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VOLUME CLVIII NUMBER TEN

DETROIT, MARCH 11, 1922

CURRENT COMMENT

THE MICHIGAN FARMER SAYS:

A sick community develops bad neighbors.

The most precious jewel of all is brimming health.

It costs less to prevent disease than it does to cure it.

Our interest in the public welfare will grow only as fast as the spirit of humanity develops within us.

If we could now standardize retail prices with a moderate spread above production prices our side of this mundane sphere would slide along surprisingly well.

The Market Milk Problem

THE latest development in the market milk situation in the Detroit area will tend to make the problem more complex from the producers' standpoint. The establishment of a new forty-five mile area about Detroit, from which the distributors will take all the milk for market purposes is an economic proposition from the transportation angle, but is certain to prove unsatisfactory to a very considerable number of dairymen located outside this area who have heretofore enjoyed the advantages of the Detroit market for their milk. It is possible that with the return of milk consumption to normal many or all of these dairymen will again be able to take advantage of that market. But in the meantime they will have to sell their milk at a manufacturing price, which makes their problem an immediate one.

This situation seems to emphasize the wisdom of the producers' organization and the dairymen in this area in determining to establish a number of high-class manufacturing plants around the outside of the Detroit milk shed, with the idea of caring for this surplus profitably and thus place them in a better position to deal with the distributors in the selling of the market milk supply for this city. This development should materially hasten progress in the establishment of the first of these plants at Adrian, the organization for which is now nearing completion, and the further rapid development of the plan until the product of the dairymen who have temporarily lost the Detroit market for their milk can be cared for in this manner. It seems reasonably certain

that the development of this plan to that extent would result in better prices for milk for manufacturing purposes not only in this area, but for a considerable distance beyond its borders as well. And this result would, in turn, certainly place the organization in a position to make a better bargain in the selling of the Detroit market milk supply.

Present conditions of liberal milk supply and low consumption demand have given the Detroit dealers the whip hand in the matter of price making, and they have shown their disposition to use it to the limit by taking advantage of these conditions to absorb better than 60 per cent of the consumer's dollar, after the producers have paid the freight on their product to this market. This is in part a consumer's problem and there are evidences that consumers are beginning to give it serious consideration. The producers' problem is primarily to secure a price for his product which will cover the cost of production plus a reasonable profit. The preparation above noted will certainly place him in a better position to accomplish that end, and at the same time be in a far better position to force a more equitable division of the consumer's dollar, and thus increase milk consumption.

The Seed and the Crop

WITH the near approach of spring and the beginning of the coming season's campaign, the plans for that campaign must be definitely settled in the very near future. With the final settlement of the plans for the campaign, the next important step is the securing and preparation of the seed for the spring planting. This is a matter which cannot be profitably left until planting time. The answer to the question of whether the crop will or will not be profitable to the grower is very often dependent on the character of the seed used. Consequently it is the part of wisdom to make certain of a supply of good seed as far as possible in advance of planting time.

There is no other single factor in the growing of a profitable crop which is so cheaply insured as the planting of selected strains of seed of productive varieties. Demonstrations without number have established this fact beyond any question of reasonable doubt. Crop losses due to poor seed can be reduced to the minimum by securing good seed in advance of the planting season and making germination tests to prove its quality in this regard. Time and money expended in this manner will pay a bigger dividend than any other single investment which can be made by the average farmer at the present time.

Lost Motion in Farming

EVERY farmer has had experience with an old mowing machine which from long use or poor lubrication had become so loose in all of its bearings that it would not function properly. "Too much lost motion" was the verdict and a new machine the necessary result. The business of the farm as it is usually conducted is to some extent comparable to the old mowing machine. There is too much lost motion. This lost motion is attributable to a variety of causes, some of them unavoidable, but many of them susceptible to correction. Lost motion is one of the greatest problems of farm management and a problem which it will pay every farmer to study well in all of its varying phases.

Of the different forms of lost motion on the average farm which should be first and most closely studied that related to farm equipment is among

the most important. There is a great deal of lost motion during the busy season on most farms because the farm machinery and equipment fails to function properly in season. There are expensive delays for repairs and added expense in the accomplishment of a task on account of the lack of available equipment for the accomplishment of the work in the most economic manner. Much of this loss can be avoided if proper attention is given to the problem in advance of the actual need.

Economy of crop production is in large measure dependent on economy of man labor. There are many ways in which this economy can be effected upon every farm with a little careful study on the part of the farm manager. And this is a problem worthy of the most careful study at the present time. A reduction in production costs spells increased profit and prosperity just as surely as does increased prices for farm products. Eliminating the lost motion so far as possible is the best kind of farm management.

A Loss to Cooperation

AT the dawn of a new day for the development of cooperative enterprises due to the recognition by the federal government of the right of farmers to work together in the distribution of their products in the passage of the Capper-Volstead bill, this same movement has sustained a great loss through the sudden and untimely death of G. Harold Powell, for the past ten years manager of the California Fruit Growers' Exchange and nationally and internationally known as an organizer and executive of great capacity.

Mr. Powell was an authority on the marketing of farm products. Many books and bulletins have come from his pen and his advice has been eagerly sought by scores of producer groups who were about to launch cooperative enterprises or who had difficulties for which remedies were needed.

The straight-forward and sound business principles which he injected into the business of cooperation has been largely responsible for the present favorable attitude of the general public toward the cooperative plan of marketing farm products. Yet it must be remembered that his success is due not altogether to a knowledge of the business requirements in the citrus industry, but perhaps quite as much to his intimate knowledge of men. On this point he once said, "The basis of the cooperative organization is men. Capital cannot cooperate; products cannot cooperate—only men can cooperate."

Despise Not the Good

A VERBAL report of a successful tester who is now in charge of one of the progressive cow-testing associations of the state, shows that occasionally members just go forward and do as they please regardless of the advice given them by the tester.

The tester in question knew his business and that the advice which he had given out was right, and when he found that it was not heeded by a few members he quickly disposed of their cases. He simply told the members who did not follow his instructions that he would not call again. And he didn't. It happens that this tester is getting results from the herds of those who have accepted his advice and now the men who allowed him to get away are sorry that they did, for he has taken on other herds to the limit of his time to serve.

And here is where a large number of farmers are failing in this twentieth century competition. They stand in their own light while trying awkwardly

to fit generation-old practices into modern conditions. The hopeful thing is that this type of farmer who is distinctly of the past, is being displaced rapidly by the thoughtful, open-minded fellow who seeks to prove the things he hears and to hold fast that which he finds suited to his particular needs.

Where Enthusiasm Works

HOW practically every stock raiser in one community has become a member of the local live stock shipping association is told in a report from Waterloo, Indiana. Shortly after the new organization was launched the members divided themselves into two groups for the purpose of canvassing the neighborhood for new members of the association. The agreement was that the losing team must buy and serve the entire membership with a dinner. As a result of the contest the strongest kind of competition developed. Farmers who were not members of the organization were even roused out of bed at night and solicited for membership. When the date for closing the contest came there were but three farmers to be found in the entire community who had not signed up. Some types of social and community work can best be done quietly and with little or no ostentation, while occasionally there comes a job in which we must put all our enthusiasm.

Winter's Waning

WINTER is night time for Ma Nature. After she's provided food and clothin' for her children she covers herself with white blankets and takes a rest. Some folks what wants to act educated-like says she recuperates which is the same thing.

Now, I know old Ma Nature is goin' to wake-up soon, 'cause Sophia made me leave the fireside the other day to prune our three grape vines.

These vines is patriotic. The red is named Delaware after the creek G. Washington crossed, the blue one is Concord from the historic town and the white one is Niagara after the greatest fall of legal liquor in this U. S. if not in the world.

Sophia is awful petickular about grapes now-a-days. She don't make no more grape juice, 'cause she thinks neighbors might suspect nature'd make it illegal, which would mean more folks to visit us. My sentiments is with Sophie, not with nature, 'cause I find it profits a man more, like you say, to get a high money percent than a liquid one.

Winter's back is broke and so is mine. Sophie made me clean out the barn yard and spread the manurial goodness over the landscape, and I'm a hopein' my endeavors will benefit the land more'n they did me. I've been oilin' the harness and Sophie's been oilin' my back ever since. She said she wouldn't oil me until I oiled the harness 'cause the most recently aforesaid needed it the most.

Sophie says, too, I gota fix up the wagons and things. She says there's lots of things I can do aforehand like. So, it seems like the pleasures of the fireside and the elevatin' readin' of catalog literature is gone, and the duties and beauties of spring has come.

The sparrows is chirpin' chipily and the crows is kawkin' with their muffers cut out. The sulphur and molasses time sure is close to hand.

Anyhow, I don't know what Sophie'd do if it wasn't for me. She'd never get the farmin' done if I didn't do the work.

HY SYCKLE.



The War Finance Corporation

How It Has Been Working for the Farmers of Iowa

By Claude L. Benner

Professor of Economics, Iowa College of Agriculture

THE importance to the farmers of the emergency agricultural credit bill, officially known as Section 24 of the War Finance Corporation Act, which congress passed last summer, can hardly be over-emphasized. To the hard pressed farmers of Iowa it was little short of a Godsend.

Everyone who is at all familiar with farming conditions in the middle west knows that for the last year money has been extremely hard for the farmer to get. It was not so much the question of whether a farmer had security or not for a loan, nor even what rate he was willing to pay, as it was of getting the loan on any terms whatsoever. A good many farmers willing to pay high rates of interest and with first-class security were refused loans by the banks. It was not because the bankers wished to turn the farmers away empty-handed that they refused him his loan. The local banks were already loaned up to their limit and the Federal Reserve Bank was virtually refusing to rediscount any more paper for them.

The seriousness of a situation like this cannot be overemphasized. This condition of the money market spells disaster for any kind of business. It leads to disorderly marketing with the resultant destruction of values for the goods marketed. While at the same time it kills production for the future for it must be remembered that no business can be carried on efficiently at the present time without adequate credit accommodation.

First-hand evidence of the truth of this statement was to be seen on every hand in Iowa during the early part of last fall. The farmer pushed by his bank for the payment of his outstanding loans was forced to hurry his grain to the market irrespective of the price he was to receive for it. There is no doubt but that this was one of the contributing factors that caused the price of grain to go so low last fall. There was an unusually large part of the grain crop marketed early, probably because the farmer had to have the money to meet his indebtedness.

Another example was the rushing to the market of unfinished hogs and cattle. In many cases the farmer was compelled to do this because he had to get some money to satisfy his creditors, while if he could have had an extension of time on his note for only a few months, or even weeks, it would have meant many dollars to him.

But it looks as though a more serious situation than this was going to confront the cattle feeders this year. Cattle feeding, of course, is always carried on with credit. The feeder seldom has the money with which to purchase the unfinished cattle at the stock yards. The custom always has been for the feeder to borrow from his bank the funds with which to buy his cattle. When the cattle are properly finished the feeder then sells them and liquidates his debt at the bank.

Now, many of the banks were in such condition last fall that they were in no position to accommodate the farmers in their usual manner. What was the feeder to do? Without credit he couldn't get the cattle, and his banker could not extend him credit.

To bring relief to a situation of this kind has been the function of the War Finance Corporation. The first funds of the corporation reached Iowa early in October. Since then the money has been coming in a steady flow until now there is about \$19,000,000 in the state. And there is but little doubt that there will be several million more placed here before the act expires next

June. There is no limitation on the amount a state can get provided in the act, but the Corporation cannot loan more than one billion dollars in all.

The initiative in bringing the money here is taken by the local banks. The act provides that any bank which has agricultural papers can take this paper, when it is properly endorsed, and rediscount it with the Corporation. This made it possible for a bank that was already loaned up to its legal limit to still extend more credit to the farmers. All it had to do was to endorse the farmer's notes and get the funds

conduits for the funds, have been reservoirs," said one farmer.

In reply to the first criticism, it is rather obvious that the Corporation couldn't loan directly to the farmers because of the difficulty they would have on passing on the loans. The Corporation in order to give immediate relief had to utilize what machinery there was already in existence for distributing its funds. The local banks provided that machinery. The local banker knows the needs of his community, and who is worthy of receiving credit, probably better than any

actually in the farmer's hands in less than a week after he made his first application.

One of the very commendable features of this bill is the simplicity with which it is working out in practice. The farmer doesn't have to bother himself about any red tape or details. All he needs to do is to make application at his local bank for the loan, convince the local banker that he has a legitimate need for the funds and that they are to be used for agricultural purposes, give the banker his personal note, no chattel mortgage is necessary, and the local banker endorses the note, and gets the funds from the Corporation.

The time that the notes can run is from six to twelve months but there is the guaranteed privilege that they can be renewed from time to time for a period up to three years. Thus the farmer will be afforded ample time in which to pay off his obligations.

As I have already said, the impression has been given out because all the money secured by the banks has not been reloaned to the farmers that the banks are profiting by this movement more than the farmer. This, however, is an erroneous idea and based upon very fallacious reasoning. Many banks are still very much overextended. They have loaned out all their capital, surplus and deposits and in some cases have borrowed to reloan. Were it not for the War Finance Corporation these banks would be compelling the farmer to dispose of his corn and live stock, regardless of prices, to pay up his debts. The way the War Finance Corporation has operated to prevent this, is excellently illustrated in the following extract taken from a letter sent by the People's State Bank of Humboldt, Iowa, to their customers:

"This bank was one of the first in the state to apply for and receive funds. We have been granted and have received an advance of \$100,000. This money we may use for three years or can return it any day when not needed. This money coming now relieves the pressure and the people of this county, our customers, get the benefit.

This bank stands first for safety. Safety does not lie in forced selling of farm products on the present market. Rather, in the opposite direction.

"By use of this money, this bank is in position to waive payment for the present, of notes owed to us by our good customers and we gladly do so.

"As a customer of this bank, if your notes are due or coming due soon, and to pay the same means that you must sell corn or oats at the present prices or that you must sell unmatured live stock, don't do it. Come into the bank and we will renew your notes, asking only the same security and rate we have heretofore; and we may advance some additional money if your situation justifies. This refers strictly to farming and live stock operations, and not to land buying or purchase of outside securities, or promotions.

"This money was intended for the use of the farmer in the present emergency and this bank is doing all in its power to see to it that our farmer customers do in fact get the benefit."

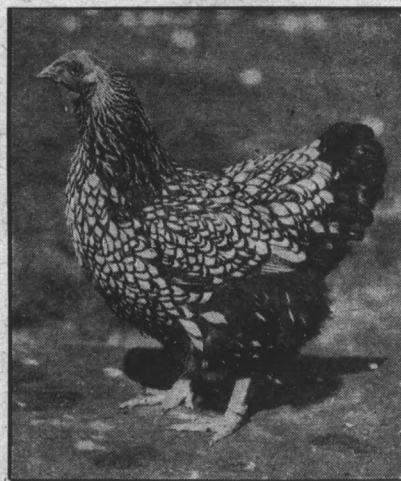
This quotation clearly shows that the banker is doing all in his power to carry out the intent of the War Finance Corporation Act, and it is good business for him to do so, for there is no prosperity for the banker if his customers are not prosperous. Their interests in this respect are identical. (Continued on Page 291)

For Bigger Poultry Profits

Prof. E. C. Foreman of M. A. C. Has Unique Plan to Increase State Egg Production

THE honor of heading the Barred Rock strain which will be developed at the Michigan Agricultural College in connection with an idea to materially increase the egg production of the state goes to a rooster belonging to Dwight O. Kline, of Grand Blanc, Michigan. This bird will head the Barred Rock division on an experimental bloc recently instituted by E. C. Foreman, newly-appointed head of the poultry department.

Foreman's plan, if successful, will increase the average egg production per bird from the present rate of seventy eggs annually to from 200 to 250 eggs a year. He has selected birds from the highest-blooded strains of poultry in the state to be used as



Other Breeds to be Made Better Layers

breeding stock. These are being loaned to the college by the farmer-owners. Exact records of the accomplishments of these fowls will be kept for a year. Severe culling will be done, and at the end of that time, the best producers will be selected. Eggs from this enormous flock will then be distributed, at cost price, to any farmer in the state, enabling him to carry a smaller flock, with less expense and with a greater output and greater financial revenue. It is the prediction of Foreman that the plan will materially increase the farm revenues of the state. Michigan is the first state to adopt the plan which, it is believed, will make it the foremost egg-producing state in the Union.—C. S.



To Head Barred Rock Egg Producers.

from the War Finance Corporation, much in the same way that a bank rediscounts with the Federal Reserve Bank. The bank has to pay five or five and a half per cent for the money and it is allowed to charge an additional two per cent for its services. Money thus is getting into the hands of the farmers at seven and seven and one-half per cent, not an exorbitant rate of interest when compared to what is being charged in some localities and when one considers the good this money is doing, he can imagine that the farmer is perfectly willing to pay the interest.

Considerable criticism has been manifested from time to time because the Corporation does not loan directly to the farmers. It has been said that the act has not been of great advantage to the farmers, inasmuch as the money has not been getting into their hands. "The banks, instead of being

other person in it. His indorsement is needed to see that the funds are properly placed where they will do the most good.

Regarding the criticism that the banks are absorbing the funds of the Corporation and not loaning them out to the farmers, Mr. McNider, a member of the state committee appointed to handle the work in Iowa, made it very plain in the meeting of the State Bankers' Association held at Des Moines recently, that such would not be the case in the future. "The Act was passed to help the farmers out of a bad credit situation and not for the banks," said the speaker, "and that is what the funds must go for." Recent evidence goes to show that the funds are getting into the farmer's hands just as rapidly as he is making application for them, and as fast as the state and national officers can pass on them. In one case the funds were

GRAPES



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Late Agricultural News

STATE HORT MEETING.

THE meeting at Coloma was a lively one at which many subjects of importance were considered. Chief among them was the sentiment in favor of an improved horticultural department at M. A. C.

The consensus of opinion was that the fruit crop would be large this year and that prices may be lower.

A more detailed report of the meeting will appear in our next issue, the report having arrived too late for use here.

KENYON'S SUCCESSOR.

IN the resignation of Senator Kenyon, of Iowa, the farmers of the nation have lost a true and able friend in Congress. His successor, Senator Charles A. Rawson, is not identified with the farmers, but announces that as he comes from a distinctively agricultural state, he will use his efforts to promote the best interests of agriculture. Senator Capper has been elected chairman of the agricultural block to succeed Senator Kenyon.

SEEK REDUCTION OF FREIGHT RATES FOR STOCK.

NOW that live stock prices have returned to levels lower than those received in 1916 while the freight rates for handling are 100 per cent higher than during that year, the men who are producing and finishing stock for the markets are so much concerned about the situation that unless they can secure a downward adjustment of transportation rates they will be obliged to interest themselves in some other line.

Last week E. A. Beamer, of Blissfield, who represented the Michigan Live Stock Exchange and the Michigan State Farm Bureau at a hearing before the Interstate Commerce Commission in Washington presented figures from his extensive feeding records showing that it is impossible for the feeder to pay the present rates and continue to do business. Substantial reductions in freight rates together with the other economies which the farmers are now able to secure, should make it possible for the feeder to continue his work with hope of a small margin of profit for his efforts. Besides Mr. Beamer, Michigan live stock interests were represented by Frank Tieche of the Nashville Co-operative Shipping Association and J. D. Richardson of the Detroit Live Stock Exchange.

THE FRENCH-CAPPER BILL.

THE friends of the French-Capper truth-in-fabric bill are doing their best to get action on the bill. Senator Watson, of Indiana, chairman of a sub-committee considering the bill, has promised Senator Capper that a hearing will be called during which a test to determine whether the labeling plan is practicable, will be given. The house committee considering the bill has also promised to have a similar test made.

Meanwhile several states are endeavoring to secure legislation requiring the labeling of fabrics purporting to contain wool with their true contents. Kansas and New Jersey are among these states, and these bills are being promoted by the farm bureaus.

At a hearing before the house committee on agriculture the enactment of the Anthony bill designed to protect migratory birds by the establishment of refuges and breeding grounds and by the federal licensing of hunters who would be restricted to certain areas

was advocated by representatives of the American Game Protective Association. The bill provides for the creation of a federal migratory bird refuge commission, composed of the secretary of agriculture, attorney-general, postmaster-general, two senators and two members of the house, which would determine what areas should be set aside as refuge grounds from which hunters would be barred. Middle west congressmen are receiving letters from their constituents, especially from Missouri, protesting against migratory bird legislation.

PROTESTS AGAINST SALES TAX.

THE Michigan State Farm Bureau has made vigorous protest to Congressman Fordney against the levying of a sales or manufacturers' tax as a means of raising money for the proposed soldiers' bonus and the bureau has asked all county farm bureau organizations to express themselves to congress on the matter. The farm bureau is taking no stand as to whether or not the bonus should be paid, but is opposing raising of the money by a sales or manufacturers' tax because such a tax would be passed on to the consumer in nearly every instance and would be heaviest on the farming population.

TO PROTEST AGAINST FOUL BROOD.

TO allay criticism of the recently imposed quarantine against imported bees with the comb into the upper peninsula, Mr. B. F. Kindig, State Apiary Inspector, explains that

this action was instituted to protect northern farmers against the introduction of "foul brood" which is costing bee-keepers in the southern peninsula at least \$100,000 per year. He explains that bees may either be imported on comb through the use of permits issued by the State Department of Agriculture, or they may be introduced in packages without comb, and he points out that the latter method is entirely practicable and is most likely to be followed, in which case the danger of infection will disappear.

OPPOSE AGRICULTURAL DEPARTMENT CHANGES.

PRESIDENT HARDING has had in his hand for several weeks the report made by the special committee to investigate the functions of the administrative departments of the government and recommend changes, says the State Farm Bureau. It has been understood that the Department of Agriculture would be greatly affected by transfers that were desired by certain individuals or groups. Among the proposals were the transfer of the Bureau of Markets and Weather Bureau to the Department of Commerce and the Forest Service and Public Roads to the Department of Interior. It is also understood that the report has been considered by the Cabinet and that so much disagreement arose concerning the proposed shifts that it will not be considered again until next winter. All farm organizations, including the Michigan State Farm Bureau, vigorously protested transfer of any departments from the Department of Agriculture.



Wednesday, March 1

THE Detroit United Railways accepts Detroit's bid of \$19,850,000 for the purchase of its city tracks and equipment.—A Kansas City father was paroled to his fourteen-year-old boy scout son after having struck his wife when being drunk.—President Harding has been elected honorary president of the Boys' Club Federation, a newsboys' organization.

Thursday, March 2.

A TOY balloon released at Waukegan, Illinois, traveled to Altoona, Pa., a distance of 750 miles, in eleven days.—President Harding urges action on the Great Lakes-St. Lawrence waterway project.—Princess Mary, of England, was married amid great splendor to Viscount Lascelles.—Some German newspapers are opposed to Ford establishing a German factory, because "he would ruin the German motor industry."

Friday, March 3.

THE minimum price of \$5.00 a ton is set for 1922 sugar beet contracts by the Owosso Sugar Company.—The committee in charge of the soldiers' bonus bill in Congress plan now to give soldiers paid-up life insurance instead of cash bonuses.—In 1897, a California man borrowed \$100 with interest at 10% per month. Neither interest or principal were paid, and the court brought judgment against him for 304 trillion dollars.

Saturday, March 4.

IF the bill prepared by the woman in New Jersey legislature passes, the women of New Jersey will be giv-

en control over the wages earned by them within the home.—A political crisis in Great Britain puts Premier Lloyd George's position in balance.—Federal Prohibition commissioners are planning to move all boded whiskey to warehouses.—Dr. Hubert Worth was appointed postmaster-general to succeed Will Hayes, who accepted a \$100,000 a year position with the "movies."

Sunday, March 5.

THE leaders in congress oppose a reciprocity agreement with Canada.—In thirty-two days thirty-two stock brokerage houses have failed, resulting from heavy losses to their clients.—In Lawrence, Kansas, the court upheld the high-school ruling for expelling girls for wearing short skirts.

Monday, March 6.

MR. A. L. SHELTON, the first U. S. Missionary to enter Tibet, China, was slain by Chinese bandits.—The failure of Vilna and Poland to agree on making Vilna part of Poland caused the resignation of the Polish cabinet.—President Harding fights the drastic army and navy appropriation cuts by Congress.

Tuesday, March 7.

THE grape growers of New York, Ohio, Michigan and Ontario have approved a plan for a wide-spread newspaper advertising campaign to popularize their product.—The million dollar city hall of Montreal, Canada, was destroyed by fire Friday night.—Twenty-three students were expelled from University of Michigan on account of poor work.

Land Clearing--the U. P.'s. New Science

Substituting Mechanical and Chemical Power and Brains for Main Force and Ignorance.—By F. W. Henshaw

STUMP pulling used to be a drudge; now it is a science; and before the year 1922 is over it bids fair to become a hobby in the upper peninsula of Michigan.

Sixty thousand more acres under cultivation is the goal of the "traveling land clearing short course," to be held during the spring months by L. F. Livingston, under the auspices of the extension division of M. A. C. in nearly every county of the upper peninsula.

Through the co-operation of railroads a train of nine cars will be used to haul the special equipment about from point to point. Then to reach

cating upper peninsula farmers upon the subject. Motion pictures showing the most approved methods for efficient land clearing have been effectively utilized.

If the goal of 60,000 acres is reached, an average of five acres for each of the 12,000 farms in the upper peninsula will have been cleared. In the past the average rate has been less than one acre per year. Because many of the farms have not sufficient area of cleared ground to make the business profitable, a large number of farmers are compelled to work outside in order to support their families.

Clearing of 60,000 acres in 1922 will

the oldest industry in the country, it has never been brought to a scientific basis until the present day. It is estimated that 30 per cent of all the explosive used is wasted through wrong methods. In addition, many lives have been lost through ignorance of the proper measures to take in handling.

