Satisfaction Guaranteed!

We are the great "price wreckers." For more than a quarter of a century we have satisfied and saved money for thousands of customers. Buy direct from the Chicago House Wrecking Co. the home of honest dealings, fair treatment and low prices. Study this page of bargains, then order without delay. FREE catalogues. Act quick while the prices remain low.

GOVERNMENT BARBED WIRE BUY NOW

Buy NOW!

For a limited time only, we offer highest grade extra heavy 12 gauge barbed wire at less than the cost of manufacture. 4 point barbs 1/2 in. long, spaced 3 in. apart. Coated with best special weather resisting paint. Reels of 750 ft. weighing 68 lbs.

Special LOW Prices!

No. 2-KA100. Carload 625 reels, per reel.....\$1.80
No. 2-KA101. 100 reels, per reel.....1.95
No. 2-KA102. 60 reels, per reel.....2.00
No. 2-KA103. 25 reels, per reel.....2.05
No. 2-KA104. Less than 25 reels, per reel.....2.10

Watts Famous Corn Shellers

Now Sold Exclusively By Us

Complete \$69.50

This is our Fall Announcement and your best chance to own a World's Famous Watts Corn Sheller in any size—small medium or large capacity. We offer them at Big Cut Prices under most liberal terms with a 60-Day Free Trial—guaranteed satisfaction.

Watts No. 1 Corn Sheller for the man who shells corn only for his own use. Capacity 50 to 75 bushels per hour with 3 H.P. engine, now \$34.50. Order No. KA900.

Watts No. 4 Corn Sheller with cleaning system, cob stacker and grain elevator. \$59.50. Order No. KA901.

Watts No. 7 Corn Sheller with standard equipment including wagon box, grain elevator, cob stacker, type "B" feeder on steel trucks. Capacity 200 bushels per hour. \$265.00. Order No. KA903.

Watts No. 8 Double Cylinder Corn Sheller for custom work. With standard equipment, wagon box elevator, swivel cob stacker, and feeder, horse hitch on steel trucks. Capacity 600 bushels per hour. \$490.00. Order No. KA905.



Buy on Your Own Terms

Write Today for Free Watts Corn Sheller Book No. KA77

Money Saving Roofing Offers!

Act Quick—Order Now Quick Shipments



This is your big chance to buy prepared roofing, Steel Roofing and Siding at an unusual saving. But you must act quickly to get your share of these savings.

Now is the Time—Order Direct from this "Ad" Ajax high grade rubber surfaced roofing: put up 108 sq. ft. to the roll. Complete with nails and cement No. KA-302, 3-ply, per roll, \$1.41. 2-ply, per roll, \$1.31. 1-ply, per roll, \$1.07.

Rawhide stone faced Gold Metal Roofing, guaranteed 15 years. Rolls contain 108 sq. ft. nails and cement included No. KA-303, per roll, \$2.20.

Buy NOW! Our famous Rawhide Rubber Roofing, 3-ply guaranteed for 12 years, a high grade covering, rolls contain 108 sq. ft. nails and cement included, No. KA-304, 3-ply, per roll \$1.83, 2-ply, per roll \$1.63, 1-ply, per roll \$1.33. 10,000 rolls of extra heavy high grade roofing; red or gray slate coated, rock faced, brown pebble coated, double ended mineral or mica surfaced No. KA-305 per roll of 108 sq. ft. nails and cement included \$1.93.

Corrugated Metal Roofing Sheets 28 gauge painted 2 1/2 in. corrugated overhauled siding sheets 1-2 ft. long, KA-306 per 100 sq. ft. \$2.00 26 gauge painted 2 1/2 in. corrugated overhauled siding sheets No. KA-307 per 100 sq. ft. \$2.75 24 gauge extra heavy painted 2 1/2 in. corrugated, overhauled sheets for roofing barns, granaries, etc. No. KA-308 per 100 sq. ft. \$3.00.

Big Price Reductions on Cream Separators

Price Cut \$2.00 to \$11.00 Each.

Harris "Cream Getter" has made a remarkable record—not a single return—not a complaint. The big increase in sales, manufacturing economies and a slight decline in cost of materials enables us to make big price reductions.

The same high quality "Cream Getter" with all exclusive patented improvements including the equal milk distributing sleeve now offered at reduced prices shown below. Write us without fail for illustrated literature with full explanation.

Order Number	Size Number	Capacity Per Hour	Reduced Price
KA100	11	3175 Pounds	\$34.50
KA101	12	3250 Pounds	\$34.40
KA102	13	3325 Pounds	\$34.30
KA103	14	3400 Pounds	\$34.20
KA104	15	3475 Pounds	\$34.10
KA105	16	3550 Pounds	\$34.00



Liberal Time to Pay

Old Separators taken in exchange. 3% Discount for Cash shipment from Pennsylvania and Chicago Warehouses.

FORD Radiators

ONLY \$21.50

Ford Motor Co.

KA1507. Latest Honeycombed pattern. Large water capacity and cooling surface. Finished in black Japan. For 1909 to 1916, 1917 and 1918 models, \$21.50.