Not only stumps must be removed. Brush, fallen trees, stones and cradle knolls must be disposed of and the original soil must be broken up. Mr. Livingston and his helpers neglect none of the numerous possibilities for preparing the land for cultivation. By noting the most efficient devices used by farmers successful in land clearing, they have made it possible for others to benefit from the inventiveness of a few. All the information concerning explosives, machinery and home-made devices is clearly set forth in several reels of motion pictures prepared under the direction of Mr. Livingston.

Perhaps the most interesting of the simple devices is a mallet stump puller, better known as "Paul Bunyan's hammer." Bunyan, who originated it, is said to have been a regular Samson when it came to land clearing feats, and this hammer was one of his favorite tools. It will multiply the pull of a team six times when the handle is in an upright position, according to specialists. Many times the stump or fragment of stump is too solid to be pulled by a team alone and rather than strain the team or break the harness, the mallet puller can be used with no lost time.

The materials necessary are a log 18 inches in diameter and 30 inches long, of such light and soft material

as cedar or white pine, and a handle 6 inches in diameter and 6 feet long, of elastic material such as seasoned iron-wood or white oak. The mallet puller is made by cutting or burning a six-inch hole through the log and wedging in the handle. There is very little strain on the log, hence the lightest wood obtainable should be used.

The puller is operated by placing the log as close to the stump as possible with the handle lying in an upright position against the stump. A heavy chain with a "corner bind" or "fid hook" attachment is placed around the stump as low as possible and around the handle at the point where it enters the log. It is essential that this chain be tight, as the greatest leverage is obtained when the handle is in an upright position. An ordinary draft chain is hooked to the top of the handle and to the double trees. This chain should be used full length as the draft comes too high on the horses when the chain is hooked short.

Mr. Livingston's purpose in the series of land clearing meetings will be threefold: first, to show how accidents which happen in the use of explosives can be avoided; second, to show the most practical methods of using land clearing equipment and explosives; and third, to explain some of the ways in which the backache may be taken out of the work.

Farmers are being encouraged to purchase explosives in carlots, as was done with the picric acid last summer, in order to save money. Where possible, county agents are combining orders from their communities so as to take advantage of the lower rates.



Paul Bunyan's Hammer is Here Shown in Operation. It is Home-made but the Stumps do Come Out.

the outlying sections motor trucks will be brought into service. The equipment will be donated by powder companies and stump puller manufacturers.

In the short course planned, the men attending will "learn by doing" and will spend a full day in their old clothes, operating the stump pullers, stump pilers, home-made labor saving devices and working with dynamite. It is believed that in this manner a small army of capable land clearing specialists will be created.

As a preliminary to the spring tour, meetings have been held in the local communities this winter. In each community where the movement finds favor a land clearing committee is organized. This committee is expected to guarantee 20 or more students for the day's course in order to secure the visit of the traveling short course. The meetings held this winter are proving valuable as a means of edu-

mean an increase of 13.2 per cent in the producing lands of the upper peninsula. "If this land which will be cleared were put into potatoes," declares Mr. Livingston, "an average yield sold at an average price would mean a crop the value of which would be \$4,800,000. It is estimated—and a low estimate at that—that the increased land valuation of the cleared acre itself would be \$35, or a total increased land valuation of \$2,100,000. The average income produced in a year's time from the cleared acre throughout the upper peninsula is \$30. That means an income every year following the clearing of this 60,000 acres of \$1,800,000. If this land clearing program is carried on for five years we will increase the valuation of our agricultural assets by \$10,500,000 and will during that time have produced an income for the farmer amounting to \$27,000,000."

Though land clearing may be termed



Dynamite is Interesting Stuff to Say the Least. That Upper Peninsula Farmers are Particularly Anxious to Know all About it is Evident from this Group Gathered About a Land-clearing Specialist.

Lengthening the Season with a Hotbed

Some Practical Suggestions on Preparing and Using a Hotbed

By R. E. Loree, M. A. C.

THE hotbed is one of the most common structures used by gardeners to force vegetable plants in order to secure a crop in advance of the normal season. They are most commonly used for the very early starting of plants such as tomatoes, peppers, melons, early cabbage and celery which later are to be transplanted in the garden or field. Some crops, however, such as radishes and lettuce, are often grown to full maturity in the hotbed, thus providing a supply for table use much sooner than could be secured by growing the plants in the open.

The hotbed consists of a box-like structure or frame covered with a glass sash, with soil inside the frame in which the plants may be grown,

and some sort of artificial heat to provide a means for maintaining growing temperatures.

Hotbeds are heated in various ways. They are sometimes heated by hot air flues and often by steam or hot water in pipes connected with the heating system of a greenhouse or residence. The heat is ordinarily supplied by means of fermenting horse manure placed under the soil of the bed.

One of the cheapest and most simple forms of manure hotbeds is one made by placing a sash covered frame on top of a flat pile of fermenting manure. However, the form most commonly used is the pit hotbed in which

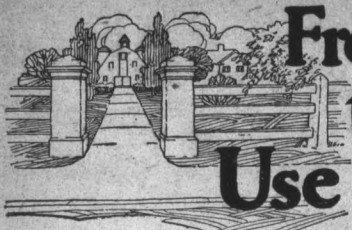
the frame is placed above a pit containing the heating material. Pit hotbeds are usually more satisfactory as they give better protection to the plants especially during cold weather and less manure is required than for beds which are constructed entirely above the ground.

The pit may be merely an excavation in the ground or if it be desirable to construct a permanent hotbed the walls may be lined with boards, brick or concrete and are built to include the frame. The pit is then permanent and merely requires filling each year and covering with sash.

The depth of the pit should be from

two and one-half to three feet below the surface. This will permit the use of from eighteen inches to two feet of manure and four to six inches of soil, and also give room for the plants between the surface of the soil and the sash.

The frame for a hotbed may be made to fit any size glass or sash. They should always face the south to get the best benefit of the sun. The standard size for hotbed sash is three by six feet. The frame, therefore, should be slightly less than six feet wide outside measure and long enough to accommodate the number of sash required. For a farm or suburban garden of large size a three or four sash bed will be found a suitable size to use. If only a small amount of hot-



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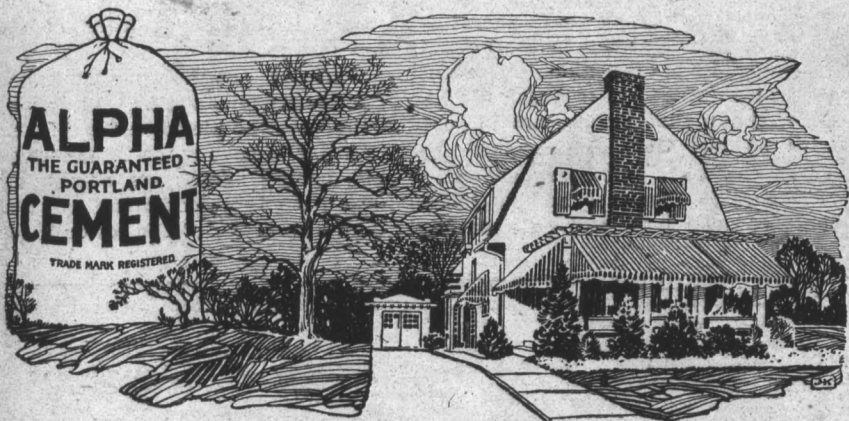
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bed room is needed a bed of one or two sash will be plenty large enough. When a large amount of hotbed space is required it is a common practice to use a series of beds of four sash each. For general and mixed gardening about twenty-four sash are sufficient for an acre of garden.

In growing plants for transplanting a sash is sometimes estimated to accommodate 400 to 500 cabbage and cauliflower, 300 to 400 tomatoes and 600 to 800 lettuce plants. A good serviceable wood frame can be made with two twelve-inch planks on the south side and two twelve-inch and one six-inch on the north side. This will make the back side of the frame six inches than the front thus providing a satisfactory slope for the cash. About one foot of the back of the frame and six inches of the front should be above ground. Posts made of 2 x 4 should be driven at each corner and if twelve foot planks are used one on each side midway between the corners. Cross-bars of similar material should be placed across the frame at the junction and edges of the sash. These should be mortised in on the sides flush with the top.

Single glass sash are most commonly used. The sash should be well made and of good material. Only "A" quality glass should be used. Ten by twelve-inch glass fit well in three by six feet sash requiring eighteen panes to each sash. The glass should be lapped and imbedded in putty to make a good tight sash. Sash should always be well painted and kept under cover when not in use.

The preparation of the manure for a hotbed should begin at least two weeks before the hotbed is to be used. Fresh horse manure, consisting of about one-half straw or litter and one-half excrement, makes very suitable material. The manure should be collected and placed near the frames in a compact pile. As soon as fermentation has become well-started the manure should be well forked over and all lumps broken up to insure even distribution of the heat. As soon as the whole pile is steaming it is ready to be placed in the pit. It should be placed in the pit in layers about six to eight inches thick and each layer tramped firmly, especially about the edges and in the corners, to avoid uneven settling. When the bed is completed the manure should be about two feet thick. About two inches of straw is placed on top of the manure and finally from four to six inches of good garden soil or compost is placed on top. The sash should be put on as soon as the manure and soil are in place to protect the bed from rain and snow and retain the heat. No seeds should be sown or plants set for several days or until after the first violent heating is over and the bed has cooled down to about 85 degrees F.

WESTERN MICHIGAN FRUIT GROWERS ORGANIZE.

THE Michigan Fruit Growers, Inc., was launched at Benton Harbor, February 28, at the third conference of Michigan fruit growers, representatives of co-operative fruit marketing organizations, State Farm Bureau officials and representatives of the agricultural college marketing department. The new exchange represents a federation of western Michigan co-operative fruit marketing associations to improve distributing and marketing facilities. Headquarters of the organization are to be at Benton Harbor.

A temporary board of 11 directors, to meet within ten days, was charged with preparing detailed plans to be submitted to the co-operative fruit marketing bodies. Permanent organization will be effected at another meeting of the co-operative association delegates. A membership drive is also scheduled for the near future.

Capitalization of the new concern was placed at \$50,000 and the maximum indebtedness allowable was placed at \$100,000. The directors are to meet at Benton Harbor the third Tuesday of each month and the annual meeting of the organization has been scheduled for February. Affairs of the institution will be in charge of a general board of delegates, who will be elected on the basis of 50-car shipments per season per unit.

Peach and apple interests are represented by five directors on the present board, grape growers by five and the berry interests by one. F. L. Bradford, St. Joseph, is chairman of the grape group, other members of the group being M. H. Pugsley, Paw Paw; S. C. Thornton, Lawton; M. D. Buskirk, Paw Paw, and W. S. Seymour, Bridgman. George Friday, Coloma, heads the apple interests; others are James Nicol, South Haven; John Wilkinson, Hartford; M. Overton, Bangor; J. E. Barron, Fennville; C. M. Hogue, Sodus, represents the berry interests.

AMERICAN GRAIN REACHES RUSSIA.

American grain is already moving into the interior of Russia, according to Don Livingston, Commissioner of Agriculture of South Dakota, and a member of the Purchasing Committee for Russian Relief of the American Relief administration.

"The first two steamers sailing January 4 and January 12 from Baltimore with approximately 500,000 bushels of No. 2 mixed corn have arrived at Novorossick, Russia, where 400 cars were assembled to rush the grain into the interior," Mr. Livingston said. The Russian authorities are friendly and are co-operating with the American Relief Administration in every way possible to assist our people in saving the children. Our people gave of their means cheerfully and with good will, as their duty. They cannot know the blessing of their gifts. A glance at the picture at the other end of our activities in Russia and the need for it is shown in the cablegram received by us today:

"In some kitchens in the worst localities children under eight years absolutely without clothing or shoes are brought to the kitchens by their parents in arms or on little sleds from distant points, with temperature fifteen below zero Fahrenheit. Children sit at tables naked to eat their portions and they make return journey home wrapped in sheepskins, old coat or piece of blanket."

Since the first of the year 30 steamers have left for Russia bearing relief corn. The number of bushels of corn shipped to date is approximately 5,633,390, and of wheat 1,464,750. The boats have cleared from the ports of New York, Baltimore, New Orleans, Philadelphia and Boston.

LIVE STOCK EXCHANGE OFFICERS

C. V. TRACY, of Ithaca, is president of the Michigan Live Stock Exchange for the coming year. He was elected at a meeting of the new board of directors, held at Lansing recently. W. J. Perry, of Grand Blanc, was elected vice-president; P. M. Granger, Charlotte, treasurer; George Boutell, Perry, secretary, and E. E. Compson, Lansing, secretary-manager. The Exchange is preparing to place co-operative commission houses at Buffalo and Detroit.

Dr. Milton Wiley, chief of the bureau of soils of the department of agriculture, predicts that electric furnace development of the fertilizer industry promises marvelous results in the matter of improving the character of fertilizer and lowering its production cost.



The Rural School Question

By E. V. Root,

Commissioner of the Van Buren County Schools

IN these days when the tendency in school matters is undoubtedly in the direction of consolidation and so much is being said and written that is not to the credit of the one-room school, the farmer who is becoming a better business man every day, is entirely justified in asking the question, "Just what is the matter with the rural school?" and he wants an answer in words that state facts rather than start discussions. The writer feels that possibly too much criticism has been laid at the door of this same little school house. We are sometimes given to understand by well meaning people that the primary school system has broken down and has lost its efficiency as the years have gone by. Now such is far from the truth. The rural school today is at its best. Its teachers today are much better prepared than were their parents who were teaching the schools a generation ago, just as these parents were stronger in this respect than the grandparents who preceded them.

The rural schools as a whole today, are better equipped than ever before, better heated, lighted, seated and ventilated. There are, of course, occasional districts that have not been touched by these evidences of progress, "where the same old bricks are in the wall," or possibly strewn around the school ground; where the relief maps carved on the desk tops by our illustrious forbears have made the task of writing upon these desks almost impossible for the past two generations; where the monograms and inscriptions left in the old toilet stand as mute evidence that the present generation of young people are as sound morally as any which preceded them.

But taken as a whole, the rural school in its mental and physical aspects has been very much improved. The school term is longer, attendance is better, there has been a great improvement in the making of text books, the number of graduates from the eighth grade of rural schools has doubled in the last fifteen years, and these schools today are furnishing an elementary education to nearly half of our boys and girls. The rural school system has not broken down, it has done a great work and is still on the job. Rural schools this year are better than they were last year and the year to come will show an improvement over the present.

The people, however, who know the rural system best, and are the most interested in it are willing to admit that it has faults that are fundamental; that its progress has not been in keeping with the spirit of the age; that it has not been able to advance with the progress that has marked the graded school system; that rural boys and girls do not have educational opportunities with the children of the graded school district. It is for these reasons that forward-looking people who live on the soil, and educators who believe in equality of opportunity, are asking for a system that will not place a handicap upon country life.

What is the matter with the rural school? Volumes have been written in answer to this query and we do not intend to exhaust the subject in a single paragraph. The most outstanding fact, however, is this—a teacher with eight grades, and with twenty-five to

thirty-five classes of from five to fifteen minutes each, can not do justice to any part of the program, particularly the lower grades. We have some remarkable rural teachers who are doing wonders with a problem of this kind, but they are the ones above all others who appreciate the impossibilities of the primary school system. The child in the primary grades can not employ his time to advantage except under the personal supervision of the teacher.

In the rural school the big problem seems to be that of keeping the small children still, whereas the great object in primary teaching should be to give the initiative and imagination of the child the opportunity for expression. The really "unpardonable sin" of the rural school system is committed in the lower grades. It is a fact that any good grade school system will give its beginning pupils at least five times as much of the teacher's time as can possibly be had in an eight grade school. Rural pupils do not learn to read. Above the third grade the pupil is better able to help himself and hence suffers less as a result of the system, but all through the work of the school the matter of time is vital, the rural school program being a regular motion picture of passing classes.

Failure of the rural school to provide a high school education for every boy and girl is a point upon which much stress has been placed. Legislation has tried to correct this fault by requiring primary districts to pay high school tuition and this has been a help; however, it has not solved the greatest problem, which is to give these children a high school education and have them home nights. Occasionally a district solves this problem by furnishing transportation for its high school students, but these instances are not common.

Our third point is lack of supervision. Supervision is comparatively a modern term in education. Until a few years ago a graded school system had a principal, usually a man whose chief duties, aside from teaching his full quota of subjects, was to discipline pupils too large for the other teachers to handle. During the past twenty years, however, a great change has come about, the superintendent has become more and more a supervising officer.

In addition to this, principals of high schools have supervisory duties and we have extended supervision to special supervisors in various lines. Last year we estimated that for supervision in its various forms there was expended upon every graded school pupil the sum of eight dollars. On the other hand, there are just as many pupils in the rural schools as in the graded districts; many of the teachers are untrained and fifty per cent inexperienced. If there is any place where supervision is really needed it is in the rural schools, and what did they get? Reduced to a cash basis, thirty cents per capita.

Janitor service. What is it worth in the school? Much more than is generally imagined. Lack of such service means coughs and colds, poor attendance, and poor school work. In order to have the best school the child must be physically comfortable. He can not

(Continued on Page 314)

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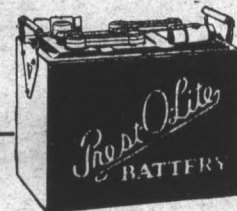
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Direct from Our Factory to You

We are manufacturers of twenty years' standing, not mail order jobbers. We make all kinds of Farm Fencing, Poultry Fencing, Ornamental Fencing and Steel Posts, and sell direct to you at prices that defy competition. Buy a guaranteed product direct and save money! Send for our booklet 75M31

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The Parrish Alford Fence and Machine Co. Knightstown, Indiana.

The First Gift of GRIMM Certified-Genuine.

Assure You

Hardy Long Life
Powerful Soil Improver
Drought Resistant
Largest Yield
Fence Posts
Best Hay
Prunings



Old Wendelyn Grimm drove fat stock to market in 1858. His neighbors, suffering financial disasters from a severe winter and a spring of alternate freezing and thawing, wondered how he did it. Grimm's prosperity resulted from a particular hardy strain of alfalfa, lying dormant in winter, having a wide-spreading, deep tap-root system with a low-setting crown that prevents heaving and injury from alternating freezing and thawing, and obtains ample water supply during drought. Grimm's neighbors obtained some of his alfalfa seed—the community became wealthy. Today proof is evident, where farmers have been fortunate to sow Genuine Grimm, that, in every climate, from milder, alternating freezing and thawing, to long, cold, northern winters, no common variety of alfalfa can stand with Genuine Grimm. Genuine Grimm seed produced by these Associations originated from Wendelyn Grimm stock and grown under severest climatic conditions. Your seedling cost of Genuine Grimm is practically as low as common alfalfa and your assured profits much greater.

Due to the vast amount of common alfalfa, or badly mixed lots sold on the market as GRIMM, many farmers have been hoaxed into raising poor or ordinary crops. On the other hand, from actual observation, users of GENUINE GRIMM are greatly increasing their profits and becoming more prosperous each year.

You will be assured success by sowing this spring CERTIFIED GENUINE GRIMM seed, produced by co-operative growers organizations under strictest field and bag inspection. We are co-operating to make possible for you to get absolutely reliable GRIMM that will give results.

Shipped in 50 lb. sealed and labeled bags.

Write Grimm Alfalfa Seed Growers Association, Grimm Alfalfa Seed Producers Assn., N. Dakota



WRITE AT ONCE for particulars & quotations to

SEED DEPARTMENT BOX 42 MICHIGAN STATE FARM BUREAU Lansing, Michigan

Our Service Department

Always Give Name and Address When Sending Inquiries

PARTITION OF LAND.

A and B own eighty acres jointly. They want to split it in two forty-acre plots. What course would they have to take to do this in the best way.—W. J. S.

This may be done by each executing a quit-claim deed to the other of the part the other is to have.—J. R. R.

ALFALFA IN WHEAT.

I have a good stand of wheat on three acres of new ground that I would like to sow to alfalfa this spring. Can it be done and not harm the crop of wheat? How had I best go about it? Where can I get good seed and how much must I sow?—J. R. L.

Excellent stands of alfalfa can be secured with wheat without injury, provided the land carries sufficient lime or has been limed, and if northern-grown seed is used. The Grimm variety is best for Michigan. Would suggest ten pounds per acre of Grimm or fifteen pounds per acre of northern-grown common alfalfa, making seeding as early in April as possible, or while the ground is in honey-comb condition in late March, using fiddle seeder and harrowing in with spike-tooth harrow, teeth standing slightly backward, or seed with seed drill.

Culture for inoculation may be secured from the Department of Bacteriology, East Lansing, Michigan, at twenty-five cents per bottle. One bottle contains sufficient material to inoculate a bushel of seed. Directions for application accompany material.

The Farm Bureau Seed Department, 221 North Cedar street, Lansing, Michigan, can furnish northern-grown seed of known source.—J. C.

COW VS. HORSE MANURE.

I wish you would tell me the difference in the fertilizing value of horse and cattle manure. I have a chance to buy some cattle manure, with a one-mile haul, I get horse manure from the city with a two and a half mile haul. I was told the cattle manure is six times as good as horse manure. What do you think it would be worth per ton? I get horse manure for nothing, keeping them cleaned up the year round.—G. M. W.

In general there is not a great deal of difference in the value of horse and cow manure—at least not as great a difference as the man you mention claims. W. W. Weir, author of "Productive Soils," gives analyses showing that where horse manure contained sixty-three per cent water, cow manure contained seventy-eight per cent. Horse manure contained a higher per cent of nitrogen, about the same quantity of phosphorus and quite a little more potash—showing it to be more valuable than cow manure in fertilizer constituents. Of course, manure value varies with the kind of feed and other things, but the figures represent general comparisons. I would say that you should use horse manure as long as you get it for nothing.—A. H. J.

CO-OPERATIVE ASSOCIATION.

What are the state regulations of co-operative ownership of animals.

What is the method of organizing agreement or by-laws? What other information can you give on this subject?—L. R. E.

Co-operative associations are either unincorporated or incorporated. The unincorporated are dangerous as they are liable to be held to be partnership creating individual liability of each member for all claims. Incorporated co-operative associations are governed by chapter 4 or part 2 of the

corporation law of 1921 being Public Acts of 1921, No. 84, and the provisions are found on page 151 of the Session Laws of 1921. An attorney should be employed to perfect the organization of the corporation, draft the by-laws and write up the minutes of the first meeting.—J. R. R.

A DAIRY RATION.

I have two good grade Jersey cows. One was fresh October 1, and makes 1½ lbs. butter daily, the other one will be fresh the last of this month. Please let me know how to feed most profitably. I have plenty of corn in the shock and June grass hay. Can get alfalfa hay at \$30.00 per ton, bran at \$1.60 per 100 lbs., cull beans at 75c per 100 lbs., bean meal, 90c per 100 lbs. The cow in milk does not like bran.—N. G.

Better results would be obtained if your corn is fed as corn meal or corn and cob meal rather than in the ear. The following grain mixture should give good results with all the corn stalks and June grass hay the cows will eat readily: Corn and cob meal or corn meal, 100 lbs.; ground oats, 100 lbs.; bran, 100 lbs.; bean meal, 150 lbs.; oil meal, 200 lbs.

Feed this mixture to your Jersey cows at the rate of one pound to each two and a half to three pounds milk produced daily. If the corn must be fed in the shock, omit the corn from the grain mixture and feed the mixture at the rate of one pound to each three to three and a half pounds of milk produced daily. If you can sell your June grass hay for \$15.00 or more per ton on the farm, you could afford to replace it with alfalfa hay at \$30.00, but it is doubtful otherwise when you can buy bean meal at 90c per 100 lbs., and oil meal at \$3.00 or less per 100 lbs.

It will pay you to grow alfalfa, however, for many reasons, some of them being the large amount of good feed per acre; its lime content which makes it a valuable dairy feed and its soil building properties. If either the cows refuse bran, omit bran and increase the ground oats in the mixture.—J. W.

RACCOON FOR FUR.

Can you tell me where to buy a male black swamp raccoon?—A. D. S.

I have never seen black raccoons advertised but should think the easiest way to get in touch with someone having them would be by advertising in some of the sporting papers or farm journals. Possible search of ads. in these publications would show dealers in such stock as he wishes.

All raccoons are "swamp raccoons" and the black raccoon is merely a dark colored common raccoon, what we call a Mendelian variety, which will transmit its dark color according to the well-known rules of Mendel's law. The black raccoon bred with an ordinary one might give one or more young as dark as the black parent but more likely all would closely resemble the normal parent. If, however, some of the young when adult were bred together at least one in four of the young should be entirely black or at least as dark as the dark grandparent. It would make no difference whether the original dark grandparent were male or female.

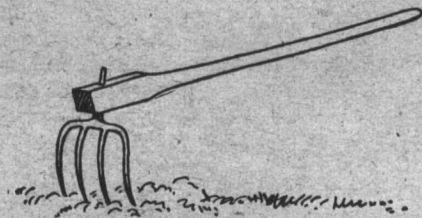
I fail to see why anyone going into fur-farming should take the trouble to breed raccoons of any color when he might just as easily breed skunks, mink, or foxes and get a much better return for time and money expended. I will look through the ads. in a number of different journals and see if I can get the address of anyone offering raccoons.—W. B. B.

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

A COMPLETE GARDEN TOOL.

THE handiest garden tool I have ever used is one my husband made from an old four-tined pitchfork. It is so simple that a glance at the cut shown explains all.

The handle should be made from a piece of hard, straight-grained wood, dressed down to the desired size. The



hole, into which the stem of the fork fits, must be bored at a proper angle to allow the fork to "hang" properly. In case the four-tined fork is too wide for certain rows of vegetables, a three-tined fork can be used instead. A small wedge driven in from above holds the fork firmly in place.—C. G.