Mixed Nails 100-lb. \$3.45

In stock now new wire nails of all sizes from 8 to 40d. Put up in kegs of 100 lbs. All good quality at a saving to you. A handy assortment of nails for general use—plenty of each kind 100 lb. case, No. KA-68 \$3.45



Guaranteed Ready-Mixed Paint

Our guaranteed House Paint of \$2.54 Gal. best formula, spreads farther, wears longer and costs less than any other paint at such a remarkable low price. White, black and 26 non-fading colors to choose from. No. KA-206. Put up in 1 gal. cans, 5 gal. kits and 50 gal. barrels.

Guaranteed Barn Paint

Guaranteed quality Barn Paint, a lasting preservative for everything about the farm; six colors. No. KA-207, per gal. \$1.55.

1-Inch Iron Pipe, Per Foot 6c

Good Iron Pipe in random lengths, complete with couplings in all sizes are now offered at prices that save money. Suitable for the conveyance of water and all liquids. No. KA-204—1 inch, per foot 6c. No. KA-205—1 1/4 inch, per foot 9c.



MAIL COUPON

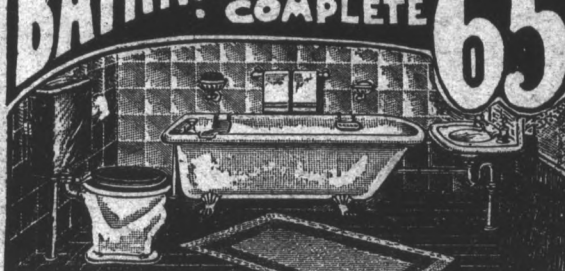
Harris Brothers Co. Dept. KA-42 Chicago, Ill.

Write in the lines below the articles on this page you are interested in and receive our Big Catalog FREE.

Name _____ Town _____

R. F. D. Box No. or Street _____ State _____

BATHROOM OUTFIT COMPLETE



GUARANTEED "A" GRADE OUTFIT No. 5KA-326. Consists of white porcelain enameled bathtub, 5 ft. long and 30 in. wide. The tub is fitted with nickel-plated connected waste and overflow and nickel-plated double bath cock. The lavatory measures 18x21 inches, finished with white porcelain enamel, and is furnished with nickel-plated trap and nickel-plated compression faucets indexed for hot and cold water. The closet outfit includes a white vitreous earthenware wash down siphon action bowl and a highly finished golden oak tank, lined with heavy copper. Complete \$65.00

One-Piece SINKS INDOOR TOILET \$9.95



Improved chemical indoor closet, fitted with regular shaped closet seat and cover, finished in birch, mahogany. Cast metal frame and base, steel casing enameled in azure blue, complete with exhaust pipe and chemical, ready to install. No. KA-1916, each \$9.95

Complete Heating Plants at Big Savings!

Hot Water, Steam and Warm Air heating systems, guaranteed to the last fitting, high grade and thoroughly efficient, are offered by us now at unusually low prices. Simply send us a rough sketch of the layout of the rooms in your home. Let our experienced engineers relieve you of all worry and assist you in deciding upon the best plan for your particular building and the most economical way to install it.

7 H. P. Stickney Gas Engines

Powerful, Durable, Economical \$125.00

We are now prepared to make quick delivery on this celebrated high-grade, guaranteed, perfect gasoline engine in 7 H. P. size. Thousands of Stickney Engines in successful operation. Take advantage of this opportunity to buy this famous Gas Engine at a money-saving price. Friction Clutch Pulley \$15.00 extra.

Barbed Hog Fencing, 26c Per Rod

Special barbed bottom galvanized fencing. Made of No. 11 top wire and No. 14 intermediate line and stay wires. Stays spread 6 inches apart. KA-209, 25 inches, per rod 26c. KA-210, 32 inches, per rod 30c. Galvanized Wire, 100 lbs. \$3.50 Galvanized Wire Shorts, 8 to 14 gauge at \$3.50 per 100 lbs. and up. Suitable for every farm use, put up in 100 lbs. KA-907.

Hercules Non-Tip Hog Troughs

5 Ft. Long Each Special Bargain \$1.95

Low prices for quick sales. Made of heavy galvanized iron (about 10 gauge) Non-Tip flared legs. Sanitary and durable—money savers. 5 ft. length, each \$1.95; 8 ft., \$2.95; 10 ft., \$3.95. In lots of 3, 10c less each—in lots of 6, 20c less—in lots of 12, 30c less. No. 14-KA-512.

ROBINSON HAY BALER \$225

Here is your chance to get the best Hay Baler made at a tremendous saving. Biggest capacity; built to run from large tractor or a small gas engine. KA 218, 18 x 18, Junior.....\$225 KA 216, 16 x 18, Standard.....260 KA 217, 17 x 22, Standard.....275 Automatic Feeders for Balers.....175

ADVANCE Ensilage Cutter—High Grade \$175

This low price offer is your opportunity to save money on a high grade ensilage cutter. A 15-in. machine. Capacity 15 to 20 tons per hour. Furnished with blower pipe for 30 ft. silo, mounted on Horse Hitch Steel Trunk. Complete outfit, No. KA-741.....\$175.00

HARRIS BROTHERS CO., 35th and Iron Sts., CHICAGO