SCRAPS.

Produce your own tankage in the legume fields.

One way for the farmer to spell prosperity is live s-t-o-c-k.

Spraying is the bridge over which many a fruit grower has passed to the shore of success.

In order that the garden may keep right on giving the family the most healthful of foods, its surface should have a real liberal introduction to a few of the best loads of manure that the farm affords.

Teachers of country schools are finding that the hot lunch not only improves alertness and scholarship but that it also has lessened the necessity for discipline and has increased sociability among the scholars at lunch time.

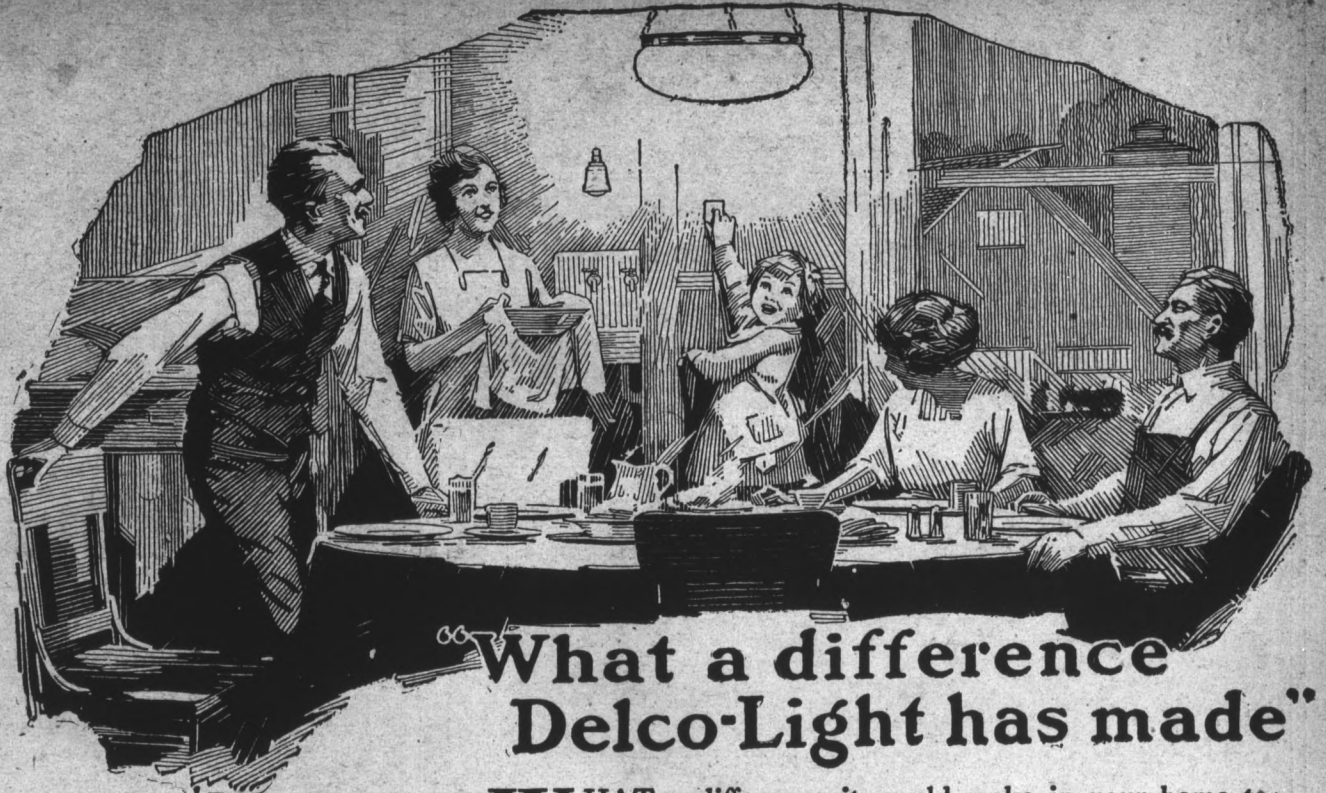
WAR FINANCE CORPORATION.

(Continued from Page 285)

Regarding the amount of new loans made to the farmers from these funds a circular sent out to three hundred banks revealed the fact that a little over twenty-five per cent of the total amount was going for new loans. The rest is being used to extend old loans and to build up the bank's reserves.

Of course, it is impossible to measure quantitatively in exact terms the benefit that has resulted from the aid of this War Finance Corporation. But when corn goes up one cent a bushel the farmers in Iowa are benefited over a million dollars. Corn now is about forty-five cents per bushel in Iowa and was only twenty-five cents per bushel last fall. Now it is rather easy for the individual farmer who was enabled to hold his corn off the market when the price was so low, because of the funds given him by the War Finance Corporation to figure how much good the Corporation did him. And with the prices of hogs and cattle going steadily upward it begins to look as though the feeders are going to remember the War Finance Corporation Act with gratitude likewise.

Of course, the farmers know that the act is a temporary one and that it does not solve the rural credit problem. But as an emergency measure it gave relief just when that relief was sorely needed. The spirit in which the act has been carried out on the whole is excellent. To be sure there have been delays and misunderstandings, but these are inevitable and to be expected in any undertaking. If the farmers and bankers of every state had tried to cooperate as they did in Iowa the operation of the War Finance Corporation Act would have been an even greater success than it has been.



What a difference Delco-Light has made

WHAT a difference it would make in your home tonight if at supper you could flood the whole room with bright, clean, safe electric light!

You can do this if you have Delco-Light—the very day you install Delco-Light you can have all the things you need to make your home more modern, better, brighter and happier.

You will be able to have electric light at the touch of a button whenever and wherever you want it. No more lamps and lanterns. No more danger of fire. The same kerosene you now burn in lamps and lanterns will even give cheaper light when used as fuel for Delco-Light.

And electric power! Think of the convenience and labor saving! You will have power to pump all the water used in the house and barns—power for the milking, separating, churning, washing, ironing, sweeping and many other tasks that are now done by hand.

Your supply of electric light and power will be thoroughly reliable because it will come from the dependable Delco-Light plant. The air-cooled, valve-in-head, kerosene engine, and the thick-plate, long-lived batteries are giving continuous satisfaction to over 150,000 Delco-Light users.

If you haven't had a recent estimate on Delco-Light for your home, you will be surprised how little Delco-Light will cost at the new low prices and how easily it can be bought on our new time payment plan.

Just ask the nearest Delco-Light dealer to explain these things to you. Or mail us the coupon at the bottom of this page and we will send you our catalog, new prices and details of our easy-payment plan.

DELCO-LIGHT COMPANY, Dayton, Ohio

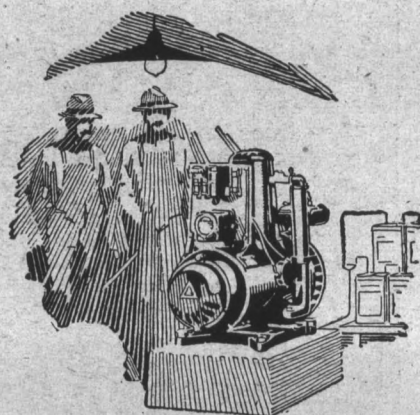
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M. L. Lasley, 49 E. Elizabeth Street, Detroit, Mich.

Pringle-Matthews Co., 18 Fulton St., West, Grand Rapids, Mich.

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There are 25 styles and sizes of Delco-Light from \$250 to \$1625 f. o. b. Dayton, Ohio.



DEPENDABLE DELCO-LIGHT

More than 150,000 Satisfied Users

Delivery Made in Few Days from Nearest Distributing Point

We Ship from
Escanaba, Mich.
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Send No Money Use It 30 Days

World's Largest Stump Puller Manufacturers

Kirstin One-Man Stump Puller

Compound leverage gives tons pull on stumps from a few pounds on lever. Speed shift gives just the speed and power needed for big, little, green or dead stumps. Three-year written guarantee with each machine. Quick delivery and low freight assured by shipment from nearest distributing point. Send for Free Book, etc.

Write now. A. J. KIRSTIN CO., 312 Lud Street, Escanaba, Mich.

One Man Alone Handles Big Stumps

Kirstin One-Man Stump Pullers give you giant's strength. One man easily operates alone. Light, fast, powerful. Clear in time for profitable crops this year—quickly, easily and cheaply. More bushels means more income. Crops from new land more than pay for clearing. Don't send a penny. Try it for 30 days in your stump field. Four easy payment plans. Long terms. Complete line of One-Man and Horse Power Pullers to choose from.

FREE 80-Page Illustrated Book on Land Clearing

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Send for Isbell's 1922 Catalog

HUBAM

The New ANNUAL Sweet Clover

A fast growing white sweet clover, big-yielding and nutritious. Excellent for hay or grazing. Being an annual, it saves a year in crop rotation. Plant Isbell's Hubam—it is Michigan-grown, hardy and dependable. Send today for your copy of catalog. It is Free.

S. M. ISBELL & COMPANY 545 Mechanic St. (27) Jackson, Mich.

Seed Oats

Limited quantity of Worthy variety. Grown in 1920. Write for particulars. E. S. CHRISTIANSEN, Coral, Mich.

Business Opportunity

We start men in the Automobile Accessory Business. The best line in the market today to become independent and own a business of your own. List of customers that we have started, name and location and their success given on request. No chance for failure if you follow our advice and instructions. One man started with \$600.00 and earned \$7,000.00 the first year, town within thirty miles of Detroit. Capital required \$500.00 to \$1500.00; we recommend small beginnings. We will furnish location for you, many places open.

E. A. BOWMAN, Inc.

"The Old Reliable" Motor Car Supplies
41 Harper Avenue, Detroit, Mich.

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR. BOX J STERLING, ILL.

"More Potatoes"

Seed Oats

Limited quantity of Worthy variety. Grown in 1920. Write for particulars. E. S. CHRISTIANSEN, Coral, Mich.

Dickinson Pine Tree Brand Seeds

Continue to be
the standard of quality the
country over

Because
they are clean seed, of strong
vitality.

When you buy Timothy, Clover,
Alfalfa, Alsike, etc., insist on

PINE TREE BRAND

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THE ALBERT DICKINSON COMPANY

Chicago

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Anthony Fence

American
and U.S.
STEEL **Posts**
AND STEEL GATES

Good farming demands good fences. Every good farmer knows this, and it is the wise farmer who buys his fences on the basis of quality and weight.

Use Anthony Fence—made of big heavily galvanized wires with strong springy mechanically hinged joints. The ideal fence is Anthony fence hung on American or U. S. Steel Posts. Driven like stakes, they anchor themselves. Fireproof, weatherproof—this combination gives you a fence that lasts for ages.

The best fence is heavy fence—of thick, strong wires. This is the type we recommend. We know that in the long run it always gives the best service. Such fence can be more heavily galvanized, looks better, lasts longer and gives better service.

In response to trade demands we also manufacture highest quality light-weight fences, with small gauge wire. Of this type there is no better fence on the market, but we strongly urge the more certain economy of heavy fence.

See our dealers everywhere. Get our prices. They have stocks on hand for quick delivery. Write us and get our new catalog illustrating many kinds of fences, gates and posts for every purpose.

American Steel & Wire Company
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Send for
These Books

"Making the
Farm Pay,"
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Rust," "Dairy
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Account Book"
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free.

Francisco Farm Notes

By P. P. Pope

WE are just coming through the biggest ice storm known to man in these parts. It's a great experience. Telephone wires as large as hay ropes. Most of them along with the poles are on the ground. The state reward roads are great for skating. So are the fields. We have been coasting down the road broadside foremost with the car, tangled in telephone wires, and into the ditch twice, and through several places where a canoe would have been more appropriate, all this in driving some 40 miles.

The orchards! there are none, at least that are worthy of the name, only some broken up trees and half trees remain. The maples! small chance for sitting in their shade this summer, and the big willow in the front yard is just naked. Its body and bare arms stripped clean. The growth of years destroyed in an hour. Veritably, how insignificant is man and his handiwork, compared to the power of nature. Yet so constituted is he that an occasional reminder of that great truth seems necessary in order to keep him from thinking that the world revolves around him.

We are living in an age of extremes. Extremes in war, extremes in social life, extremes in finance, extremes in nature. Perhaps they should cause us to stop and think, to pause and ponder well, to dig deeply in an endeavor to ascertain the place and portion in the world which is ours.

Should we allow ourselves to become superstitious and think the devil had us under a spell? That might do for the "haythen chinee." Should we become discouraged and give up trying? Only the weak-kneed have such a license. Real Americans with red blood in their veins are not made that way. While it may be well for ourselves individually to realize that it is not necessary for us to carry the world on our shoulders, it will be well for the world when we realize that, in spite of our great insignificance, we are at least a part of that great body of average citizens, upon whom the progress of the world depends. So we will "gird up our loins" and go to work and do the best we can; we will "buck up" and be satisfied with the result; we will take our work upon our hearts but keep it off our nerves, and we will "Pucker Up and Whistle" while we do it.

One of the jobs requiring early attention on Francisco Farm will be the clearing away of the wreckage left by the ice storm. Liberal proportions of our fruit trees and shade trees will be consigned to the buzz pile and brush heap. There is also some clearing up back in the little wood lot. Most every spring finds an accumulation of odds and ends too good for the bon fire, but that work well into the buzz pile. Again, if we do all we can to repair the damage done by the storm it is up to us to do some planting.

At the close of the Civil War the country hereabout was practically unbroken forest. The first generation on this fair land was interested first, last and all the time in cutting away the trees. The second generation have continued too far in their fathers footsteps, until today the narrow belts of woods (they can no longer be called timber) back next to the line fence in

the center of the section, have grown so thin that automobiles may be seen through them on the road a mile away. We have never ceased to regret that the back twenty acres on Francisco Farm could not have been left in timber instead of the paltry three or four acres. I am sure that properly handled it could be made equally profitable with an equal acreage anywhere else on the farm and that without depletion.

For many years we have been wanting to plant trees. Shade trees, ornamental trees, fruit trees, wind breaks, but each year sees tree planting time pass with little planting. We have planted a few, we have destroyed more. The winds and the elements have destroyed more still. This last destruction makes us think it is time to get the habit, and plant a few trees each year. Growing trees add an attraction and create an attachment to the country home that nothing else can give. They help to make the farm and the family one, inseparable. They help us to take strong root in the soil from whence cometh our strength. Thus indirectly they stand for permanent agriculture, for when we cease our roving and settle down on a spot where we hope to live and die, we also cease preying upon the land and inaugurate a system of soil building.

WHY TRUCK CROPS FAIL ON MUCK SOIL.

CELERY, onions, lettuce, and other truck crops are grown extensively on muck soils, but occasionally a grower will have difficulty with the young plants turning yellow after making a good start.

According to experts at the Geneva Experiment Station, several factors may be involved in the failure of crops on these soils. If recently drained, the muck may contain an abundance of plant poisons which can be removed only with frequent and thorough cultivation. This is said to be a very common cause of crop failure on new mucks and it is suggested that on such areas corn or potatoes be grown the first year or two with frequent cultivation.

Other causes of failure are high acidity, lack of available plant food, and improper drainage. Ground limestone or marl, barnyard manure, potash fertilizers, and acid phosphate can be applied to many muck soils to good advantage. Too little drainage frequently results in the crop being drowned-out in wet weather, while with too much drainage the crop may suffer from drought in dry weather. Shallow mucks should be avoided for the growing of truck crops.

OTHER MILK AND ALFALFA CAMPAIGNS.

RECENT reports from the extension department at M. A. C. are to the effect that the milk and alfalfa campaign in Lenawee county was well attended. It was said that attendance at barn meetings often mounted as high as twenty-five and that evening meetings were exceedingly popular.

Similar campaigns in other counties of the state have proven very successful. A campaign was started in Eaton county February 28 and is to close March 10. Another campaign will start March 13 in Jackson county and will close March 25.

Feeding standards should be used as guides in formulating rations.

HUNDREDS ENTERTAINED BY INSTRUCTIVE ADDRESSES.

FULLY eighteen hundred people listened to a big agricultural program put on by the High School Agricultural Department of the Bad Axe High School last week. Health and Markets were respectively discussed by Miss Moore and Mr. Cribbs while Poultry received the attention of Mr. Ferguson and Bacteriology was the general theme of Dr. Giltner, all of the M. A. C. Five reels of films on farming subjects were also features of the interested sessions.

URGES USE OF CERTIFIED SEED.

THE cost of working a poor crop is just as much as that of working a good one, says the State Farm Bureau Seed Department in boosting for the general use of certified seed. Certified seed assures the farmer of a good crop under normal conditions and the kind of crop he had a right to expect when he bought the seed, says the department.

Although certified seed has a greater first cost than does common seed, that cost is absorbed in the results gained at harvest time. Certified seed is a guarantee to the farmer that his seed is adapted, pure, of high germination, will not winter-kill under normal conditions, is true to name and will live up to the statements that go with its name. The ordinary run of seed may be weak in any or all of those points and it may be strong, but the farmer does not have the advantage of knowing those facts by means of disinterested tests. Ordinary seed may look very good, but be cross-pollinated with inferior stock and be a poor crop in the field.

CABBAGE MAGGOT AND POTATO LEAF HOPPER.

IN discussing recent developments in insect control, Prof. P. J. Parrott, of the Geneva station, has said that the station had been investigating cabbage maggot control for several years. It has been found that good results can be obtained by screening the bed. The screening also preserves moisture and the cost is small. Screened beds are common in the western New York cabbage districts.

The station has been carrying on investigations to discover the best means of destroying the potato leaf hopper as a means of controlling tipburn. Spraying with Bordeaux so as to completely cover the leaves of potatoes has given effective results. The untreated plots have developed pronounced browning. This year all the plots not sprayed were dead by August 25. All plots thoroughly sprayed with 4-4-50 Bordeaux mixture were green up to September 23, when the potatoes were dug. The increase was fifty-eight bushels per acre from spraying.

RIGHTS DURING FORECLOSURE.

B has a forty-acre place and mortgages it to make a payment on a twenty. B has a deed of the twenty, but only a contract for the forty. A holds a mortgage on the twenty, being unable to pay the interest, but mortgage not yet due for two years, can B have possession one year to redeem it in and must B live on it to hold it one year?—E. J. S.

The mortgagee or the purchaser as the forecloses is not entitled to possession until the right to redeem has expired, and it is not necessary for the mortgagor to reside on the land to hold it.—J. R. R.

It is getting near the last date when it will be safe to prune the grape vines. Cut the old canes back to two or three buds.

McQUAY-NORRIS
PISTON RINGS

Give Your Engine More Power—and Save Gas

Gas that leaks past worn or poorly designed piston rings is a dead loss. It wastes power and money. That's why it pays to replace leaky rings with McQuay-Norris equipment. It will increase power, save gas and oil, and decrease carbon trouble in any passenger car, truck, tractor, or stationary engine. The McQuay-Norris line is complete for every need. Through the addition of McQuay-Norris

Wainwright Pistons and Piston Pins to the McQuay-Norris Piston Ring line, you can now secure for your gas engines complete McQuay-Norris-made Pistons, Piston Pins and Piston Ring equipment.

Send for Free Booklet—a valuable explanation of the relationship of piston rings to gas engine operation. Address Dept. AE.

McQuay-Norris Mfg. Co., St. Louis, U.S.A.
Canadian Factory: McQuay-Norris Mfg. Co. of Canada, Ltd., Toronto, Canada



McQUAY-NORRIS
WAINWRIGHT
PISTONS & PINS

LEAK-PROOF—an exclusive two-piece design, preventing loss of gas and compression. Gives equal pressure at all points on cylinder walls. For all piston grooves except top, which should have Superoyl. Each ring packed in a parchment container. Price per ring—

\$1.25

In Canada, \$1.50



Superoyl—Keeps lubricating oil out of combustion chamber. Collects excess oil on each down stroke of piston and empties on each up stroke, which ordinary grooved rings cannot do. Each ring packed in a parchment container. Price per ring—

\$1.00

In Canada, \$1.25



JIFFY-GRIP—a one-piece ring. Non-butting joint which can be fitted closer than ordinary step cut—velvet finish—quick seating. "Seats in a jiffy." To keep them clean and free from rust, each ring is packed in an individual glassine envelope. Price per ring—

50c

In Canada, 50c



Snap Rings—of the highest grade. Raised above the average by McQuay-Norris manufacturing methods. Their use insures all the satisfaction possible for you to get from a plain snap ring. They are packed twelve rings to the carton and rolled in waxed paper.

And Snap Rings of the highest grade



Made of Electric Iron

SEND FOR CATALOG TO-DAY



Planet Jr.

Accurate seeding pays

Seed costs money. Labor costs money. Save both by planting with Planet Jr. seeders. Planet Jr.s sow regularly, rapidly and accurately in hills or drills at proper depths in even, narrow lines. A Planet Jr. leaves no gaps—wastes no seed. Every Planet Jr. has an adjustable index with the names of the principal seeds, enabling the user quickly to change the feed to sow the different varieties.

Planet Jr. sows so evenly and straight, it makes close cultivation of standing crops quicker and safer.

All Planet Jr. Farm and Garden Implements are scientifically constructed on proved, practical lines. Send for the complete Planet Jr. catalog, showing seeders, wheel hoes, horse hoes riding cultivators, etc.

S. L. ALLEN & CO., Inc.

Dept. 58,

5th & Glenwood Avenue, Philadelphia

No. 4 Planet Jr. Combined Hill and Drill Seeder, Single Wheel Hoe and Plow. An economical, easy-working and serviceable implement for large gardens. Does most of the garden work from planting to cultivating right through the season. Built to last a lifetime.

BUILD For All Time

Investigate for yourself the great superiority of Kalamazoo Glazed Building Tile for permanent, attractive, economical farm buildings. Warm in winter, cool in summer, storm-proof, rot and rat-proof. Save cost of paint and expensive upkeep.

Kalamazoo GLAZED BUILDING TILE

Positively without a superior in any way. Impervious to dampness. Ample air cells make insulation perfect. Single blocks withstand 40 tons pressure. FREE estimate of cost furnished if you send rough sketch of building wanted. Send your name for full particulars.

KALAMAZOO TANK & SILO CO.
Dept. 423 Kalamazoo, Mich.

For Healthy Orchards
Plant Michigan Grown Trees

BUY handsome, thrifty trees, grapevines, berry bushes, roses, and shrubs from your own state and insure prompt receipt in vigorous condition. Kalamazoo County is famous for hardy, well-rooted stock. We guarantee healthy and true to name. You ought to plant more fruit trees this season. Special rates if you order now. Our handsome catalog of dependable trees for the asking.

Celery City Nurseries
Box 204 Kalamazoo, Mich.

Nursery-to-you, At Pre-War Prices

NEW HUCKLEBERRY

The Garden Variety that grows from seed the first year. A Huckleberry that thrives in all climates and on all kinds of soil; remarkably prolific, yielding an immense crop of fruit.

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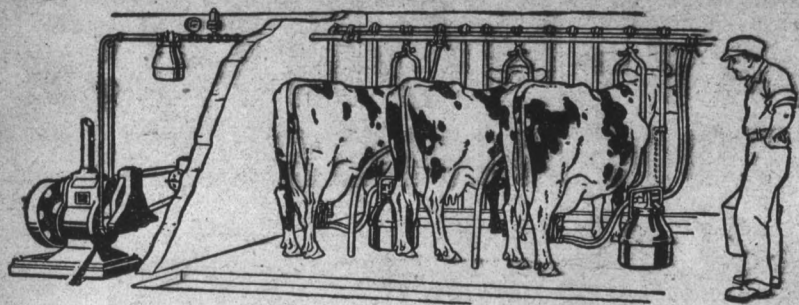
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Perhaps the thought has occurred to you—"Why buy a milking machine when help is so plentiful?"

Help usually must be paid for, whether it is plentiful or not; and one dollar saved now is as much as two dollars saved a short time ago.

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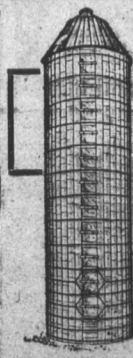


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Early Varieties: Helen Davis, Charles First, Medium: Dunlap, Pocomoke, Haviland. Late varieties: Late Champion. Any of these per 1000 \$5.00; per 100 75c. Everbearing: Progressive, the best Everbearing. Strawberry, \$10 per 1000; \$1.50 per 100. All orders P. O. B. Lawton. ED. PHILLIPS, Lawton, Mich.

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Dairy Farming

BIG COWS MOST PROFITABLE.

THAT the big cows within any breed are the most profitable is the general conclusion reached by the department of agriculture after a careful study of figures gathered by various cow-testing associations. The bulk of the data gathered was for grade cows rather than pure-breds but the conclusions generally seemed to point as above indicated.

While the evidence gathered forced the general conclusion that the larger cows were the most economical producers, there are some indications that this may not hold true where herds contained animals with a considerable mixture of beef blood prevailing, are concerned.

The cows whose records have been used by the department have been sorted out so that only mature animals were used for these comparisons, thus eliminating any differences that might have been caused by the immaturity of some cows.

In one group for which figures have been prepared there were 160 cows classified as small, 201 as medium, and 129 as large. The small cows averaged 243 pounds of butterfat a year, and made an income over the cost of feed of \$77.39. Those of medium size made 289 pounds of butterfat and an income over feed cost of \$88.91. The large cows produced 345 pounds of butterfat and a return above feed cost of \$105.74.

In another group there were 461 small cows, 483 classed as medium, and 326 large. Those in the first classification made 240 pounds of butterfat on an average and an income over cost of feed of \$89.11. The mediums made 278 pounds of butterfat and \$106.09 over feed cost. The large ones produced 299 pounds of butterfat and an income over feed cost of \$108.29.

These tables were based mostly on figures for the years 1916 to 1919, inclusive, which accounts for the high average income over cost of feed.

WHAT A COW TESTER FOUND.

THE Kalamazoo County Cow Testing Association on February 8th finished its first year and the report of the tester shows some real dairy progress.

The annual meeting of the association was held February 18th. E. L. Brown, of Schoolcraft, was re-elected President; W. E. Balch, Kalamazoo, Secretary-Treasurer. Directors: A. B. Imus, Galesburg; D. E. Kuhn, Vicksburg; Harold Buckham, Kalamazoo. S. P. Sexton continues as tester.

Twenty-three members finished the year with 299 cows and the average production for the entire lot was 7,064 lbs. of milk and 305 lbs. of fat, the milk having an average test of 4.3%. There were 4 reg. Jersey herds, 3 gr. Jersey herds, 1 reg. Holstein herd, 6 gr. Holstein herds; 3 gr. Guernsey herds, and 6 mixed herds.

The highest milk producing herd was a 12-cow reg. Holsteins herd owned by H. B. McMurray. Six cows in this herd were given official records during the year and the average production was 10,623 lbs. milk and 399 lbs. fat. The high cow was also a member of this herd, a 4-yr.-old and her record was 14,011 lbs. milk and 511 lbs. fat.

The high fat herd is a 12-cow graded Guernsey herd owned by T. L. Rae, with an average of 8,043 lbs. of milk and 408 lbs. fat. The high cow in this herd produced 498 lbs. of fat and the lowest cow 320 lbs.

Ray Cartwright, with a 12-cow herd

of grade and registered Jerseys, made an average of 383 lbs. of fat and his high cow made 499 lbs. fat.

All herds in the association but one were tested for tuberculosis, about 12 reactors were found on the first test and on the second test only 3 have been found so far as we know. About 50 have been taken out as unprofitable during the year and the average production shows that a standard of 250 lbs. of fat is none too low.

In one herd the owner had been trying to sell a certain cow and when the tester came he induced the owner to wait awhile before selling. She has since proved to be the best cow in the herd, giving nearly 14,000 lbs. milk and 440 lbs. fat. The saving of this cow alone will pay this man's testing dues for many years.

In another herd a cow was booked for the butcher and she has since proved to be one of the best cows in the herd. Cases like these are not at all new in the testing work but it is sometimes uphill work to get the cow keepers to see it.

A striking illustration of the value of a sire was shown in the herd of T. L. Rae. Old Brownie, as she was called, left two daughters (Brownie by the way was a good old Jersey Duroc). One daughter was sired by a purebred Duroc bull, the other by a registered Guernsey bull. The Guernsey grade last year made 498 lbs. fat and the other 320 lbs. Mr. Rae thinks she is about such a cow as her mother was but no better one was the high cow in the herd and the other was the lowest.—S. P. Sexton, Bridgman, Mich.

NEW GUERNSEY RECORD FOR MICHIGAN.

THE state Guernsey record in Class A for Michigan has just been broken. Cilla M., No. 45875, owned by Mr. John Endicott, of Detroit, Michigan, has just completed a yearly record and produced 17,088.8 pounds of milk and 868.2 pounds of butterfat. This record replaces the one made of Abbie of Riverside with a Class A record of 14,201.10 pounds of milk and 816.12 pounds of fat and is also larger than the record made by the Michigan Agricultural College cow, Carrie of Hillhurst, whose record for Class AA is 15,307.8 pounds of milk and 814.83 pounds of fat.

Cilla M. is an excellent type of cow and is of good size for the breed. When she started out on the record just completed she was a victim of a severe attack of milk fever and for six weeks was fed cautiously and sparingly. As her detailed record shows, she was a persistent producer.

A glance at the breeding of Cilla M. does not indicate at first that she was bred for this kind of performance, but on looking back a generation or two we find the names Sheet Anchor III and Monarch of the Glen, who was out of Glenwood Girl 6th. It is impossible to tell just when and from what line of breeding one can expect such splendid records. When animals have been bred for generations with one aim in view you can expect producers to show up in any generation.

In addition to this fine record, Mr. Endicott has made other splendid records in his herd near Birmingham, Michigan. He has some thirty head of Guernseys and has worked out a definite plan of breeding.

At Michigan State Fair, held last September in Detroit, Mr. Endicott's herd bull, Rosetta's Marshall of Wadlington, was made Grand Champion bull.

Get Together--Keep Together

Convention Talk Shows That More Than Ever are Dairymen Relying Upon Mutual Effort to Help Solve the Big Dairy Problems

JUST what some of the men who are giving the most thought to the business of producing milk and other dairy products, are thinking about is shown in the following reports of some of the important addresses and discussions by and for dairymen and dairy manufacturers given at their recent convention held in Saginaw. This material was prepared for last week's issue.

Judge Munn's Masterly Address.

In the Tuesday afternoon session, Judge Munn, of Chicago, was the principal speaker, his address being "The National Dairy Council, its Place in Organized Dairying." He made a very strong plea for dairymen to think of dairying as an organized industry of the greatest importance to the people, rather than as an individual business—a thing which most farmers are prone to regard it. The whole industry should function for the public welfare as a big national organization, and not for an entirely selfish purpose.



The Good Dairy Cow is the Most Efficient Animal for the Conversion of Raw Materials into the Best of Foods.

"The country is just beginning to realize," he said, "how its vitality, its manhood and its leadership in trade depends on proper diet and nutrition of its people, especially the children, and how much milk, butter, cheese, ice cream and other milk products contribute to the national health. The fact that 150,000,000 more pounds of creamery butter, and about 50,000,000 more pounds of dairy butter were made in 1921 than in 1920, is an illustration of this realization by the country, even though the reduced prices of milk and its products in 1921 tended to stimulate consumption in some degree."

Judge Munn then showed by government reports that the average farmer received forty-two per cent more for dairy products in 1921 than during the five year pre-war period. Beef cattle brought seven per cent more and hogs eleven per cent more than in the five-year pre-war period; but corn, oats and barley, when sold in the open market, brought eleven per cent less. These grains when fed to dairy cows brought thirty-two per cent more in 1921 than in the pre-war period.

Helpful Talk by Prof. A. C. Anderson.

"Don't be influenced by the demand coming out of the west for curtailment of production as a remedy for low prices," Prof. A. C. Anderson, of Flint, told the farmers and dairymen in the Wednesday morning session. "It is not overproduction that is causing your troubles so much as underconsumption of milk and its products, a condition largely due to inability of industrial workers and the people generally to buy on the scale of a few years ago. The farmer today has a good job, far better than that of the average city man who is happy if he has three days work in a week, for in that he sees a living at least. The farmer is always sure of a living for himself and family and this is not the time for dairymen, least of all, to complain, but rather to think sanely and act wisely, putting more brains into the conduct of their business. Better times are surely in

store for all who now bravely bear the troubles of the present in a calm, assuring way, ever looking hopefully to the future."

In the afternoon session, Roy C. Potts, of Washington, representing the United States Department of Agriculture, on the subject, "Future's Yardstick," urged his hearers to strive for one hundred per cent efficiency in the production and distribution of milk and milk products, as this is the measure of success and progress. This applies to all engaged in the great industry. The dairyman should improve his herds, improve his methods of handling milk, the dealer should adopt more sanitary methods of distribution, the creamery men should cut their operating costs by careful management, and all work in harmony to the betterment of the public service.

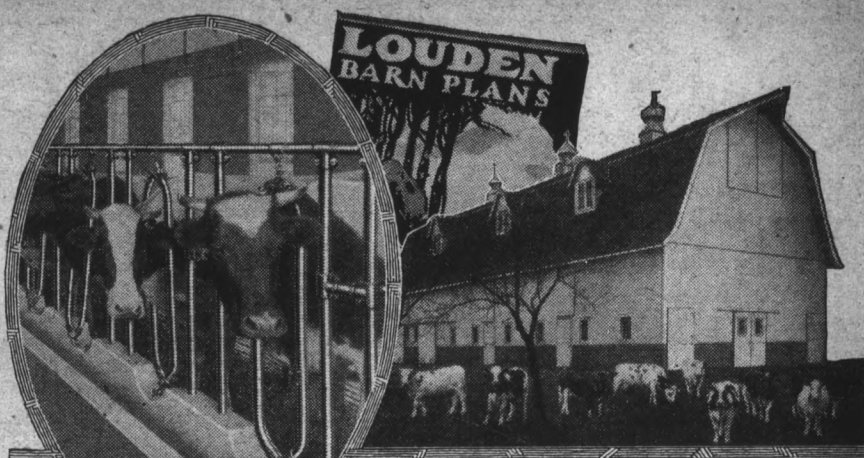
Never before has the dairyman been given the consideration by congress, and never before have the distributors been so alive to the need of close co-

operation with the producers, as at the present time. There is no need of fear now for future of dairymen who strive for higher efficiency. If they expect to keep pace with the march of progress they will keep one hundred per cent efficient as measured by "Future's Yardstick."

Asks Dairymen to Cooperate.

Urging farmers and dairymen to recognize the value of cooperation before being driven to it as were the peasants of Europe, E. B. Heaton, of Chicago, director of dairy marketing of the Farm Bureau Federation, and secretary of the Farmers Dairy Marketing Committee of Eleven, addressed the convention at its final session Thursday afternoon. He referred to the isolation of farmers as one factor in producing a lack of cooperation, but he warned them against allowing themselves to be pushed down to the mere existence of the peasant of Siberian Russia thirty years ago, before they adopt the cooperative marketing plan through necessity. "We hope his ideas of democracy as found in this nation will teach the value of united action, and that it will be possible to convince the other citizenry of our country that the strength of our nation will depend upon the development of its agriculture, and in this progress the farmer should be allowed to cooperate in their marketing undertakings.

"It is a hard lesson for individuals to learn to cooperate, especially for farmers living as they do widely separated, so far as their business in a community is concerned. But the time comes, sooner or later when they are forced into united action, in order to take some of the speculation out of the products which they produce. While it is claimed that the creamery idea was developed a number of years ago in this country before it was in any other country, yet the American farmer is far behind those of other nations. The great need of the dairy farmer today is a development of cooperative marketing to compete with these dairymen of other countries."



Scores of Labor Saving Barns Pictured in This Free Book

Think what it would mean to have a barn that would save you hundreds of hours every year, and in addition, all of the back-breaking drudgery of barn work—a barn that will give your cows better health, greater comfort and promote increased milk production—a barn that will save thousands of steps and all unnecessary labor.

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The Louden Barn Plan Book pictures over 50 such up-to-date barns, shows how efficiently they are arranged and gives full detailed information on every phase of barn construction, wall-framing, types of roofs, greatest mow capacities. Has chapters on foundation work, amount of cement needed, ventilation, size barn required for different purposes, silo-building, etc. A complete encyclopedia on barn building that not only enables you to select a better barn but a better barn at considerably less cost. If you are intending to build or remodel a barn, tell us the number and kind of stock you expect to house and we'll gladly send you this book absolutely free of charge.

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Louden Plans help you get the best possible barn for the money you put into it. Loudon Labor-Saving Barn Equipment enables you to get a bigger profit from your herd as long as the barn stands.

Louden Steel Stalls and Stanchions are noted for smooth construction and great durability. Easily installed in any barn—old or new. Loudon Swinging Stanchion gives cows real pasture comfort in the barn—lying down or standing. The only stanchion that can be used with Loudon Built-Up Manger Curb which prevents cows nosing feed back onto the stall floors.

Louden Manure Carrier will pay for itself the first year in the saving of time alone. Takes all the back-breaking drudgery out of barn-cleaning—takes the equal of five wheelbarrow loads at one trip—lifts and carries this big load so easily that the job is a snap even for a boy.

Louden Water Bowls are the most profitable investment you can make. They save all the labor of watering the herd, increase the amount of milk from each cow 25% to 40% and prevent the spread of tuberculosis or other diseases through the water.

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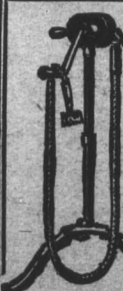
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HOGS CONTINUE TO ADVANCE.

WHERE will hog prices climb to? Despite the great surplus of corn, quotations for swine, the largest consumer of the corn plant, keeps right on mounting to higher and higher levels. The advance has been steady but when the bears cannot break the upward push on days of exceptionally heavy receipts, then there is a good foundation for the prices which buyers are paying.

Last week the market opened with the heaviest run of the year to date but the Chicago market failed to sag more than 15c below the high level of the preceding week and the day closed with the loss regained. In the following days the receipts were moderate and advances carried the market up from 20 to 35 cents above the opening.

A comparison of the past week's closing prices with those of the first week of the year shows advances ranging from \$2.50 to \$3.25 on all classes except pigs and underweights, with the heavy classes gaining most.

Such an advance within a seven-weeks' period in the heart of the so-called winter packing season is perhaps unprecedented and is attributable partially to the broad and constant demand on the part of shippers and small packers which reflects a healthy domestic and foreign demand for the product, especially of light and medium weight hogs. It is also partially attributable to the fact that the winter supply, as measured by receipts at the leading market centers, has fallen considerably below general expectancy as disclosed by a shrinkage of nearly 1,000,000 hogs in receipts at 10 large markets during the first seven weeks of the year compared with a like period last year.

CLOVER IN THE ROTATION.

CLOVER is generally regarded as a valuable aid in maintaining soil fertility, but it is sometimes difficult to see just how much clover has benefited other crops in the rotation.

The Experiment Station at Geneva reports that on plats where clover was grown in a four-year rotation the yield of dry matter for all crops produced over a period of 17 years was about 28,000 lbs. more than on the plats where timothy was used. Based on the production of the cereal crops alone, the clover plats produced nearly 10,000 lbs. more dry matter than did the timothy plats. It was concluded, therefore, that there is a considerable advantage in using clover in the rotation.

HUBAM POPULAR WITH BEEMEN.

A GREAT many Michigan farmers have become enthused over the splendid possibilities of Hubam clover for bee pasture. The numerous fields for seed increase throughout the State last year gave plenty of opportunity to see what the crop would do along that line.

"Fifty per cent of our colonies made over one hundred pounds of comb honey each," was the word from Farley Brothers, of Albion.

"It was of such fine flavor, too. Our field of Hubam clover for seed increase was alive with the busy workers from early summer till late in the fall. The Hubam has such a very long season, much longer than the common biennial sweet clover. Ours blossomed from June well into October or long after the first frosts."

The crop has a double value to beekeepers in that they profit not only from the honey crop but from the large yields of seed as well. The Michigan Crop Improvement Association is certifying genuine Hubam seed which is then marketed by the Farm Bureau Seed Department, of Lansing.

Sweeping Reduction of \$375 on the WATERLOO BOY 12-25 Three-Plow TRACTOR

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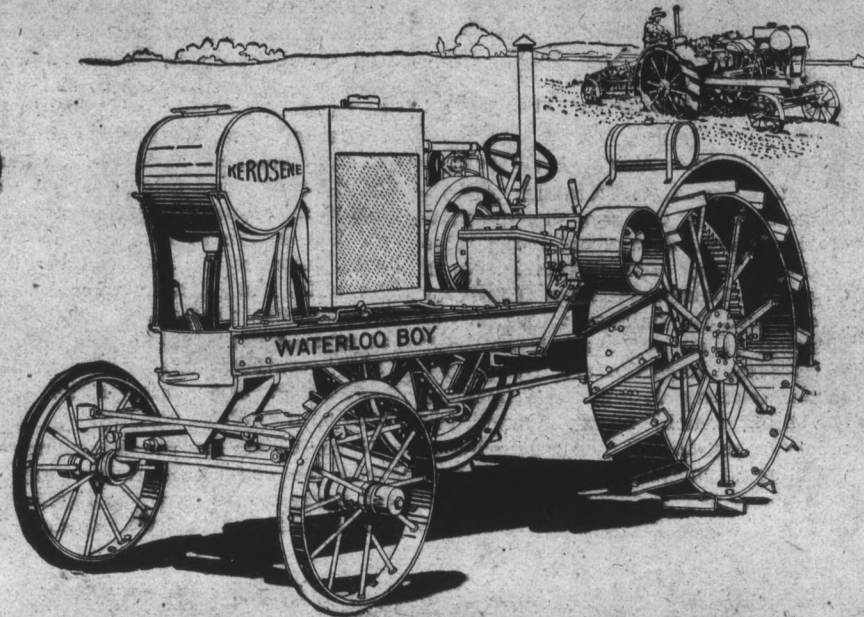
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The Waterloo Boy is a real farm tractor. It stands the strains of heavy-duty, continuous farm work. Its low-speed, simple, two-cylinder engine, built for burning kerosene, utilizes this low-priced fuel with unusual economy. In competitive fuel-economy tests, time after time, the Waterloo Boy has led the field.

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Farmers all over the country who know the value of the Waterloo Boy will be quick to seize this remarkable offer. Think of it—this heavy-duty, fully equipped, 12-25 three-plow tractor backed by years of successful performance—for only \$675. There are a limited number of Waterloo Boys on hand. Every sale means a loss and it follows that this low price cannot be continued indefinitely. The lower-than-cost

figure will result in a quick clean-up—if you don't act today you may never again have the opportunity to buy this popular, reliable tractor at so low a figure.

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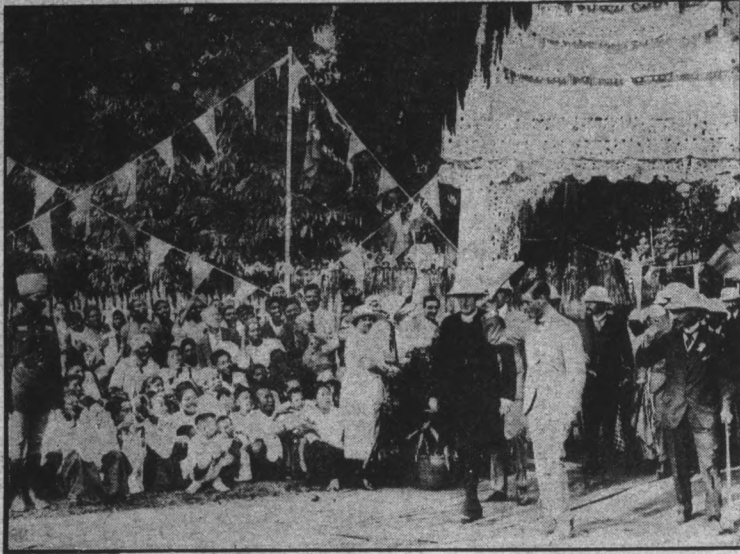
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WORLD EVENTS IN PICTURES



Miss Emley Spaich and her pet kid, which prefers tree-climbing to chewing tin cans.



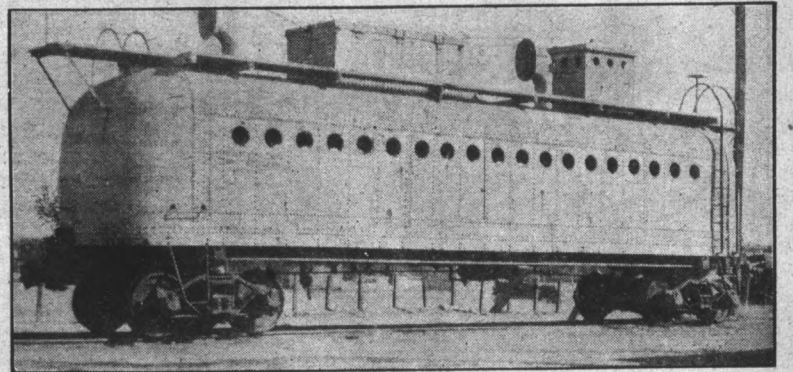
The Prince of Wales gets an enthusiastic reception when he attends the Burmese Water Carnival at Rangoon, India. Bishop of Rangoon accompanies him.



One of the quaint and narrow streets of Genoa, Italy, the birth place of Columbus.



Dr. Fridtjof Nansen, the noted Norwegian explorer, watches the arrival of flour in the Russian famine district. Dr. Nansen is now in England lecturing on his Russian experiences.



One of the armored cars which the Mexican government uses in suppressing raids and uprisings by Mexican bandits. This car is near the American border.



This train with a rotary plow makes its way to snowbound Yellowstone Park, which is snowed in for several months during every winter.



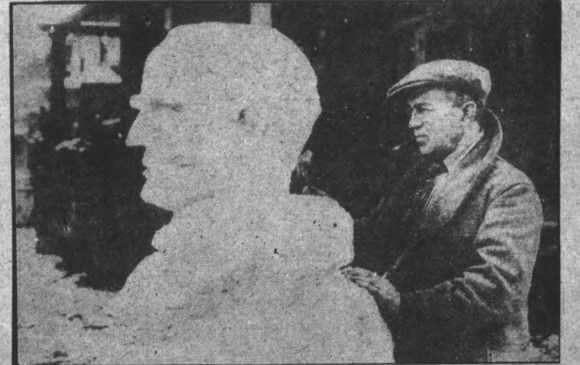
The public square in Genoa, Italy, the building in the background being the place where the International Economic Conference opens early in March.



On the big Conway ranch at Petaluma, California, they have solved the bottle-baby lamb problem by the contrivance shown.



Erna Rubenstein, sixteen-year-old violinist, amazes New York by her playing.



R. O. Yardly, a California newspaper artist, makes bust of President Harding with snow, using only a tablespoon.

THE BLIND MAN'S EYES

By William MacHarg and Edwin Balmer

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CHAPTER XVII.

The Fight in the Study.

EATON dismissed the man who had been waiting in his rooms for him; he locked the door and carefully drew down all the window-shades. Then he put his overcoat, folded as he had been carrying it under his arm, on the writing table in the center of the room, and from its folds and pockets took a "breast-drill" such as iron workers use in drilling steel, an automatic pistol with three clips of cartridges, an electric flashlight and a little bottle of nitroglycerine. He loaded the pistol and put it in his pocket; then he carefully inspected the other things.

The room he was in, the largest of his suite, resembled Santoine's study on the floor below in the arrangement of its windows, though it was smaller than the study. The writing-desk in its center occupied much the position of Santoine's large desk; he moved it slightly to make the relative positions coincide. The couch against the wall represented the position of the study's double doors. Eaton switched out the lights, and starting at the windows, he crossed the room in the darkness, avoiding the desk, and stopping a few feet to the right of the couch; here he flashed his light upon the wall at the height of the little wall-safe to the right of the doors in the study below. A dozen times he did this, passing from the windows to the position of the wall-safe and only momentarily flashing his light.

He assured himself thus of being able to pass in the dark from the windows of Santoine's study to the wall-safe. As the study was larger than this room, he computed that he must add two steps to what he took here in each direction. He paid no attention to the position of the safe to the left of the doors, for he had kept watch of the vase on the table in the lower hall, and the only sign he had found there had told him that what he wanted was in the safe to the right.

He raised a shade and window, then and sat in the dark. The night was cloudy and very dark; and the lake was smooth with barely a ripple. Near at hand a steamer passed, blazing with lights, and further out he saw the mast-head light of some other steamer. The lake was still ice-locked at its northern end, and so the farther of these steamers, he knew, was bound to some southern Michigan port; the nearer was one of the Chicago-Milwaukee boats. For some moments after it had passed, the waves of its wake washed in and sounded on the shore at the foot of the bluff. Next Eaton made out the hum of a motor-car approaching the house. It was Avery, who evidently had been out and was now returning; the chauffeur spoke

the name in his reply to some question as the car swung away to the garage. Eaton still sat in the dark. By degrees all noises ceased in the house, even in the servants' quarters. Twice Eaton leaned forward looking out of the window and found all quiet; but both times he settled back in his chair and waited.

The wash of waves, as from a passing boat, sounded again on the shore. Eaton leaned nearer the window and stared out. There was no light in sight showing any boat; but the waves on the shore were distinct; indeed, they



had been more distinct than those from the steamer. They must have been made by a large vessel or from a small ship close in and moving fast. The waves came in first on the north and swept south; Eaton strained his eyes and saw a vague blur off to the south and within half a mile of shore—a boat without lights. If it had passed at high speed, it had stopped now. He watched this for some time; but he could make out no more, and soon he could not be sure even that the blur was there.

He gazed at the south wing of the house; it was absolutely dark and quiet; the windows of the first floor were closed and the curtains drawn; but tonight there was no light in the room. The windows of the room on the second floor were open; Basil Santoine was undoubtedly asleep. Eaton gazed again at the lower room. Then in the dark he moved to the table where he had left his overcoat, and distributed in his pockets and within his clothing all the articles he had brought; and now he felt again in the overcoat and brought out a short, strong bar of steel curved and flattened at one end—a "jimmy" for forcing the windows.

Eaton slipped off his shoes and went to his room door; he opened the door and found the hall dark and quiet. He stepped out, closing his door carefully behind him, and with great caution he descended the stairs. Below, all was quiet; the red embers and glowing charcoal of wood fires which had blazed on the hearths gave the only light. Eaton crept to the doors of the blind man's study and softly tried them. They were, as he had expected, locked.

He went to a window in the drawing-room which was set in a recess and so placed that it was not visible from other windows in the house. He opened this window and let himself down up on the lawn.

There he stood still for a moment, listening. There was no alarm of any sort. He crept along beside the house till he came to the first windows of the south wing. He tried these carefully and then went on. He gained the south corner of the wing, unobserved or at least without sign that he had been seen, and went on around it.

He stopped at the first high French window on the south. It was partly hidden from view from south and west by a column of the portico, and was the one he had selected for his operations; as he tried to slip his jimmy under the bottom of the sash, the window, to his amazement, opened silently on its hinges; it had not been locked. The heavy curtains within hung just in front of him; he put out his hand and parted them. Then he started back in astonishment and crouched close to the ground; inside the room was a man moving about, flashing an electric torch before him and then exploring an instant in darkness and flashing his torch again.

The unexpectedness of this sight took for an instant Eaton's breath and power of moving; he had not been at all prepared for this; now he knew suddenly that he ought to have been prepared for it. If the man within the room was not the one who had attacked him with the motor, he was closely allied with that man, and what he was after now was the same thing Eaton was after. Eaton looked about behind him; no one apparently had been left on watch outside. He drew his pistol, and loosing the safety, he made it ready to fire; with his left hand, he clung to the short, heavy jimmy. He stepped into the great room through the curtains, taking care they did not jingle the rigs from which they hung; he carefully let the curtains fall together behind him, and treading noiselessly in his stocking feet, he advanced upon the man, moving forward in each period of darkness between the flashes of the electric torch.

The man, continuing to flash his

light about, plainly had heard nothing, and the curtains had prevented him from being warned by the chill of the night air that the window was open; but now, at the further side of the room, another electric torch flashed out. Another man had been in the room; he neither alarmed nor was alarmed by the man flashing the first light; each had known of the other's presence before. There were at least two men in the room, working together—or rather, one was working, the other supervising; for Eaton heard now a steady, almost inaudible grinding noise as the second man worked. Eaton halted again and waited; if there were two, there might be others.

The discovery of the second man had not made Eaton afraid; his pulses were beating faster and hotter, and he felt the blood rushing to his head and his hands growing cold with his excitement; but he was conscious of no fear. He crouched and crept forward noiselessly again. No other light appeared in the room, and there was no sound elsewhere from the darkness; but the man who supervised had moved closer to the other. The grinding noise had stopped; it was followed by a sharp click; the men, side by side, were bending over something; and the light of the man who had been working, for a fraction of a second shot into the face of the other. It did not delay at all; it was a purely accidental flash and could not have been said to show the features at all—only a posture, an expression, a personality of a strong and cruel man. He muttered some short, hoarse imprecation at the other; but before Eaton heard the voice, he had stopped as if struck, and his breath had gone from him.

His instant's glimpse of that face astounded, stunned, stupefied him. He could not have seen that man! The fact was impossible. He must have been mad, his mind must have become unreliable to let him even imagine it. Then came the sound of his voice—the voice of the man whose face he had seen! It was he! And, in place of the paralysis of the first instant, now a wild, savage throng of passion seized Eaton; his pulses leaped so it seemed they must burst his veins, and he gulped and choked. He had not filled in with insane fancy the features of the man whom he had seen; the voice witnessed too that the man in the dark by the wall was he whom Eaton—if he could have dreamed such a fact as now had been disclosed—would have circled the world to catch and destroy; yet now with the destruction of that man in his power—for he had but to aim and empty his automatic pistol at five paces—such destruction at this moment could not suffice; mere shooting that man would be petty, ineffectual. Eaton's fingers

AL ACRES—Al Seeks Contentment and Gets a Bump.

—By Frank R. Lees



tightened on the handle of his pistol, but he held it now not as a weapon to fire but as a dull weight with which to strike. The grip of his left hand clamped onto the short steel bar, and with lips parted—breathing once, it seemed, for each heartbeat and yet choking, suffocating—he leaped forward.

At the same instant—so that he could not have been alarmed by Eaton's leap—the man who had been working moved his torch, and the light fell upon Eaton.

"Look out!" the man cried in alarm to his companion; with the word the light of the torch vanished.

The man toward whom Eaton rushed did not have time to switch off his light; he dropped it instead; and as Eaton sprang for him, he crouched. Eaton, as he struck forward, found nothing; but below his knees, Eaton felt a man's powerful arms tackling him; as he struggled to free himself, a swift, savage lunge lifted him from his feet; he was thrown and hurled backwards.

Eaton ducked his head forward and struggled to turn, as he went down, so that a shoulder and not his head or back would strike the floor first. He succeeded in this, though in his effort he dropped the jimmy. He clung with his right hand to the pistol, and as he struck the floor, the pistol shot off; the flash of flame spurted toward the ceiling. Instantly the grip below his knees was loosed; the man who had tackled him and hurled him back had recoiled in the darkness. Eaton got to his feet but crouched and crept about behind a table, aiming his pistol over it in the direction in which the supposed other men must be. The sound of the shot had ceased to roar through the room; the gases from the powder only made the air heavier. The other two men in the room also waited, invisible and silent. The only light in the great curtained room, came from the single electric torch lying on the floor. This lighted the legs of a chair, a corner of a desk and a circle of books in the cases in the wall. As Eaton's eyes became more accustomed to the darkness, he could see vague shapes of furniture.

The other men seemed also to have recognized this; no one moved in the room, and there was complete silence.

Eaton knelt on one knee behind his table; now he was wildly, exultantly excited; his blood leaped hotly to his hand pointing his pistol; he panted, almost audibly, for breath, but though his pulse throbbed through his head too, his mind was clear and cool as he reckoned his situation and his chances. He had crossed the Pacific, the Continent, he had schemed and risked everything with the mere hope of getting into this room to discover evidence with which to demand from the world righting of the wrong which had driven him as a fugitive for five years; and here he found the man who was the cause of it all, before him in the same room a few paces away in the dark!

For it was impossible that this was not that man; and Eaton knew now that this was he who must have been behind and arranging and directing the attacks upon him. Eaton had not only seen him and heard his voice, but he had felt his grasp; that sudden, instinctive crouch before a charge, and the savage lunge and tackle were the instant, natural acts of an old linesman on a championship team in the game of football as it was played twenty years before. That lift of the opponent off his feet and the heavy lunge hurling him back to fall on his head was what one man—in the rougher, more cruel days of the college game—had been famous for. On the football field that throw sufficed to know a helmeted opponent unconscious; here it was meant, beyond doubt, to do more.

(Continued next week)



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Two More Letters

Our Weekly Sermon—By N. A. McCune

THE letters which follow are from two correspondents, and are from opposite poles of belief, as far apart as the "east is from the west." No two men may be farther apart in their attitude toward things religious, if conclusions may safely be drawn from what they write. Hence it is not likely that the replies will be satisfactory to either one.

Number one: "As I was reading your weekly sermon where you say that God is nothing but a spirit—now, my dear brother, will you kindly tell me how God could make heaven and



earth and He being a spirit? And He made all living things; both heaven and earth and the sea, and how could He do it without body and hands, please answer. And He being a spirit, how could He make Adam and take a rib out of a man

to form the body of clay, and breathe in him and bring forth a living soul, and yet have no hands to do it with?"

"And many other things he did. Now, my dear brother, how could He do all

THE gentleman who writes the above seems to forget, or not to know, that the writer was quoting the Bible when he said that God is Spirit. See John 4:25. It is Christ who says it. See also I Cor. 3:17. "Now the Lord is that Spirit." And this perfectly agrees with our reason. We know, for instance, that man is spirit. When the spirit leaves the body, the body is useless, lifeless, dead, a thing to be buried. I never saw you, nor you me. I see your body, but the real you is the invisible spirit. If the soul is immortal, as we believe it to be, it is the soul, the spirit, not the body. On a much greater scale, God is a spirit. He must be, else He could not be everywhere at once. In that wonderful passage in the Psalms it says this truth in a beautiful way: "Whither shall I go from thy spirit? or whither shall I flee from thy presence? If I ascend up into heaven thou art there: if I make my bed in hell, behold, thou art there. If I take the wings of the morning and dwell in the uttermost parts of the sea; even there shall thy hand lead me, and thy right hand shall cover me." The metaphor here is that of a man with hands, but the real idea is that God is a spirit, equally present at all places at all times. God is equally present when your little boy in Michigan prays to Him, when a Chinaman on the other side of the earth prays to him, when some Australian prays to Him, and millions more, all at the same instant are worshipping Him or praying to Him. Christ's definition of His Father is, "God is Spirit," and there has never been a better statement of what God is.

Number two: This gentleman is much incensed because I wrote of Roosevelt as a Christian. The letter he writes is too long to quote entire, but the part relating to Roosevelt is, that he was not a Christian in any sense of the word. He "owes his hold on the ignorant masses to the fact that he was a vigorous animal who attended prize-fights and hunted bear and killed lions." "Roosevelt knew nothing of the square deal he prated about." "So much for the erratic, irresponsible, revolutionary, ripping, ranting, roaring, rule or ruin Roosevelt." I had supposed that when a man was dead, even though he had been a politician, it was safe to speak

of him, without arousing the fire and ire of people who did not vote for him. But it seems not.

IF Roosevelt was as bad as this gentleman's letter states, it is strange that he escaped state's prison. As for his hold on the "ignorant masses," I leave that to those who loved him, voted for him, and worked for him, and they were a numerous tribe. We can live under the same flag, I trust, even if we don't agree as to our national heroes. This letter goes on to make statements about Jesus Christ, such as the following. Only selections are quoted: "Jesus Christ, we are told, came to teach mankind, to serve as an example and to die for them. But he failed to convince the generation he lived among, and even his own brothers and sisters (Renan) and all generations of Christians have disputed about his doctrines." "In regard to marriage he was an ascetic; and yet we are told that Christianity is a religion of love. Everything is based on the physical; the intellectual faculties guide us only in physical things, and the moral which are really one with the intellectual, tell us when we are right or wrong, according as circumstances change." "So truth is incumbent in a peaceful industrial state of society, as it facilitates cooperation, but in a state of war falsehood is legitimate as indeed murder so to speak." "So much for the teachings of Christ; as an example he was a failure. No one who never had a wife, children, or sweetheart can be an example to me. He seems never to have had an occupation, depending on the charity of others." "I suggest that if you are an honest man you want to hear all sides of a question and therefore begin with Paine and Ingersoll."

THE New Testament which our correspondent reads must be different from the ordinary one, as he seems to have imbibed very strange ideas. When he quotes Renan he is quoting one whom scholars long ago classified as one who wrote an extravagant and ill-balanced life of Christ. If a man quotes authorities he ought to keep up with the times and quote the recent ones, not the old-timers. We do not read that Christ was an ascetic. He always accepted social invitations, nor is there a record anywhere of his refusing one, even though it was extended by people who were "sinners." If He failed to convince his own generation, it is hard to account for St. Paul's work, or the very rapid spread of Christianity. It is very difficult to understand also how men of brains like Irenaeus, Tertullian, Augustine, and a host more, were won to Christianity and defended it, many of them with their lives. Christianity was not embraced by the ignorant and oppressed only, but men of intellect and social standing. As for Christ teaching that the "everything is based on the physical," I leave that to any person who reads the New Testament and is fairly well acquainted with its contents. Did he have an occupation? See Mark 6:3. I do not know, either, just where the correspondent gets his idea that falsehood and murder are legitimate in war. I do not deny but that falsehood is practiced in war, and perhaps murder, but I do not see where the New Testament teaches these things. I have never heard that blessing attended the reading of Paine and Ingersoll; that whole civilizations have been changed and millions transformed by their teachings; if I had heard this, I would probably be a disciple of Paine and Ingersoll today. As it is, I shall be content with Christ.

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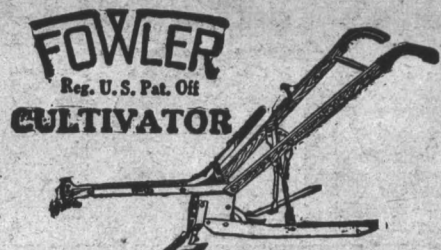
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The Pathfinders

Mother Allen Entertains

By Alta L. Littell

IT was October, the sort of October when, "Once more crawls the meditative plough:

And still the sun shines cloudless, hot and high."

Mother Allen was giving a party for Milly, the first social gathering she attended since she came into her new home. Father Allen had been determined to ask everyone from far and wide—"A county home-coming," Bob dubbed the idea—but the rest of the family over-ruled him.

"Just the neighbors," Mother Allen insisted, "and no week or two of baking beforehand. If it's a nice day we'll cook our dinner in the grove, make 'em bake their own potatoes and roast their own wienies. I've wanted to cook a meal outside ever since the first auto party camped across the road and I watched them build their fire. If I could forget the sight of a stove I believe I could stop wearing glasses."

Her idea was hailed with delight by the guests as they arrived, the more especially as pasteboard plates and paper cups, with sharpened sticks for forks, removed them from the advantages of civilization—and dishwashing. The only concession to modernity was the knives, which, somehow, seemed a necessity for cutting up the steaks. Gay groups were soon busy at the fire-places broiling steaks, roasting wienies, watching potatoes buried in hot ashes and superintending the brewing of coffee, while Chester and Tom hovered about offering to get more wood or to bring water, and calling the attention of the new arrivals to the fire-places which they had made.

"Is it October or June?" Milly exclaimed as they gathered about the tables, arranged in a hollow square.

"June, if this is a token," Bob laid a big rose at her plate. I found this on the big bush."

And when later Tom and Chester, who had eaten quickly and disappeared, came marching down from the house bearing huge strawberry short-cakes, the fruit of the ever-bearing plants, everyone agreed that the calendar was wrong.

"It's been the jolliest time we ever had," the women voiced, as they gathered up the "dishes" and burned them at the dying fires, there were no "fragments" to gather up. "Nobody is tired out with a lot of cooking, and there are no dishes to wash nor long table cloths to iron next week."

"Why don't we do this oftener?" Myra Jones asked. "We never seem

to get together without someone being so tired with cooking and the thought of cleaning up afterwards that it sort of spoils things for all of us."

"Why can't we have something where we don't eat?" Mrs. Peterson demanded.

"But what would we do if we didn't eat?" the astonishment in plump Mrs. Mason's voice drew a laugh from everyone.

"What's the matter with a club?" Mrs. Peterson answered. "The folks over at Loon Lake have one, and I guess Poplarville women are just as bright as they are. Now, we've got a school teacher with us all the time," she smiled at Milly, "we've got to sit up and watch our grammar."

"Oh, both grammar, I never could diagram a sentence," Mrs. Mason dismissed study. "But I'd like to learn how to make my own clothes and hats. Why couldn't we start a sewing club? Somebody came up to Johannesburg last winter from Ann Arbor or Lansing or some place and started the women there at work. Do you know who it would be, Mrs. Bob?"

"I suppose it was someone from the Agricultural College," Milly answered. "We could get a specialist from there if enough are interested."

"Well, I am, and I, and I," a score of women eagerly cried.

"There's so much handwork on everything now," Myra Jones broke in. "Doris cried yesterday because I didn't know how to put daisies on her apron pockets. Ruth Deering had posies on her apron, and, of course, Doris wanted them, too."

"Why not have someone write the college and try to arrange for a meeting?" Milly suggested. "We'll have to ask for an open date and—"

"You do it, you're used to that sort of thing," the vote was unanimous.

"And do it right away; maybe I can embroider something for Doris before Christmas," Myra ordered.

"Here," broke in Mother Allen. "I'm not going to have my party turned into a business meeting. We're here to play. Milly, you take 'em to the house, while I round up the men for a sing."

But the new club was the under current of every woman's mind. Between songs it would crop out.

"I'll tell you," Myra said, finally. "Meet me within a week from this afternoon and we'll organize. Maybe by that time we'll hear from the college."

And the last thing Milly heard as the autos drove away was a chorus.

"Now, don't forget that letter; be sure to get it off in the morning."

Lessons In Health Culture

5—Exercise

By Ruth Selby

EXERCISE, regular, judicious exercise, is of more importance to health and the up-building of the human body than most people are aware of. All work is exercise, and manual labor when performed with regularity and moderation, and especially when one loves the work and there is incentive for doing it, is beneficial to health.

But we are not dealing with the subject of work in this article, for we all know that the great incentives of labor impel most people on to the limit of their ability, and that they need no urging in this line unless it is to avoid excess and fatigue. The kind of exercise and health exercise and each should endeavor to learn, and, if possible, daily engage in that which is best suited to their occupation and mode

of life. Women, living in farm houses especially, as a rule, do not get sufficient exercise, we are considering now, is that intended especially for health and recreation. Work exercises some of the muscles but it does not exhilarate and give pleasure, as do out-door games, horse-back riding, rowing, etc.; and all people need some diversion from the regular routine of work.

There are many health exercises taught by physical culturists for special body-building and for strengthening the various organs, and these are practiced by many in the home as well as in the gymnasium; but to think of the busy housewife, farmer, mechanic, merchant, and others whose duties are urgent and varied, "chinning," doing body twists, arm and leg stretches, (Continued on Page 305)

He beat the train to the crossing a good many times

"It's never touched me yet," he explained when they pointed out the risks.

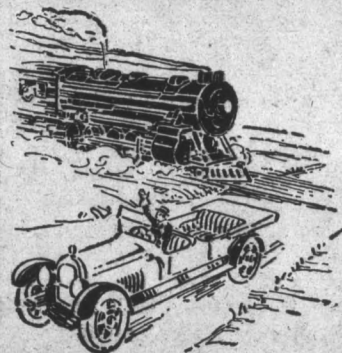
That's the answer a good many people make when they hear that the drug element in tea and coffee often harms nerves and health. They say it's never touched them yet.

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Woman's Interests

Old Furniture Made New

Some Helps on Brightening Things Up for Spring

By L. B. Reber

HOUSECLEANING time will soon be here. Along with other articles like rugs and curtains, the household furniture will show the effects of hard winter usage. It is a simple and inexpensive matter to refurbish old furniture so that it again gladdens the eye of the thrifty housewife.

Chairs and tables should be done over carefully for loose joints and loose spindles. Do not try to use melted glue. It is unsatisfactory and very messy. Get a ten cent bottle of liquid glue, and glue fast all loose joints and spindles. The next thing to do is to clean the article of its accumulated grease and dirt. No matter how carefully you have used polish, the surface of furniture will have a greasy feeling by spring. Remove this by washing the piece in gasoline, alcohol or strong suds. This should be done out of doors or in a room away from all fire. Open the windows and let the gas fumes out. When the piece is dry, go over it carefully with fine sandpaper or emery cloth. O, or double O, sandpaper is the kind to use. Be sure and use the paper with the grain of the wood. This sandpapering may be dispensed with if there are no mars or scratches on the surface of the piece and you have done a thorough job of cleaning.

After the piece is thoroughly dry and wiped free from dust, apply stain. An acid stain is best for fine pieces which are to be finished with varnish. For the less important pieces a varnish stain will be satisfactory. The secret of getting an even stain is to wipe over the stained area with a cloth right after applying the stain. The staining is necessary to get an even color over the marred places. Varnish only brightens and never covers a marred place.

After the pieces are stained with acid stain and very dry, three methods of finishing remain. For articles which get no rough usage, such as picture

frames and stands, you can get a beautifully soft effect with common floor wax. Apply the wax with the finger tips or a small brush. A light coat is best. Now with a stiff bristle brush, brush with the grain until you get a soft polish. Every time you wipe the surface with a dust cloth afterwards the surface will take on an added polish.

For pieces which get rough usage, such as kitchen chairs, the varnish stain will give a sufficient finish. Just apply it with a brush and let it dry thoroughly. For finer pieces you may apply floor varnish or the very best grade of furniture varnish. If you simply ask for varnish you will get a varnish which seemingly never dries. Always do your varnishing in a warm room free from dust. If you wish a quick-drying finish, very lasting, less expensive, but not quite so nice looking as varnish, get a bottle of orange



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Choice Color Combinations

WHEN decorating a room the furniture and rugs should be used as a nucleus, as these are very seldom changed. Of course, if the furniture is old and scarred and is not to be refinished it would be best to use darker shades, otherwise all the defects of the furnishings would be shown up.

But it is not necessary to have any scratched and marred furniture when there are so many products on the market today which can be bought at a very nominal cost, especially designed to make chairs and tables look new and attractive.

A coat of stain with a couple of coats of varnish, after the old finish has been removed, will do wonders to any old article. Or a coat of enamel with a dainty design stenciled on a bedroom suite will make it a thing of beauty. What could be prettier than a bedroom set stained walnut, a light

gray wall for a background, with pink drapes, white curtains, old rose and white rag rugs with a little touch of very pale blue here and there; or a bedroom suite stained oak with cream or ivory background, with either blue and yellow cretonne overdrapes or brown and cream drapes, ivory curtains and a nice brown and tan rag rug?

Of course, in combining the two or more colors, the shades should also be taken into consideration. For instance, a pale blue and pale pink are very pretty and one will offset the other, but if the shades are dark they will clash. Gray is a neutral color and almost any color will harmonize with it with the exception of brown or tan. Because of the handsome curtain materials, as well as upholstery now obtainable, it is far better to have plain wall tones.



shellac and apply the shellac with a soft paint brush. This makes an excellent finish for cupboards, kitchen cabinets and wooden beds.

Just now fashion has swung away from the metal beds. If you have an old, wooden bed with a very high end, cut through the posts just above the panel, remove the top above the cut, place the top rail back between the posts, repolish the bed and you have an up-to-date bedstead. If you are fortunate to have an old-fashioned spindle bed tucked away in the attic, get it out and polish it up; you will be right in style. Old-fashioned bureaus from grandmother's day are right in style. Polish them up and your friends will exclaim in rapture.

Old friends, old books, old furniture and a Michigan farm make up the sum total of human happiness. Treat them well, they are priceless.

CARE OF HARDWARE.

KEEP iron utensils dry and brightly polished, for a polished, rust-free surface rusts much less readily than a rough and spotted one. Water and air cause rusting. Cover the outside of the iron with oil, melted wax, vaseline or stove polish. Paint is good for outdoor hardware, such as flower pots. Japan lacquer baked on and polished is a satisfactory covering. Enamel cracks if subjected to shocks or to rapid heating or cooling and then the iron becomes exposed. The simplest and easiest way to clean enamel is to wash it with soap and water. Scouring soaps or powders should not be used as they may cut through the enamel and leave the iron uncovered.—Univ. of Wis.

TO SAVE BUTTONS.

BUTTON, button, who's got the button?" Is there a woman who doesn't play that game every week after the washing and ironing is done? Some sewing on of buttons seems inevitable each week, but here are a few suggestions to keep the number few. On thin garments, run a strip of tape down the button side, and sew buttons to this. Always use coarse thread, put the knot on the right side under the button, and fasten the end of the thread securely with three small back stitches before cutting off. In using a wringer, take time to fold the buttons inside the garment before wringing. It will not take so much time to do that and keep the button on, as to tear it off and have it to sew on later. When you buy a ready-to-wear garment, sew on all the buttons before the garment is worn.

SHORT CUTS.

Grate the cheese and keep it in a fruit jar. It is ready at a moment's notice to sprinkle over macaroni; for potatoes au gratin cheese straws or any of the good things in which grated cheese is used. It will keep indefinitely.—J. J. O'C.



No Guest Room

By Hilda Richmond

WITH the high cost of material many of the newer houses contain just enough room for the members of the family, and when guests come there are many makeshifts to be made to accommodate all. If company over night is not a frequent happening then it is easy to manage, but where guests come often it takes careful planning on the part of the housewife to get through without trouble. Many a woman has wished for a house built of India rubber that she could stretch on occasions to fit her needs, and then let it fly back to place when the need was over for increased space, but until such a dwelling can be invented by some genius laboring for the good of womankind some other ideas will have to be carried out in the little house.

For about six months in the year a tent that can be set up on the lawn will make an ideal "annex" to any farm house, and since most of the country company comes in summer the sleeping problem is not so complex if the boys or the men folks or the girls or even the ladies of the family can be shifted to the temporary sleeping quarters. With the fly of the tent open and a netting over it to keep out insects, the tent is the ideal place to sleep, even when there are no guests.

The tent furnishings can be old and simple. Several old beds or cots simply spread up with old sheets and old quilts will supply every need. Our neighbors sleep in a tent all summer, and one of them is a lady past seventy. Of course, an occasional storm drives them to the house, but that doesn't happen often, particularly after July. Even a little summer kitchen or clean woodhouse which has had many windows or openings added for a summer sleeping apartment is better than a stuffy upstairs room right under the eaves.

Then there is the screened porch that is even better than the tent. By using screens or hangings to separate the "apartments" the whole family can rest and enjoy the fresh air from spring to fall, leaving the inside rooms to the chance guest. If the porch is in front, cots should be used so they can be stacked away when the room is wanted for a sitting-room; but if at the side or back they can be left in place all day, or old-fashioned bedsteads can be used. If each bed has an oil cloth cover an occasional storm will do no harm, or the porch can be fitted with windows that will close.

If there is no money for a tent or to build a porch with screens, there are still ways to manage. A couch that can be made into a bed in the living-room will answer, or cots can be carried in from the woodhouse and back out in the daytime. It is not an ideal way, but it will do until prosperity makes an addition to the house possible. If a cot must be used in winter it should be a three-quarters one fitted with a good mattress, as it is very easy to catch cold with only a little bedding folded under the sleeper and that liable to slip from under him in the night. Every piece of old bedding should be saved for the makeshift beds, as it is very hard on good things, particularly the pretty light comforts, to use them on narrow cot beds where they are bound to get on the floor. If there is a small cheap child's bed to be had, or even an old-fashioned cradle, keep it for small guests, as it can be carried in easily.

It takes forethought and extra bedding and good management to make a number of people comfortable by using the living rooms as bed rooms, but it can be done and the mistress of the house who longs for more bed rooms can console herself with the fact that a little house has its advantages for everyday living that the big house has not, even if the big house is better when company comes.

HOW I MADE WINDOW DRAPES.

By Doris W. McCray.

WE moved into a different house and as is usually the case, none of my curtains fit the windows. Half of them were too long and the other half too short. We were not sure how long we would be in this house, so I planned to spend only a small sum in fixing up the curtains. I hung a curtain up at one of the long windows and found it lacked 12 inches of touching the sill. I decided to have a cretonne valance across the top thus making the window appear shorter. But I omitted side drapes, since they would make additional vertical lines which always add height. An 18-inch valance looked very well, as far as spacing was concerned. So it was decided about the valance, and up underneath where nobody could see, the curtains were pieced with some old material I had on hand.

The windows in the living room were short, and I did hate to cut my curtains. I decided that by using valances here, I could fold the curtain over behind and save cutting. The valances add width to the window, just as when a stout woman wears a plaid dress. But really they are very good looking, in spite of the fact that I violated the principles of good design. Perhaps I shall add side drapes later. The material I selected was a heavy cretonne in rose, green, blue and brown. The colors are lovely and blend together into an indistinct all-over design. There are three scallops on each valance, and they are finished with a narrow blue fringe. Later I am planning to use them for a bed room, when we can afford pretty silk hangings for the living room.

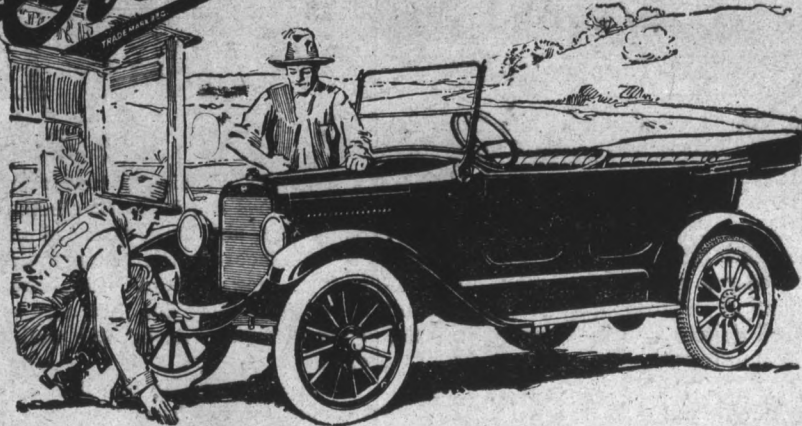
The material was 36 inches wide, so it was the right width for the valances when split. I did not split it, of course, but fitted the pattern on the material so that between the scallops were large pieces of material. The window seat was 18 inches wide, so that a pad was made for it to match. Then I made a charming cretonne covered waste basket, by pasting the material and trimming flat on to a paste board sugar bucket from the grocery. There are some plain blue cushions with touches of flowered cretonne, and a lamp shade to match. And just think how pretty they will be in the guest room, when we move to the next house, and fix the curtains all over again!

Old can rubbers can be used several times without danger of losing your fruit, by dipping in paraffin. Dip rubbers in melted paraffin, place on jar, and screw on the top. Work quickly. —J. J. O'C.

Make a bag of strong net or other cloth that can be seen through and put the scraps left from sewing in this. When it is necessary to find the material to mend a dress it is easily located. —J. J. O'C.

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Our Boys' and Girls' Department

The Busy Bees Help Bessie

A Sting Attracts Her Attention to Bee Possibilities

By J. Leland Fowler

WHEN Bessie Marton started to cross the fields that bright June day, she little dreamed that she would discover the opportunity she had so long desired. She would not have seen it if she had not already learned to use her ears as well as her eyes.

A queer, low hum had first attracted her attention. Investigation revealed a dark brown mass hanging from a low cherry tree, and she became so interested in watching the animated mass, that she failed to notice where she put her hand and inadvertently crushed one of the little workers.

Now Bessie had always supposed that a bee sting was as painful as a hornet's, so she was very surprised to discover that they were not nearly so painful.

"Why, I can take care of bees if that is all they hurt," thought Bessie, and hurried back to the house to find a box and see if she could get the swarm into it.

That was her beginning, but Bessie did not stop there. She wrote to the experiment station and got all the literature they could send her; then she spent her spare time reading it.

In the fall she took off fifty pounds of honey which she sold to a local hotel for twenty cents a pound, or ten

dollars. This money she used for another swarm of bees and three old hives which a neighboring farmer had offered to sell. They were good, solid hives, but very dirty. She scrubbed them thoroughly inside and out; tacked heavy paper around them and was ready for the spring rush, as her father laughingly told a neighbor. Her father had no faith in bees and said they were just a waste of time.

The next year she succeeded in saving four new swarms and the six of them made over four hundred pounds of honey which netted her eighty dollars. She again invested all of the profits in new material and more bees so that she faced the new year with eight good swarms of bees and several new hives.

When Bessie started across the fields that eventful June day, she was longing to go to high-school and college. She wanted to get out of the rut that the other farm girls were in. She longed to have more money and be able to buy some of the pretty things she saw in the stores, so her family supposed that they would soon hear of some wonderful plans—now that she was having such fine success

with her bees—but she surprised them all by telling them that she would like to take a short course at the agricultural college; learn all she could about bees and their handling, and then start a modern "Apiary" in partnership with her father.

His prejudice against bees had been entirely overcome, so he was very glad to hear that his daughter would be content to settle down on the old farm. They soon had a thriving business and by seeding the overworked land to honey-producing clovers, they not only provided bee food, but built up the run-down place and in a surprisingly short time they had proved that the old, land-robbing method of farming did not pay. They built a comfortable, modern home, bought a car, and Bessie even had a shining new runabout of her own.

She finally married an up-to-date young farmer and her father bought her share of the business, but Bessie always keeps a dozen swarms of bees, as she declares she would be lonesome without them, and like all women, she enjoys having her own little bank account.

THE SCOPE OF CLUB WORK.

BOYS' and Girls' Club Work is the copper cable through which our agriculture and rural home life may be electrified and made to function efficiently. It makes possible the dissemination of our best knowledge and facts to the people as a whole, making for a greater democracy in great contrast to the policies of autocratic governments. It combines practice and science, promotes industry and thrift, contentment as against dissatisfaction, and the use of brains as well as brawn. It is a great influence in cementing together the various sections of our nation, for in this work north meets south and east meets west and all together are working for the same end; a happy, contented, educated, wholesome and prosperous people.—G. L. NOBLE, Secretary National Committee on Boys' and Girls' Club Work.

HOT LUNCH BULLETINS.

IN response to the many requests which have been sent to the Boys' and Girls' Department located at the Michigan Agricultural College, for soup recipes, in addition to those which they already have, the department has sent the January Hot Lunch Bulletin to each organized club in the state giving hot lunches in the schools. There are still some of these bulletins on hand at the state club leader's office which will be gladly sent out on request.—T.

PUSSY WILLOWS.

NOW is the time to gather pussy willow twigs and place them in water in a warm sunny corner. The flowering process will be interesting to watch. If you have not gathered "pussies" before, you will find this willow which bears the "pussies" is more of a shrub than a tree, and grows in moist locations. The pussy willows bloom from late February into March, according to season and location. Be sure, if you should want "pussies" again next year, not to damage the shrub any more than necessary, so that it may flourish.



The Spotted Poland-China Members Are Proud of Their Charges.

The First Spotted P. C. Club

The First Club in the State to Pick Spotted Poland Chinas

By Helen Coffman

I AM a member of the first Spotted Poland-China Pig Club in Michigan under a county club leader, under a state club leader, and run according to the rules laid down by the state club leader. There are three boys and three girls in our club. We bought our pigs June 13, of G. S. Coffman, and also chose him for our local club leader.

We were given record books to keep our records in, so we would know how much it cost us to feed our pigs, and at the end of the project we had to hand them in to our country club leader. We were also given books on feedings pigs, etc. We chose our own pigs by drawing a slip of paper with a number on, the one who drew the slip of paper with one on got first choice, the one who drew the slip of paper with two on got second choice, etc. The pigs were all farrowed between March 15 and April 17.

Mr. Coffman weighed our pigs every month and the club members went with him from place to place so we knew what everyone else in the club was doing.

When we first got our pigs they weighed an average of fifty-four

pounds each. The first month the average gain for each pig was twenty-nine and two-thirds pounds; the second month, fifty-six and one-third pounds each; the third month, thirty-nine and one-half pounds each, and the fourth month, forty-four pounds each. The average weight at the end of the project was 224 pounds each.

One girl in the club started out with a forty-three-pound pig, the end of the first month it weighed eighty-four pounds; the end of the second month it weighed 168 pounds, and at the end of the third month it weighed 228 pounds. If anyone can beat these with a Spotted Poland-China or any other breed of pig, we are very anxious to know it.

We took our pigs to Unity Grange Fair, where I got first prize, and to the pig club round-up where I got second prize. We all had to pay for our pigs and pay for the feed they ate.

We all still have our pigs and are going to keep them another year, when we will follow the sow and litter project. Also none of the members care to change breed of pigs, for we are all satisfied with the Spotted Poland-Chinas.

Pussy willow gathering is not only an interesting experience for children, but also for grown-ups, as it has a faculty of making time turn backwards, while we're gathering them at least.—Pauline Ward.

LESSONS IN HEALTH CULTURE.

(Continued from Page 301)

and other stunts before breakfast in the morning, would seem absurd and preposterous.

Yet the farmer, the housewife, and all the others need their diversions and out-door exercise. They tend the chickens, to be sure, and often the garden, but this does not afford them the all-around health exercise they need. It does not inflate their lungs and get the blood to circulate rapidly.

There is one exercise that all health teachers recommend and which everyone (who has the use of body and limbs) may engage in, and that is walking. And do you know that in walking one fourth of the muscles of the entire body are exercised? It is to be regretted that the automobile today is taking the place of this healthful exercise. People walk only when they cannot ride. Even in the city, where they go out so much, people imagine they haven't time to walk, and when they do not run their own car, the street car must hurry them from place to place.

No where in the world is there better opportunity for healthful walking than in the open country, where the hand of God is visible on all sides, rather than the hand of man; where one can study nature in trees, and plants, and birds, and skies, and breathe the pure oxygen, unburdened by the race and eager quest after things that, if gained, add little to the real happiness of life.

A young girl asked her physician for a formula for a rouge, and this is what he told her: "Buy one from your druggist and bury it half a mile from your house; then walk there every morning before breakfast for a month to see that it is undisturbed. You will not need to use it."

But to get the full benefit of walking one must walk correctly as instructed in article No. 1, of this series. One must walk with energy and vigor; there must be a spring and elasticity to the step, the head must be erect, the chest well up, and deep inspiration should frequently be taken. Walking in this manner will give an easy, graceful motion that will enable one to walk many miles without fatigue, when it becomes habitual.

The length of one's walk must be gauged by one's strength. If you are not in the habit of walking make your walks rather short at first and gradually increase them. I would advise all sedentary persons to walk; walk all you have time and strength for, but be sure you walk in the proper manner, and breathe properly.

Frail persons and semi-invalids can be greatly benefited by walking, but they should remember always to stop this side of fatigue.

Horse-back riding is a most healthful exercise, and always stirs to action a sluggish liver as well as other inactive organs, increase the appetite and often brings a glow to the cheeks. Rowing also stirs the liver and is excellent for biliousness. It is also a wonderful exercise for developing the arms, shoulders and chest.

There are many special exercises for health and body development that may be taken indoors, in a well ventilated room or before an open window, but space will not allow me to give them here.

There is essentially a difference between the exercise of work and the exercise of play, inasmuch as most people do the former because they have to, and the latter because they love to. Therefore, the latter diverts

and recuperates the mind, while bringing into action many of the muscles not used in ordinary work. Yet if people would always remember to carry themselves properly and breathe deeply—take deep breaths at frequent intervals—much of the benefit of special exercises may be obtained in doing ordinary household work and other duties. For instance, ironing develops the hand and forearm; churning develops the arms; and sweeping strengthens the muscles of arms and back. Sweeping cobwebs from the ceiling is fine exercise for the neck, back and upper arms. Scrubbing, or wiping up floors, if done on the knees, will help to ward off biliousness, and is also beneficial where there is a tendency to a prolapsed condition of stomach or any of the pelvic organs.

THREE-TIME POTATO CHAMPION.

FOR the third time in succession, announces the "L'Anse Sentinel," Ted Stensen, of Covington, has been awarded the silver cup as the champion potato club member of Michigan. The cup was awarded by the Michigan Potato Growers' Exchange, at Cadillac. It is offered to the member who exhibits the best of sample potatoes at the Farmers' Week potato show. Ted's third success entitles him to possess the cup permanently. At local fairs Ted has had the pleasure of winning first against his own father.—C.

Another Chance

HERE is a second chance for the boy or girl who reads this department to win a dollar. Below is a list of ten questions, each of which can be answered from this issue of the Michigan Farmer. To each of the five boys or girls who send us the correct answers and the page on which each answer is found written in the neatest and best hand writing we will send one dollar. Number answers to correspond with questions and mail to the Educational Editor, Michigan Farmer, Detroit, by March 17. Watch for another list in next week's issue. Here are the ten questions for this week:

1. Where can culture for inoculating alfalfa be obtained?
2. How does barley compare with corn and oats as a feed for poultry?
3. In what county did the cow tester save a dairyman from selling his best cow?
4. What is wrong with a quotation on "Enthusiasm" and on what page does it appear?
5. What treatment is recommended for a horse out of condition?
6. With reasonable care, how many eggs should a hen lay in a year?
7. What spray will control potato leaf hopper?
8. How many more pounds each of dairy butter and creamery butter were made in 1921 than in 1920?
9. Who wrote an extravagant and unbalanced life of Christ?
10. Where will the International Economic Conference be held?

NATURE NOTES.

Are frogs especially beneficial to man?—M. L.

Frogs are indeed beneficial to man. I will attempt to tell you of but one species of frogs this time, and that is the Leopard frog, which destroys grasshoppers by the wholesale during July and August. These frogs believe in being active in their campaign against the "hoppers" while they are still in the nymph stage. Because of its protective color this frog may easily elude you among the tall weeds or grasses of the moist meadows. I have watched a Leopard frog greedily devour grasshoppers by the hour, his eyes gleaming with satisfaction while his sides were getting plumper and plumper. You may also find the Leopard frog among the grass about old wells. These frogs breed among the pickerel weeds or water lilies on the borders of ponds.—Pauline Ward.

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7260	7	26	6 3/4	6.5	.30 1/2
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8320	8	32	6 3/4	7.7	.36 1/2
9390	9	39	6 3/4	8.7	.41 1/2
H-726	7	26	12	7.5	.32 1/2
H-7260	7	26	6	9.8	.42 1/2
H-832	8	32	12	8.6	.37 1/2
H-8320	8	32	6	11.4	.49 1/2
H-939	9	39	12	9.7	.42
2 Point Hog Barb Wire heavily galvanized, weight about 1 lb. to the rod, per 80 rod spool.					\$3.70
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Raising Chicks on the Farm

By W. E. McMullen

KEEPING a flock of hens for egg production is one of the most profitable things that a farmer can do, for neither the investment nor the labor involved is excessive and with reasonable care a hen should lay at least ten dozen (120) eggs per year. Hens will eat small wheat and kernels of small ears of corn which a farmer cannot sell at an elevator, also pick overgrown cucumbers, wormy apples, etc. No farm animal yields a greater percentage of profit.

Many farmers would keep more hens if they could raise the young birds more easily, and it is the purpose of this article to outline the important things that must be borne in mind in order to raise chickens successfully.

In the first place, eggs used for hatching should be laid by mature birds. Pullet eggs are smaller than those laid by mature hens, and the chickens hatched from such eggs are small and weak, and more of them may die before reaching maturity. Use the hens for breeders and pullets for production of market eggs. Eggs for hatching should be as fresh as possible. The germ in an egg is strongest immediately after it is laid, and its vitality gradually diminishes afterwards. No eggs should be used that are more than two weeks old, and it is far better to have them less than one week old. If eggs are to be held, they should be kept in a cold place. If they remain at the temperature of an ordinary living room, they are soon unfit for hatching purposes.

Do not use small or misshapen eggs. The smaller the egg, the smaller and weaker the chick. Many eggs also when held before a strong light show mottles in the shell, that is, thinner places than in other parts of a shell. Such eggs should be rejected as most of them are unfertile.

After selecting the eggs, the question arises whether to use natural or artificial incubation. Generally speaking, a hen can hatch out stronger chicks than an incubator, and if broody hens can be secured, it is as well to let those do the hatching, especially where not more than 200 chicks are to be raised.

Sitting hens should be kept free from lice, otherwise they may desert their nests before the little chicks are born, and those birds will either be dead in the shell, or weak afterwards and may die then. Cluckers should be dusted two or three times with lice powder during twenty-one days' hatching, but clean chaff or straw must be put into the nest just before chicks are due to be born so that no louse powder will get into their eyes.

It is well to set several hens at the same time, then when the hatch comes off, each hen that is used as a mother may be given the full number of chicks that she can brood properly. This number depends somewhat upon the general temperature and the size of the hen. Care should be taken not to give a hen more chicks than she can properly cover, for if this is the case they will not thrive and many of them may die, especially if the weather is cold. If it is possible all the broody hens should be placed in one enclosure or building where they will not be disturbed by other fowls.

Feed, water and a box of dust or ashes should be furnished for chicks so that they may be satisfied quickly and return to their nests.

After the hatch is completed, the hen and chicks should be placed in a coop where the mother hen remains inside until the chicks are weaned. This plan saves much trouble. More chicks can be raised, and better and more easily than where the hen and chicks are allowed to roam at will everywhere.

If gapes prevail, coops containing hens and chicks should be moved to cultivated ground or to land on which little chicks have not been raised before. Place coops in a sheltered location, if possible, where the wind cannot get a clear sweep at them, and drive the little chicks backward when they try to go inside during a thunder storm.

A good type of coop for a farmer is the "A"-shaped coop made of boards, with the back boarded closely and with slats in front.

It is well to pull the coop along a few feet onto fresh ground every few days, for if there are any intestinal parasites of any kind present, the danger of the spread of the trouble is very much reduced in this way. The chicks must be kept free from parasites in order to have the pullets to lay eggs during the following winter months.

For best results in winter egg production, the chicks should be hatched out fairly early. White Leghorn pullets seldom begin to lay until they are at least five months old and heavier birds a month or more later, and if they do not begin to lay eggs freely at the approach of cold weather, many of them may not commence laying until January or February.

HENS ON SHARES.

I have a large flock of chickens. If I should rent a place on shares, would I have to share what chickens I hatch on the farm?—H. J.

The method of handling the chickens would have to be made a part of the understanding with the owner of the farm as individual cases will differ. In many cases the tenant is given all the chickens raised where the flock is only moderate in size and largely for farm use.

If you have a very large flock they will require plenty of feed and range and it might alter the conditions. Because of the large amount of equipment and detail work required in the poultry business it seldom pays to try and handle poultry projects on shares. I believe if a farmer is going to raise large quantities of poultry it will pay him to rent the place outright for cash rent. Then there will be less chance of misunderstandings in dividing the poultry profits and the man who does the work will have a better chance to profit.

LAME RABBIT.

One of my rabbits is lame in the hind quarters. What is the cause of the trouble?

Rabbits are sometimes subject to a mild attack of paralysis called "dizziness," and weak limbs are one of the symptoms. Feeding dandelions abundantly is a help in preventing it. A

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The End.
not injure chicks. Bottle, \$1.00; 3 bottles for \$2.50; 12 bottles, \$9.00. Prepaid. Money back if it fails. American Supply Company, Dept. 93 Quincy, Illinois.

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RHODE ISLAND WHITES win over all breeds at the egg laying contest. 30 eggs \$5; 50 \$8; 100 \$15 order from this ad. Some chicks. H. E. JUMP, R. 5, Jackson, Mich.

tablespoonful of powdered camphor mixed in a quart of warm water is sometimes used successfully in curing the digestive disorders and nerve trouble which cause the sickness. This can be given internally once each day. Rabbits are sometimes subject to paralysis and the symptom is a dragging of the hind quarters and in such cases treatment is seldom satisfactory. A rabbit might be slightly lame due to a bite, kick or sprain due to fighting.

HENS WITH ROUP.

What is the trouble with our chickens? They run at the eyes, a yellowish matter of some kind forms on the tongue, in the throat, eyes and wind pipe and bursts the whole head open. We have cured some, and some have died. What can we do for them?—J. M. N.

The hens probably have severe cases of roup. This is a disease that must be overcome in the early stages if satisfactory cures are to be made. Roup can usually be prevented by keeping the birds in a dry, well ventilated house and feeding a balanced ration to keep up their vitality. Poultrymen are beginning to believe that roup germs are probably always present but do not develop until the bird is lowered in vitality because of exposure to poor housing conditions.

The liberal use of the coal tar disinfectants is a help in destroying disease germs. Hens with colds can be treated and cured with some coal tar disinfectant, camphorated vaseline or permanganate of potassium. When very severe cases of roup occur it is usually best to kill the birds afflicted and try and improve the conditions which may have caused the trouble.

FEEDING PORK SCRAP.

About how many pounds of lard and beef scraps should be fed to a flock of 70 hens at once and how often?—G. W. W.

I assume that you mean pork scrap and cracklings combined with beef scrap. Pork scrap contains more fat than beef scrap but has a low digestibility and is not considered as good as beef scrap in the poultry ration.

Pork cracklings from lard making are very rich and should not be fed too heavily. Changes in feeding should be made gradually for the best results. In feeding a flock of 70 hens it might be best to mix about ten per cent cracklings either with bran or a balanced mash which only lacks beef scrap. I believe that feeding beef scrap and cracklings at the same time makes too rich a ration and might throw some of the hens off-feed.

It will be safest to only give the moist mash containing cracklings once a day.

FEEDING QUESTIONS.

Is cracked corn from which the germ and glaze have been removed as good feed for chickens as the whole kernel cracked once in two would be? Also, what is the value of oats as compared to barley for poultry feed? There being so much inferior oats this year, and barley is being offered to take place of oats, but I am at a loss to know their respective values.—F. B.

Cracked corn from which the germ has been removed does not contain as much nutrition for poultry feeding. Barley contains more protein and carbohydrates than oats but less fat and fiber than oats. Barley is usually considered to rank between oats and corn as a feed for growing and fattening poultry. Barley is extensively used in Europe about the same as we use corn here. Barley is a good poultry feed but is usually considered as a substitute for corn rather than a substitute for oats.

Keep the eggs from hens for hatching purposes and if you can select the eggs from individual birds remember that the best looking hens are not generally the best layers.



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Wyngarden Hatchery, Box M, Zeeland, Mich.

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Additional Poultry Ads. on Page 309

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THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio

Stock Farming

Handling the Young Lambs

Mr. Oviatt Finds Many Things That Can Be Done to Reduce the Percentage of Losses.

IN a recent article we tried to impress how essential to success it was to secure and save a maximum lamb crop and some things in feeding and care leading up to this result. And before taking up the care of the lamb, would like to add a few points farther in getting the lambs to care for.

Our experience has shown that the ewes that are in the best flesh and condition in the fall are the ones that breed first and, what is more essential, breed a larger per cent of twins. We have heard flock masters say they "Would rather have one good single lamb than twins." With any well-cared for flock this is a great mistake. Our experience has shown for many years that we get far greater returns from the ewes having twins.

This also is borne out by carefully prepared data secured by the Department of Agriculture. I refer to Bulletin No. 996, on "Flushing and Other Means of Increasing Lamb Yields." Under head of "Weight and Six-month-old Twin and Single Lambs," we find the single lambs weighed 78.6 pounds, while the twin lambs averaged 75.3, only 3.3 pounds less than the singles, scarcely noticeable in a flock. Note in this case the owner gets 150.6 pounds of lambs from the ewes having twins and only 78.6 from the ewes dropping singles. These figures show conclusively how very desirable it is to secure and raise all the twins possible.

I wish, before pursuing further, each reader could take a peek into the "all above ground" basement barn at Sunnyside and see the flock of happy skipping youngsters some of which weighed today 40 pounds being only 39 days old. They certainly are a delight to the eye of the true shepherd.

Now, for the care of the ewe and young lamb. First, provide a clean, dry place for the ewe to lamb. While a warm place is certainly desirable, yet we feel a clean, dry place means more than the warmth.

Watch the Ewes Closely.

The wise shepherd will pass through his flock very often and note each individual carefully as lambing time comes on. A wrong presentation is not unusual. A normal presentation is the front feet with the nose and head immediately following. Sometimes the hind feet appear first in this case. Be sure the bottoms of the feet are turned up. Should they be otherwise, the shepherd, whose hands have first been carefully washed and disinfected, and with finger nails closely cut, and having thoroughly greased the hand with some soft, clean grease, should carefully insert the hand and using plenty of time get the fetus turned over and probably all will be well.

We have had the front feet come first O. K., but the head turned back. This simply means untold suffering and final death to both ewe and offspring, unless assistance is given. In this case, after proper preparation as above described, the shepherd should, taking plenty of time and with great care, force back the fetus and following up until it is well back and while

the hand is yet there carefully bring the head forward and usually the trouble is over. Sometimes, but very rarely, the rump may try to come first and the ewe labor for hours and even days with no visible presentation and finally die. The remedy is obvious. Insert the hand, force back the fetus and secure a normal presentation either way.

Nearly all farmers, we feel sure, are in far too great haste to help, as they think, in the delivery. First, be sure the presentation is normal and then go away and leave nature alone for at least three or four hours. The parts need plenty of time to expand and yield sufficiently for the delivery, and great injury and even death may result from too great haste.

If present when the lambs are dropped, avoid handling as much as possible, but be sure they are properly cleaned up and dried. Next examine the ewe's udder and see the milk starts readily from both teats. A very little stoppage in the end of the teat will discourage the weak lamb and result in much trouble.

How to Save Lambs That Have Become Chilled.

It may, and with many farmers does, often occur in cold weather that the new born lamb becomes chilled and dies. In the case of chilled lambs, we use the warm water treatment. We found this treatment almost by accident many years ago and have had some most remarkable experiences with it, completely restoring lambs we had thought dead. We will not stop to relate them here, but for the benefit of some poor beginner will describe the process.

If the lamb is chilled, the mouth cold, and you fail to get him warmed up, simply immerse him in a pail of warm water and hold him there until every part is thoroughly warm. The water should be simply warm, not hot. We believe many lambs have been lost by the use of too hot water. The little lamb is very tender and water that would not seem hot to the human hand might prove fatal to it. The hand will stand much hotter water than our own bodies will. Any person who has tempered the water in his bath tub to the hand and then jump into it has done, just as I have done many times, jumped out again very quickly. If this is true with us, how much more so with the little newborn lamb. Now, in every case, get a draught of the mother's milk down the little lamb as soon as possible. When a little lamb gets up on his feet and a good drink of his mother's milk down him, his chances are certainly good.

Dock Early.

Lambs should be docked and gelded while yet quite small. There are two or three reasons for this; first the nervous system is not so fully developed in a very young animal and any operation of this kind is much easier borne and recovery is much quicker. Then, too, it is much better to get this out of the way before warm weather comes on and flies become troublesome.

Some prefer to leave the tails on the

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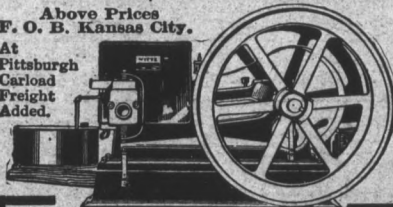
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wether lambs for convenience in sorting in the fall. But a flock looks much nicer if all have been nicely docked. The excrement of the young lamb is of such a sticky, gluey nature that their tails sometimes will become so stuck down to the body that movement of the bowels is impossible and the lamb will droop and die unless assistance is given. Soft grease applied to the wool will help greatly, but dock, and dock short, and the job is done and all further trouble is avoided.

Eye Trouble.

One thing we have found about the eyes of sheep and lambs that many farmers seem not to have found. Both sheep and lambs often suffer greatly from troubles with the eye and unless the water runs down in quantities sufficient to saturate the wool the owner will not know it. A short time since, we bought a flock of pure bred Oxford ewes and the owner thought he was a good caretaker. But we found several of the ewes with a perfect ring of tickle-grass surrounding the eyeball and under the lids which, of course, caused great irritation and much suffering. We found, many years ago, that small lambs often suffer from having (please note carefully) the under eyelid simply turn in with the lashes against the eyeball. Not a year passes that we do not find many of them. The remedy is simple; simply draw down and turn out the lid and usually it will stay, but occasionally it may require many times. We once had a case where it would not stay and the lamb was going blind, so we simply clipped that portion of the lid off and effected a cure at once. We have one just now that we fear we will have to treat in the same way. This may seem cruel, but really it is far more humane than permitting the terrible irritation to be continued. This seldom occurs in lambs over two weeks old, but I think I have never examined a flock of young lambs in which I did not find some suffering in this way.—L. W. Oviatt.

RATION FOR BUTTER PRODUCTION.

I am feeding good alfalfa hay morning and noon, and corn fodder for the evening meal, in addition the cows have access to fodder when they are out in the yard. As a grain ration I am feeding equal parts of corn and cob meal, ground oats and bran, which is fed immediately after each milking. My cows are in very good condition and give about thirty pounds each daily. I wish to feed for butter-fat production, rather than a larger flow of low-test milk.—A. H. B.

The ration you are feeding should give very good results. The only change that might be made would be to substitute oil meal for all or nearly all of the bran. The oil meal has a very desirable effect on the digestive system of the dairy cow and probably would be a little cheaper than the bran. The mixture that you are feeding, however, is a good one.

BRIEFS FOR COW OWNERS.

A few standard crops which will provide the cows with a balanced feed throughout the feeding season, should be the aim of the average dairyman rather than the production of a small acreage of a large number of uncertain crops.

Poor rations fed to poor cows, are certain to keep the pocketbook thin.

Primitive methods of dairying will not bring satisfactory results under modern conditions of production and marketing.

During the period of lactation the amount of concentrates fed to the cow should depend upon the amount of milk and butter fat which she is giving.



Now come the Pigs—the Calves—the Colts—and the Lambs.

TIME for your work horses and mules to shed their winter's coat.

—TIME to tone them up—give their systems a spring house-cleaning—and drive out the worms.

Dr. Hess Stock Tonic

A Spring Conditioner and Worm Expeller

Your COWS that have long been on winter feed need the system-toning, bowel-cleansing, appetizing effects of Dr. Hess Stock Tonic. Puts them in fine condition for calving. It means more milk.

Your BROOD SOWS will be relieved of constipation and put in fine fettle for farrowing by a course of Dr. Hess Stock Tonic,—which means healthy pigs, and a mother with an ample milk supply to nourish them.

Your SHOATS will be greatly benefited by a course of Dr. Hess Stock Tonic. It drives out the worms—stimulates the appetite and makes them thrive.

Feed it to EWES before lambing time. It prevents fevered udders and scouring lambs. Feed it after lambing time to stimulate the flow of milk, insuring lambs for the early market.

Dr. Hess Stock Tonic contains Tonics for the digestion, Laxatives for the bowels, Diuretics for the kidneys, and Vermifuges for the worms.

Always buy it according to the size of your herd. Tell your dealer how many animals you have. He has a package to suit. Good results guaranteed.

PRICES REDUCED—25 lb. Pail now \$2.25. 100 lb. Drum now \$8.00. 60c. Package now 50c. \$1.25 Package now \$1.00.

Except in the Far West, South, and Canada.

WHY PAY THE PEDDLER TWICE MY PRICE?

DR. HESS & CLARK Ashland, Ohio

Dr. Hess Instant Louse Killer Kills Lice

POULTRY

BABY CHICKS BUY THEM NEAR HOME

	Mar. 20-27	April
B. P. ROCKS	\$19.00	\$27.00
R. I. REDS	10.00	17.00
W. WYANDOTS	21.00	19.00
H. F. ORPINGTONS	21.00	19.00

Add 50c for 1/2 and 1/4 hundreds. 100% live delivery guaranteed. Mailed post paid. All Buckeye hatched in forced draft ventilation. Strong, fluffy, lively chicks.

WASHTENAW HATCHERY, Ann Arbor, Mich.

5 to 6 Lb. White Leghorns

Larger hens, better winter layers. Free catalog describes them, tells a new way to cull hens, feeding methods, how to make a mash hopper that won't waste feed or clog, and other information.

A. WAUGHEN, Gobleville, Mich.

DAY OLD CHICKS

and hatching eggs from select heavy producing stock. Delivery guaranteed. Wh. Leghorns, Bar. Rocks, W. Wyand., S. C. Reds, B. Orp. Cat. free.

GOSHEN POULTRY FARMS, R-19 Goshen, Ind.

BABY CHIX

March and April Delivery Prices. Barred Plymouth Rocks, R. I. Reds, Black Minorcas, White or Brown Leghorns 25 for \$5.50, 50 for \$10.00 or 100 for \$17.00 parcel post prepaid. 100% live delivery guaranteed. Our 12th year producing the kind of chick that please. Get our prices in 500 or 1000 lots. **GREEN LAWN POULTRY FARM,** Route 3, Fenton, Mich.

FOR Sale choice Barred Rock cockerels and pullets, 1 cks. \$3. and \$4 and pullets \$2. two \$5. Good large birds. **George H. Campbell,** R. 5, Ypsilanti, Mich.

Barred Rock. Hatching eggs from Parks 200-egg strain from stock direct from Parks best pedigree pens. \$2 per 15, \$5 per 50, \$12 per 100. Prepaid by parcel post in non-breakable containers. No chicks for sale. **R. G. KIRBY,** Route 1, East Lansing, Mich.

Baby Chicks and Hatching Eggs

S. G. English White Leghorns. Bred from heavy egg producing strain from our own free range poultry farm. Circular free. **VILLAGE VIEW POULTRY FARM, R. 3, Zeeland, Mich.**

Crystal Poultry Farms

High quality baby chicks from heavy laying strains. Prize winners at leading state fairs. 35 best breeds. Prices very reasonable. **CRYSTAL POULTRY FARM,** 7902 Franklin Ave., Cleveland, Ohio

Barred Rocks. HH's heavy-laying prize-winning strain. Eggs \$5, \$2.00; 50, \$5.00; 100, \$9.00 prepaid. **Lucian Hill,** R. 3, Tekonsha, Mich.

Barred Rocks from Rocky Ridge

Hatching eggs from Park's Pedigreed Selected Stock \$2.00 per 15. Prepaid by P. P. Booking orders for day old chicks. **W. T. Richardson,** Hanover, Mich.

BABY CHICKS

\$13 per 100 and up. Leghorns, Rocks, Reds. SEND FOR PRICE LISTS.

CONNERS CHICK HATCHERY, Oxford, Mich.

Chicks From "Michigan's Old Reliable Hatchery." S. C. White Leghorns, (3 grades), Anconas, White and Barred Plymouth Rocks and Reds. Fine strong, sturdy chicks from Grand, bred-to-lay Hogenized, free range breeders. Prepaid by mail. 100% alive on arrival. Sold on guarantee to satisfy or money back. 15,000 every week, 14th season. Get my low price and valuable illustrated 1922 free catalogue, and place your order where you get your money's worth. Write **W. Van APPELDORN,** R. 7, Holland, Mich.

Chicks of Quality pure bred S. C. White Leghorns and Anconas; bred exclusively for egg production and best standard qualities for prompt delivery; order now; new low price catalog free. **Riverview Poultry Farm, R. 2, Zeeland, Mich.**

CHICKS

Bred-to-lay S. C. W. Leghorns, S. C. Anconas and Barred Rocks, quality chicks that please, guaranteed full count, parcels post paid. Leghorns \$14.00 per 100. Anconas and Rocks \$17.00 per 100. Special prices 500 to 1000. Circular. **Sunnybrook Poultry Farm, Hillsdale, Mich.**

100,000 Chicks 12c & Up. Of pure bred finest egg producing flocks. Built directly from laying and exhibition contest winners hatching eggs. Ducklings, Catalog 20 varieties. Early bookings avoids disappointment. **Beckman Hatchery,** 28 E. Lyon, Grand Rapids, Mich.

Day Old Chicks

From best selected flocks, chicks and prices that are right. Send for price list. **HOMER HATCHERY,** Homer, Mich.

HA! HA! 75,000 12c and up. CHICKS

Buy Hi-grade Profit Paying Bred-to-Lay Chix. From tested egg strain. Best foundation stock ever produced. Hatching eggs, ducklings, 10 varieties. Cir. stamps appre. **Laurence Poultry Farm, R. 7, Grand Rapids, Mich.**

Day Old Chicks. S. C. White Leghorns. They are from the big, thrifty, persistent producing stuff for which Macalwhite Poultry Yards are becoming noted. We know we can give you satisfaction. Send for our circular. **Macalwhite Poultry Yards, Caro, Mich.**

STRONG BABY CHICKS

From flocks bred for heavy egg production. We offer Leghorns, Rocks, Reds, Wyandottes and Anconas. 100% live delivery, prepaid post. If you make your living or a part of it from poultry, we can help you. Catalog free. **RANSOM POULTRY FARM,** Geneva, Ohio.

BABY CHICKS

1922 delivery now ready. White Leghorns, White Rocks, Buff Orpington, Buff Rocks, Barred Rocks, R. I. Reds, Black Minorcas, S. C. Anconas. Guaranteed pure bred and live arrival. Postage paid. **DURAND HATCHERY,** Fenton, Mich.

Additional Poultry Ads. on Page 313

BREEDERS' DIRECTORY

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ACHIEVEMENT

The reward of pure breeding; the accomplishment of quality. Success has again contributed more laurels to the already remarkable record of

Imp. Edgar of Dalmeny

The Sire Supreme

At the International Live Stock Exposition, where gathers each year the elite of North American Cattle to compete for the coveted awards, five more honors have been bestowed upon the "get" of Edgar of Dalmeny. You too may share these honors. A bull by this world famous sire will prove a most valuable asset to your herd. Write us today.

WILDWOOD FARMS

ORION, MICHIGAN

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

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

Guernsey Heifer Calves

also some cows for sale. Herd under Federal Supervision. May Rose and Gov. of the Chene Breeding.

Hicks' Guernsey Farm, Saginaw, W. S., Mich.

Registered Guereseys

We have a special proposition on your Bull for next year that will interest you now. J. M. WILLIAMS, North Adams, Mich.

For Sale Guernsey Herd Bull

3 yr. old. Sire, Anton's May King sold for \$7,000.00. Dam, Bonnie's Bloom 530 lbs. B. F. Price \$175. Fall bull calves by above sire. Accredited Herd. GILMORE BROTHERS, Camden, Mich.

GUERNSEYS Accredited Herd, 4 bulls sold in last month. Bull calves under 4 months old. Grandsons of ex-world champion A. A. cow and out of A. R. dams. Satisfaction guaranteed. G. W. and H. G. Ray, Albion, Mich.

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

For Sale, Reg. Guernsey Cows or heifers, prices right. GEO. M. CRAWFORD, Holton, Mich.

Guernsey Calves, bull and heifer not related, also yearling heifer. Ancestors include most noted animals of the breed. G. A. Wigent, Watervliet, Mich.

WINNWOOD HERD Registered Holsteins

It was through the daughters of Flint Maplecrest Boy that Sir Ormsby Skylark Burke

Our Junior Herd Sir

produced the Junior Champion and Reserve Grand Champion Heifer, at the Michigan State Fair this year, in a class of 38.

His get won first in Calf Herd, also first in get of sire, in a class of 13.

A son of either of these great bulls will help the individuality and production of your herd.

We have bulls at dairymen's prices, and we also have bulls at the breeder's price, from dams with records up to 38 lbs. of butter in seven days, and 1168 lbs. of butter in one year.

Ask us about a real bull, a Maplecrest or an Ormsby.

JOHN H. WINN, Inc., Rochester, Mich.

A BLUE RIBBON WINNER YOUNG BULL

On the 1921 Show Circuit For Sale at a low price. Out of an A. R. O. granddaughter of Pontiac Korndyke. Sired by our SENIOR SHOW BULL, Model King Segis Glista 32.37 lbs.

GRAND RIVER STOCK FARMS,

Corey J. Spencer, Owner 111 E. Main Street, Jackson, Michigan. Herd Under State and Federal Supervision

Wiscogin Farm offers Holstein-Friesian bulls ready for light service. From sire whose 6 nearest dams average 33.34 lbs. butter for 7 days. A. R. O. Dams from 18.33 to 21.51 lbs. Herd under state and Federal Supervision. Oscar Wallin, Unionville, Mich.

HERE IS A GOOD ONE

BORN JUNE 2nd 1920 by MAPLECREST DE KOL HENGVERD whose three sisters have each produced over 1200 lbs. of butter in a year. TWO of them former WORLD CHAMPIONS. Oalf's dam by an own brother of a 1248 lb. cow. Write for pedigree. F. B. LAY, Kalamazoo, Mich.

Cluny Stock Farm

Offers A Splendid Yearly Record Bull Born March 22d., 1920

Sire a 30 lb. son of King Segis Pontiac Konigen whose daughters are making big Holstein History. Dam's Record at 2 yr. 3 mo. 305 d.

12,425.5 lbs.M. 550.38 lbs. B.
7 days. 3 yr. 3 mo. 452.6 23.967
Dam's Dam 7 days. 665.9 29.67
365 days 23,542.2 1031.85

Dam's Sire's Dam 7 days 515.6 35.103
365 days 23,421.2 1344.30

This splendid yearly record work available for your herd at a very reasonable price. Bull is about evenly marked, growthy and ready for heavy service. The last one offered is sold.

R. B. McPherson, Howell, Mich.

Bulls Registered Holstein Bulls

old enough for service, for sale. Bred from Pontiac and Segis dams and sired by a 26 lb. Gdson of Maplecrest Korndyke Hengerveld, priced to move them will also sell a few heifers soon to freshen. Herd under federal and state supervision. HENRY S. ROHLFS, R. 1, Akron, 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.

"Top Notch" Holsteins

Bull advertised last week bought by a good breeder in Ohio.

We have a few more desirable bulls ready for service, sired by a 32 lb. grandson of the 40 lb. 4 year old former world's champion, Mabel Segis Korndyke, out of high milk and butter producing cows. Priced to sell.

McPherson Farms Co., Howell, Mich. (Breeders of the only 800 lb. 7 day cow to produce an 800 lb. daughter). Herds under U. S. Supervision.

\$300 buys six grade Holstein Heifers two will soon freshen other four one year old, and one registered bull ready for service; we also have some fine young bulls sired by a 23 lb. grandson of the \$50,000 bull old enough for light service at \$75 each; also cows and heifers, at right price. The Home of Michigan's Best Bull. The Long Lane Stock Farm, E. A. ROHLFS, Akron, Mich.

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

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

HOLSTEIN and Guernsey calves, 7 weeks old, 31-32nds pure, \$25 each crated for shipment. Satisfaction guaranteed. EDGEWOOD FARMS, Whitewater, Wis.

Holstein-Friesian pure-bred bull calves, tuberculin tested herd. Prices are right. Larro Research Farm, Box A, North End, Detroit, Mich.

5 yr. old son of Smithdale Alcatraz Pontiac from daughter of Pontiac Korndyke. Priced low. FERNWOOD FARM, Evart, Mich.

Ten reg. Holstein heifers, some fresh, others fresh soon. All tuberculin tested and guar. O.K. every way. Price \$100 to \$150 each. B. B. Keavey, Akron, Mich.

Beef Producers! Michigan Produces The World's Best Beef At The Lowest Cost.

Raise far better feeding cattle than you can buy. Grow Baby Beef when gains cost least in feed and labor. Avoid costly rail hauls with their shrink, bruises and loss.

SOTHAM'S EARLIRIPE BEEF CONTRACT Solves your problem—insures your success. A fair intelligent, satisfying system evolved from 87 years conscientious service to American Cattle Industry by three generations of Sothams. GET THE FACTS. Write now, or wire. Address

T. F. B. SOTHAM & SON, (Cattle Business Established 1835) Phone 250 Saint Clair, Michigan

Herefords

Repeaters, Beau Donalds, Fairfaxes, and Farmers represented in our herd. Repeater 173rd, a son of old Repeater, at head of herd. Both sexes and all ages for sale.

ALLEN BROS., (Farm at Paw Paw, Mich.) Office 616 So. West St., Kalamazoo, Mich.

Herefords For Sale 8 females and 1 bull, \$75 per head. RALPH CALHOON, Bronson, Mich.

Jersey Thoroughbreds

Few cows and bull calves. Best breeding line. Guaranteed. Tuberculin tested twice a year. If you have no money will take bankable note. E. W. Vasvary, 509 Free Press Building, Detroit, Mich., Main 1267.

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

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

For Sale Jersey Bulls ready for service; Lad, Majesty breeding. WATERMAN & WATERMAN, Packard Rd., Ann Arbor, Mich.

Dispersal Sale of accredited herd of Mich. Herefords, Shorthorns, on March 21st. Davidson & Hall, Tecumseh, Michigan

Francisco Farm Shorthorns and BIG TYPE POLAND CHINAS

Now offering—Three bulls ready for service. Mastodon, Clansman, Emancipator blood in gits bred for spring farrow. See them. POPE BROS. CO., Mt. Pleasant, Mich.

YOUNG HERD SIRE FOR HILL-CREST FARMS.

In the purchase of Matador Sylvia Concordia, R. B. Lay, proprietor of Hillcrest Farm of Kalamazoo, is to be congratulated. This young herd sire has on both sides animals that have made and are making great records several of them being world records. In conformation the young bull is well put together, being deep, with good rib spring, plenty of width, a fine top line and unusual length between the hip and pin bones. He was born last May on Carnation Stock Farm, from whence he was purchased by Mr. Lay.

DUROCS SELL WELL.

The Hillsdale County Duroc Association held their first sale of bred sows and open gifts at the Fair Grounds, Hillsdale selling 46 head at an average of over \$50.

A very large crowd was present, bidding was brisk throughout the sale. The top price was for catalog No. 27 going to Hagaman Bros., Hillsdale, Mich., at \$106. Following is a list of buyers and prices paid:

- | | |
|---|----------|
| No. 1. E. M. Hawes, Coldwater, Mich. | \$ 51.00 |
| No. 2. John Stewart, Hillsdale, Mich. | 48.00 |
| No. 3. Fletcher Porter, Hillsdale, Mich. | 55.00 |
| No. 4. C. S. Bell, Hillsdale, Mich. | 49.00 |
| No. 5. P. J. Card, Cambria, Mich. | 52.00 |
| No. 6. Dr. Wm. Crall, Pioneer, Ohio. | 54.00 |
| No. 7. Albert Dimmers, Jonesville, Mich. | 41.00 |
| No. 8. J. P. Burroughs, Hillsdale, Mich. | 48.00 |
| No. 9. Will Lazenby, Litchfield, Mich. | 89.00 |
| No. 10. Dr. Wm. Crall, Pioneer, Ohio. | 53.00 |
| No. 11. J. W. Harbaugh, Ray, Ind. | 50.00 |
| No. 12. Wm. Bowditch, Allen, Mich. | 40.00 |
| No. 13. Dewey Ochsenrider, Jonesville, Mich. | 46.00 |
| No. 14. Clarence Smith, Montgomery, Mich. | 44.00 |
| No. 15. R. H. Morlock, Hillsdale, Mich. | 40.00 |
| No. 16. Hagaman Bros., Hillsdale, Mich. | 91.00 |
| No. 17. Chester Barker & Son, Albion, Mich. | 43.00 |
| No. 18. E. J. Kaltinbach, Quincy, Mich. | 35.00 |
| No. 19. Elmer Don brock, Quincy, Mich. | 31.00 |
| No. 20. Arthur Smith, Allen, Mich. | 50.00 |
| No. 21. Roy Snow, Hillsdale, Mich. | 70.00 |
| No. 22. J. C. Southern, Allen, Mich. | 26.00 |
| No. 23. John Phelps, Quincy, Mich. | 36.00 |
| No. 24. C. O. Brott, Montgomery, Mich. | 83.00 |
| No. 25. J. M. Williams, North Adams, Mich. | 75.00 |
| No. 26. E. M. Hawes, Coldwater, Mich. | 73.00 |
| No. 27. Hagaman Bros., Hillsdale, Mich. | 106.00 |
| No. 28. T. J. Scholfield, Pittsford, Mich. | 39.00 |
| No. 29. Arthur Smith, Allen, Mich. | 32.00 |
| No. 30. Roy Snow, Hillsdale, Mich. | 60.00 |
| No. 31. Harry Fogg, Allen, Mich. | 44.00 |
| No. 32. V. Crandall, Reading, Mich. | 39.00 |
| No. 33. Albert Dimmers, Jonesville, Mich. | 43.00 |
| No. 34. Wm. Glasgow, Jonesville, Mich. | 56.00 |
| No. 35. Wm. Glasgow, Jonesville, Mich. | 53.00 |
| No. 36. V. D. Crandall, Reading, Mich. | 39.00 |
| No. 37. Geo. Huff, Allen, Mich. | 45.00 |
| No. 38. L. G. Stump, Osseo, Mich. | 41.00 |
| No. 39. H. C. Oberlander, Montpelier, Ohio. | 39.00 |
| No. 40. J. A. Fenstermaker, Hillsdale, Mich. | 41.00 |
| No. 41. Walter Moore, Hillsdale, Mich. | 49.00 |
| No. 42. J. M. Williams, Adams, Mich. | 46.00 |
| No. 43. J. M. Williams, North Adams, Mich. | 50.00 |
| No. 44. T. W. Southworth, Allen, Mich. | 41.00 |
| No. 45. C. S. Allen, Pulaski, Mich. | 46.00 |
| No. 46. Geo. Huff, Allen, Mich. | 40.00 |

HUBAM

The report just received from the Ontario Experiment Station, Canada, shows that Michigan HUBAM outyielded other Hubams by 13%. Why? Because it's northern-grown, harvested, hulled, scarified and cleaned under strict regulations.

Now some of you who want to try out the wonderful possibilities of this new annual legume with your small grain, for hay, pasture, to shorten your crop rotation, build up your soil, or for an excellent honey crop, will be disappointed, for in view of the great shortage in field seed many wide awake producers have already laid in their supply of genuine hardy HUBAM seed. The Michigan State Farm Bureau, a co-operative organization with quality and low prices its aim, suggests that you place your order immediately. This season started with a rush and there's a great many orders on hand. By placing your order now we will be glad to hold shipment until date you specify. This will enable us to give you best of service. For your convenience we're sending along with your information and quotations a stamped and self addressed order blank. If you want Certified Genuine Hardy HUBAM seed write

T O D A Y

MICHIGAN STATE FARM BUREAU

Seed Department Box J-5

Lansing, Michigan



Homeward Bound—Eager to be Milked

Cows with healthy udders and teats "give down" the milk easily, freely. The slightest injury or discomfort means a sure milk-loss.

Bag-Balm pays for its slight cost many times over in providing a sure, quick relief from udder troubles. Sores, chaps, cuts, scratches, inflamed tissues, hardened or swollen teats, caked Bag—an abnormal udder condition is quickly cleared up by this great penetrating, healing ointment.

Big 10-ounce package at the reduced price of 60c, at general stores, feed dealers, druggists.

DAIRY ASSOCIATION CO., INC. Lyndonville, Vt.

BAG BALM

MADE BY THE KOW-KARE PEOPLE



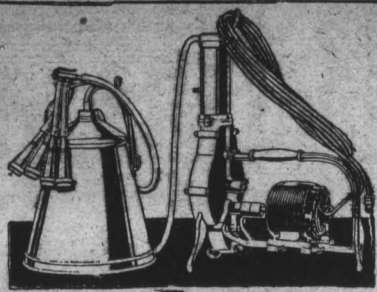
Booklet Free 63 Pkg. guaranteed to give satisfaction or money back. \$1 Pkg. sufficient for ordinary cases. MINERAL REMEDY CO. 463 Fourth Ave., Pittsburgh, Pa.

FREE BOOK on CONTAGIOUS ABORTION

Describes cause, effects and treatment; tells how farmers in all parts of U. S. are stopping the ravages of this costly malady. Write for free copy today.

ABORTIO LABORATORY 44 Jeff Street, Lancaster, Wis.

White Blossom Sweet Clover Seed 10c Per pound F. O. B. Latty, Ohio. Bags free. Guaranteed pure Hubam seed. 80c per pound prepaid. All seed scarified. Inoculating bacteria for alfalfa and sweet clover, 50c for 1/2 bu. size. E. E. BASIL, LATTY, OHIO



The HINMAN ELECTRIC MILKER

\$150.00

(F. O. B. Oneida, N. Y.)

For those with electric power of any current this outfit is without an equal.

Every principle of the reliable Hinman Standard Milker is retained. The power unit and pump come in a neat, compact light outfit carried in one hand. No shafting, pulleys, belting drive rods. When it arrives you attach to any lighting plug and milk!

The Hinman Standard Milker at \$45.00 per Unit or this complete outfit at \$150, will earn their first cost every year in use.

Simple to use, easy to keep clean and made by the oldest manufacturer of milking machines. The Hinman is made by men who were dairymen first and was never excelled for what is best for dairymen.

HINMAN AGENCY
A valuable, money making offer for open territory. Write now!
Write today for our new 1922 Catalog.
Hinman Milking Machine Co.
Sixth St., Oneida, N. Y.



CATTLE

Southern Michigan Polled Shorthorn Breeders Ass'n.

are offering for sale
A Few Select Young Bulls and Heifers.
We sell worth the money. Write your wants.
C. E. NASH, Sec. GEO. E. BURDICK, Pres.
County Agriculturalist and
Branch County Mgr. Branch Co. Farm
Coldwater, Mich. Coldwater, Mich.

BIDWELL SHORTHORNS BUY A BULL

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

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

Richland Shorthorns

Now offering a choice lot of bull calves. Best of breeding. \$150 to \$250 will buy a real bull at present time. Write for particulars.

C. W. Prescott & Sons,
Tawas City, Mich.

The Maple's Shorthorns

Kirk Livingston Lad, by imported Hartforth Welfare, in service. Bulls and heifers for sale.

J. V. Wise, Gobleville, Mich.

Claradale Milking Shorthorns

We invite the discriminating breeder and farmer, who is in need of a real bull, that will transmit the combine qualities, beef, milk, high in butter fat, type, character, beauty. We do state official milk testing. Come and see us or write for circulars and reasonable prices. F. W. Johnson, Custer, Mich., Mason Co. Box 26

Central Mich. Shorthorn Breeders' Assn.
offer for sale both milk and beef breeding, all ages. Write M. E. MILLER, Sec'y, Greenville, Mich.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

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

Swollen Gland.—I have a horse that is troubled with swollen glands; have applied white liniment, but it failed to help him. G. D., Jr., Holland, Mich.—Clip off hair and paint with tincture of iodine daily.

Suppression of Urine.—We have a horse that has good appetite, but seems to have considerable trouble in passing urine. We thought he might have kidney disease. W. Z., Lucas, Mich.—Give him a teaspoonful of acetate of potash in feed or water 3 times a day, until the desired effect is produced, then as often as necessary.

Horse Pahts.—I have a horse that pants during hot weather. What can I do for him? H. E. M., Caro, Mich.—Give one ounce of Sweet Spirits of Nitre at dose 3 or 4 times a day and wash body with tepid water to keep sweat glands of skin active and clean. Keep the bowels open and don't overwork your horse.

Teat Stricture.—My eight-year-old cow came fresh one week ago, I find it almost impossible to get milk from one quarter, the teat is seemingly closed, but with a teat tube some milk comes. N. C., Scottville, Mich.—Gentle hand rubbing, fomenting the quarter with warm water and the use of a clean milking tube of sufficient length is about all you can do.

Rickets.—I have three pigs which have been fed liberally on corn, now all three move stiff. I forgot to say they are four months old and on wood floor. H. B., Whittemore, Mich.—Feed less corn, more roots, skim milk and clover. Also feed some wood ashes, salt and charcoal in their feed or place it within their reach. Give them exercise.

Loose Teeth.—The front teeth of my cow are loose. She dislikes to drink cold water, but is fond of tepid water and corn fodder. She is nine years old. A. S., Shelby, Mich.—It is not unusual to find a 9-year-old cow's incisor teeth loose. Extract the loose teeth, wash mouth with salt and water twice daily. Give her one-half ounce Fowler's Solution 3 times a day and perhaps you had better beef her.

Malignant Wound.—Last August my two-year-old colt got hind leg cut on barbed wire. The wound has never healed, now there is proud flesh in wound. I have applied caustic but it makes no impression. R. S., Good Hart, Mich.—The scar tissue will either have to be cut off or burned off with red hot iron, then apply one part iodoform and five parts boric acid daily.

Out of Condition.—I have a six-year-old mare that commenced to run down last fall. One month ago I took her to veterinary. He floated teeth, gave her worm medicine; also tonic medicine. She passed plenty worms, but don't pick up. R. H. M., Shiloh, Mich.—Increase her food supply, give one dram fluid extract of nux vomica, and one-half ounce of Fowler's Solution at dose in feed or water 2 or 3 times a day.

Indigestion—lice.—I have a cow that rests her nose on manger, slavers some sour smelling saliva part of time. I notice some of your readers have cattle that are troubled with lice. If they will give their cattle a teaspoonful of sulphur daily for few weeks, keep them in during wet or stormy weather, the lice will not bother them. N. B. C., Imlay City, Mich.—Mix equal parts bicarbonate of soda and powdered gentian together and give cow two tablespoonfuls three times a day. Sublimed Sulphur, commonly known as Flowers of Sulphur, is the chief form used in veterinary practice. Insoluble in water, slightly soluble in hot absolute alcohol. Physiological actions, when given internally, is laxative and alterative. Externally, chiefly used as a parasiticide and desiccant, also to disinfect premises. It is an old traditional belief that giving sulphur to man or beast, it has a tendency to destroy external parasites, but is only a belief. Lice are hard to kill. A teaspoonful is an exceedingly small dose of sulphur for a cow and I fail to understand how much of it can be eliminated through glands of the skin. We thank you for calling our attention to this remedy.

DISPERSION SALE of Milking Shorthorns

at Tecumseh, Michigan, March 21, at 1 P. M.

Now is the time to buy pure breds. 33 head, 22 cows and heifers, 11 bulls of all ages. From the herd of Davidson and Hall. Tuberculin tested, and largely Clay bred. Sale, 2 miles east Tecumseh. Will meet all trains. Auctioneer, Andy Adams.

Write for Catalogues to CLAIRE BELAND, Administrator.

Milking Shorthorns of best Bates breeding. 10 Mature Bred Sows \$25.00 E. H. KURTZ, Mason, Mich.

SHORTHORNS. Two 4 mo. old bull calves of White-Shall Sultan Strain and a few young heifers. Priced very reasonable. J. A. Wilk & Son, Alma, Mich.

HOGS

BERKSHIRES

Special prices for registered Berkshire breeding stock: 10 Fall Yearlings, Bred \$50.00 Best type with size and quality. Satisfaction absolutely guaranteed. Write for information. C. C. COOREY, 2428-30 First National Bank Building, Detroit, Michigan

Brookwater Duroc Jerseys

Bred Gilts for March and April farrow. Bred to Big Bone Giant Sensation, Panama Special 55th and Brookwater Demonstrator 26th. Write us for description and prices. Or come and see them.

BROOKWATER FARM, Ann Arbor, Mich. H. W. Mumford, Owner J. B. Andrews, Mgr.

Woodland Farm Duroc Hogs

A well kept herd, best of blood lines, with size and breeding qualities, stock of all ages for sale at reasonable prices. W. E. BARTLEY, Alma, Mich.

Duroc Jersey Swine

Breeding stock for sale at all times at reasonable prices. If in need of a high class boar, or sow any age write, or better, come to farm. Best of Blood line and we guarantee you satisfaction. Herd boars, Panama Special 11th and Home Farm Wonder. Booking order for fall pigs at \$15 each. Thos. Underhill & Son, Salem, Mich.

Duroc Bred Sows \$40 to \$50. Service boars \$15 and \$20. We register in your name and guarantee satisfaction. We have one of the largest and best herds in the state. Write for special sale folder. Michigan Farm, Kalamazoo County, Pavilion, Mich.

DUROC JERSEYS

Bred gilts at \$40-\$45-\$50 each. Also some good fall pigs. RUSH BROS., Romeo, Mich.

Duroc Jersey A few extra good fall boars, and a choice lot of spring boars of the heavy boned type popular blood lines at reasonable prices. DRODT & BENS, Monroe, Mich.

DUROC JERSEYS: A few choice bred gilts for sale. CAREY U. EDMONDS, Hastings, Mich.

Pure-Bred Duroc Jersey Hogs: we usually have good boars and sows of all ages for sale. Reasonable prices. Larro Research Farm, Box A, North End, Detroit, Mich.

DUROCS WITH QUALITY

Spring pigs by Walt's Orion, First Sr. Yearling Detroit, Jackson, Gd. Rapids and Saginaw 1919 **Phillips Bros, Riga, Mich.**

Durocs Herd headed by Great King Orion Col. assisted by a good son of King Orion Fancy Jr. HARRY FOWLER, Stargis, Mich.

AM SELLING

a great offering of bred Duroc sows and gilts March 4th. They are mostly bred to Orion Grand Col., son of Ohio Grand Champion. Get on mailing list for catalog. W. C. TAYLOR, Milan, Mich.

WEST View Duroc Farm offers spring boars from Home Farm Tippy Orion and Pathfinder Prince, with big bone and type. Ready for service, sows, fall gilts and spring gilts with quality. Write or come and see them. ALBERT EBERSOLE, Plymouth, Mich.

DUROC—JERSEYS

Sows all sold. E. D. Heydenberk, Wayland, Mich.

\$12 for a Duroc Jersey pig, farrowed in Feb. shipped in April. M. A. C.—Brookwater breeding. Registration papers free. Express charges paid. D. W. SUTHERLAND, Gd. Ledge, Mich.

Duroc Jerseys heavy boned, low down type breeding stock for sale. CHAS. BRAY, Okemos, Mich.

BIG TYPE CHESTER WHITES

The prize winner kind from the best prize winner bloodlines. Early developers, ready for market at six months old. I have started more breeders on the road to success than any man living. I want to place one hog in each community to advertise my herd. Write for agency and my plan. G. S. BENJAMIN, R. F. D. 10, Portland, Mich.

CHESTERS We are all sold out of Boar, Bred Sows and Gilts, For spring pigs write WEBER BROS., Royal Oak, Mich., 10 Mile and Ridge Rd., Phone 408.

Chester Whites, bred gilts and fall pigs of excellent quality and breeding. Satisfaction guaranteed. F. W. Alexander, Vassar, Mich.

Chester Whites Bred gilts for April farrow 250 lbs. w. o. d. \$45. ALBERT DORR, Clinton, Mich.

O. I. C. HOGS

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

O. I. C. & Chester White Swine. Strictly Big Type with quality. Service boars, and gilts bred for Mar. and early April farrow, are all sold. Some good ones left, bred for last of April and early May farrow. All of prize winning blood lines. Have one good tried yearling sow that I will sell. Newman's Stock Farm, R. 4, Marlette, Mich.

O. I. C. BRED GILTS

shipped C. O. D. J. CARL JEWETT, Mason, Mich.

O. I. C. Spring boars and gilts no akin. We breed and own the Grand Champion Boar at West Mich. State Fair. We ship C. O. D. and Reg. free. GEO. M. WELTON & SON, Alto, Mich.

O. I. C's. choice gilts bred for March and April farrow. A. J. BARKER & SON, Belmont, Mich.

O. I. C's all sold except two fall boars. Orders booked for spring pigs. C. J. THOMPSON, Rockford, Mich.

O. I. C's Choice Aug. and Sept. open gilts also booking orders for spring pigs. CLOVER LEAF FARM, Monroe, Mich.

BIG TYPE O. I. C. Pigs born Sept. The L. B. Silver Strain. Both sex. GEO. N. RUPECHT, Mallory, N. Y.

For Sale. O. I. C. Gilts bred for March and April farrow (at a reasonable price). H. W. MANN, Dansville, Mich.

LARGE TYPE P. C.

Largest herd of individuals in Mich. Come and see, compare, and be convinced, expenses paid if not as represented. Boars and early gilts all sold. A few late gilts, will sell open or hold and breed for late farrow. W. E. LIVINGSTON, Parma, Mich.

Big Type Poland China. Fall boars at \$25 each soon ready for service, sired by Clansman Buster and Hovey's Giant and out of such sows as Gettsdale Queen 2d. She is a daughter of Gertsdale Finn, and Bob's Prospect 3rd is out of Leonard's Big Bob. DORUS HOVER, Akron, Mich.

40 Sows, Granddaughters of the great Giant Buster, bred to a grandson of the Yankee, the \$40,000 sire. Where can you find any better Big Type breeding? Our prices are very low. \$30, \$40. Also 50 fall pigs. Why not buy a pig? JNO. C. BUTLER, Portland, Mich. Bell Phone.

LEONARD'S Big Type P. C. Herd headed by Leonard's Liberator 458,285, the tallest, longest and heaviest boned pig for his age in Mich. Call or write, stock in season. Fall pigs at Bargain Prices. E. R. LEONARD, St. Louis, Mich.

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

L.T.P.C. \$15, \$20 & \$25

We have a fine lot of fall pigs sired by Harts Black Price and Right Kind Chan. HART, FULCHER and CLINE, address F. T. Hart, St. Louis, Mich.

Large Type Poland Chinas

Spring boars all sold. Fall pigs at bargain prices. Bred gilts held for public sale. A. A. FELDKAMP, R. 2, Manchester, Mich.

L. T. P. C.

Gilts bred Mo. Bob. 2 sons of Clansmans Image. Big Defender 2nd and High Joe, tracing back to Chief Price. H. O. SWARTZ, Schoolcraft, Mich.

HAMPSHIRE all sold out at present. JOHN W. SNYDER, R. 4, St. Johns, Mich.

BIG TYPE POLAND CHINAS

Bred gilts for sale. Choice individuals of rich breeding at prices within your reach. Come see them or write. WESLEY HILL, R. 6, Ionia, Mich.

L. T. P. C. Gilts bred to that Yearling Boar that stands 40" high, is 76" long, and walks on a 11" bone. Offering summer and fall pigs. Clyde Fisher, R. 3, St. Louis, Mich.

Poland Chinas Sixteen years breeding and showing. I can please you in a bred gilt. ROBERT MARTIN, R. 3, Woodland, Mich.

Big Type P. C. Sows bred to Big Bob Mastodon, his gilts bred to a son of Peter Pan, that sold for \$1,075 cash Jan. 5. C. E. GARNANT, Eaton Rapids, Mich.

L. T. P. C. Orange Model gilts, bred for March and April farrow. Come and see them, they will bear inspection. W. J. Hagelshaw, Augusta, Mich.

BIG TYPE Poland Chinas, leading strains at lowest prices. Both sex, all ages, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

SHEEP

A Real Bargain at Kope Kon Farms

We offer 40 big healthy yearling Shropshire and Hampshire Rams all registered at \$25.00 each. Come or write while the picking is good. S. L. WING, Coldwater, Mich.

Additional Stock Ads on Page 313

LATEST MARKET REPORTS

Tuesday, March 7.

Wheat.

Detroit.—Cash No. 2 red \$1.44; No. 2 mixed and No. 2 white \$1.41. May \$1.49.

Chicago.—No. 2 red \$1.40; No. 2 hard \$1.38@1.38½; May \$1.41½.

Toledo.—Cash at \$1.44@1.46; May \$1.49.

Corn

Detroit.—Cash No. 2 67c; No. 3 yellow 65c.

Chicago.—No. 2 mixed 57½c; No. 2 yellow 57½@58.

Oats.

Detroit.—Cash No. 2 white 43; No. 3 yellow 41c.

Chicago.—No. 2 white 40¼@41c; No. 3 white 37¼@40c.

Beans.

Detroit.—Immediate and prompt shipment \$6 per cwt.

Chicago.—Choice to fancy hand-picked Michigan beans at \$6.55@6.75; red kidney beans \$8.

New York.—Choice pea \$6.85; red kidney beans \$8.25.

Rye.

Detroit.—Cash No. 3, \$1.06.

Chicago.—\$1.02½.

Toledo.—\$1.04.

Seeds.

Detroit.—Prime red clover, cash at \$16; alsike \$12.60; timothy \$3.35.

Toledo.—Prime red clover \$16.15; alsike \$12.30; timothy \$3.17½.

Hay.

Detroit.—No. 1 timothy at \$19@20; standard and light mixed at \$18@19; No. 2 timothy \$16@18; No. 1 clover mixed \$16@17; rye straw \$13.50@14; wheat and oat straw \$12.50@13 per ton in carlots.

Feeds.

Detroit.—Bran \$33; standard middlings \$33; fine middlings \$33; cracked corn \$30; coarse cornmeal at \$28; chop \$25 per ton in 100-lb. sacks.

WHEAT

Wheat prices have shown an uncertain trend recently owing to the arrival of rain in the southwest, a slow flour trade, an ample supply and a tendency on the part of European buyers to drop out of the market on extreme advances. The latter have reappeared, however, to purchase large quantities whenever values have had a good setback. It is estimated that Canada has only 60,000,000 bushels yet to be shipped of which less than 40,000,000 bushels are unsold.

The movement of wheat from farms has decreased materially in the southwest and primary receipts are declining. Domestic milling demand for wheat is expected to increase very soon be noted in the visible supply.

CORN

Although the movement of corn from farms is still liberal, it has decreased nearly 50 per cent during the past week. Large quantities are held on track or in transit so that total receipts may remain above the average for another week or two. Corn prices at one time recently reached a level slightly higher than at the same period of 1921. But declined sharply when the wheat market began to hesitate.

Export demand for corn remains brisk and clearness still aggregate around 5,000,000 bushels per week.

OATS

In spite of a smaller supply available, the oats market has shown no independent strength but has followed the action of corn although the advance in prices has been proportionately less upon the lighter cereal. Some export demand is appearing. The visible supply is still enormous but primary receipts last week were smallest since early January and were almost equalled by shipments from primaries.

SEEDS

Seed markets have been easier in the last few days although clover seed has retained most of its advance. Demand for timothy has been disappointing and stocks at distributing markets are liberal. No big decline is likely to occur, especially in clover seed, within the next 30 days.

FEEDS

Although demand for feedstuffs is slow, except for middlings and tankage which have been aided by the advance in hogs, prices are holding on a high level. The supply of wheat feeds, corn by-products, and cottonseed meal appears ample but stocks of tankage and linseed meal are light.

HAY

Cold weather and snows over large areas have helped the demand for hay and at the same time have obstructed the movement from surplus sections. Higher prices have been recorded especially in the northwest. The south is a heavy buyer at this season and the northern and eastern sections are expected to purchase more freely during the next month or two as supplies of forage are becoming depleted.

POULTRY AND EGGS

Although there have been numerous upturns, the egg market has been headed downhill during the last six weeks. Prices are the lowest at this season in a number of years and are only two to three cents higher than the low point reached in the spring of 1921 so that the spring slump should be practically at an end. Receipts are increasing and withdrawals from cold storage are considerable. Stocks of the latter at the four leading cities are down to only 1872 cases compared with 9821 cases at this time last year. Within another week or two the movement into storage will expand. Poultry prices have advanced sharply in the last 60 days.

Chicago.—Eggs: Fresh firsts, 23½c; ordinaries, 20@21c. Poultry: Hens, 27c; springers, 29c; roosters, 18c; ducks, 28c; geese, 18c; turkeys, 35c.

Detroit.—Eggs: Fresh candled and graded 23@24c; springers 25@28; hens 25@30c; roosters, 17c; geese, 20@22c; ducks 35c; turkeys 35c.

BUTTER

Butter production is gradually increasing according to reports to the American Creamery Butter Manufacturers' Association. The increase is small, however, and may not become a big factor in the market for another month. Prices recently have been comparatively firm as a result of severe storms in some sections. Receipts at the four leading cities during the last week, however, were materially larger than in the corresponding week of 1921. The undertone of the market is rather nervous with a prospect of lower prices within the next thirty days although there may be but little change immediately.

Prices for 92 score fresh butter were:

Chicago, 37c; New York, 38c. In Detroit, fresh creamery in tubs sells for 34½c@35c.

POTATOES

Total season's shipments of potatoes from the leading 18 states have been nearly 25 per cent larger than in the same period of the previous crop year. The movement from producing sections has slowed down and prices have become more firm. The supply for the rest of the season appears ample. Round whites sacked are quoted at \$1.70 to \$2.15 per 100 lbs. in various consuming markets.

BEANS

Tone continues firm with the general tendency to higher prices. Mediums are scarce. Receipts of pea beans in New York increased, owing to favorable market conditions in the east.

APPLES

Total shipments of apples from all sections up to February 25 have been 78,216 cars compared with 98,339 cars to the same date of 1921. The market displays a firm tone although the de-

mand is slow and supplies in sight for the rest of the season are up to normal. Baldwins are bringing \$7 to \$8.25 per barrel and Winesaps are bringing \$2.75 to \$3.75 per box in city wholesale markets.

GRAND RAPIDS

A weak potato market is expected as there is considerable loading activity in northern Michigan points. The produce market is active with a plentiful supply. Prices to the growers are:

Potatoes \$1@1.10; onions \$3.50@3.75 per bu.; beets, parsnips and rutabagas \$1.50; dairy butter 22@24c; eggs 23c.

DETROIT CITY MARKET

The mild weather brought plenty of produce on the farmers' markets. The supply of potatoes was heavy but the demand was active. Apples were in good supply demand and the local supply is now about cleaned up. Prices are as follows: Apples \$1@4 per bu.; cabbage, \$1.75@2; eggs 32@35c a doz.; potatoes \$1.10@1.20 per bu.; poultry, 26@35c.

LIVE STOCK SALES.

Shorthorns.—March 21, Davidson & Hall, Tecumseh, Mich.

Holsteins.—April 20, Eaton County Holstein Breeders' Association Assignment Sale, at Charlotte, A. N. Loucks, Secretary.

For Better Commission Service Write

Gunsberg Packing Co.,
Commission Dealers in Poultry,
Veal, Eggs, etc.
2460 Riopelle St., Detroit, Mich.

STRAWBERRY PLANTS

The real money makers for you to plant, including four best everbearers. Full assortment of other berry plants. The new Cooper Strawberry, most productive, largest and sweetest berry known, 30 yrs. experience growing and packing plants. Great reduction in prices. Wholesale prices on large amounts. Weston's plants are first class and true to name. Our free catalogue tells the truth; a valuable book for the grower. A. R. WESTON & CO., R. F. D. 6, Bridgman, Mich.

PLANT the new RAINIER APPLE

pronounced by U. S. Department Agriculture best keeper of the Pacific Northwest. Keeps common storage until May; cold storage a year. We can still supply limited number mail size trees at special prices for spring planting. Colored illustration of fruit and special information free. Sample apple 10c.

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All about the Fall bearing high-grade Stock. 75 Standard varieties to choose from.
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grease, paint and specialties regular or part time. Samples free. Should have car or rig. Write for attractive terms. THE IVISON CO., 1573 Merwin Rd., Cleveland, O.

TOBACCO

Kentucky Homespun Natural leaf. Chewing or Smoking. 2 yrs. old. Ripe, wild, strong. 10 lbs. \$3; 20 lbs. \$5. MADDIX BROS., Dept. 50, Ayrfield, Ky.

Pedigree Seed Oats For Sale

Apply THE JENNINGS FARMS, Bailey, Mich.

500 Senator

Dunlap Strawberry plants \$2.25, other varieties \$5.00 per M. Write for circular. E. S. SWANSON, R. 2, Paw Paw, Mich.

FARM HELP

Wanted single good all around experienced man in farming and care of dairy cattle. References required. John Mason, South Lyon, Mich.

Live Stock Market Service

Wednesday, March 8.

DETROIT

Cattle.

Receipts 658. Market strong and active.

Best heavy steers	6.75@ 8.00
Best handy wt bu steers	7.00@ 7.75
Mixed steers and heifers	6.25@ 6.75
Handy light butchers....	5.75@ 6.25
Light butchers	5.00@ 5.50
Best cows	4.75@ 5.50
Butcher cows	3.75@ 4.50
Common cows	3.00@ 3.25
Canners	2.00@ 3.00
Best light weight bulls..	4.50@ 5.00
Bologna bulls	4.00@ 4.50
Stock bulls	3.50@ 3.75
Feeders	5.50@ 6.50
Stockers	5.00@ 5.50
Milkers and springers....	4.00@ 7.50

Veal Calves.

Receipts 824. Market steady.
Best\$12.00@12.50
Others 5.00@ 10.00

Hogs.

Receipts 2,189. The market is 5@ 10c higher.
Mixed hogs\$ 11.50
Pigs 10.75@11.00
Roughs 9.00@ 9.25

Sheep and Lambs.

Receipts 1,016. Market steady and quality common.
Best lambs\$15.50@15.75
Fair lambs 13.00@14.00
Light to common..... 8.75@10.50
Fair to good sheep..... 8.00@ 9.50
Culls and common 3.00@ 4.00

CHICAGO

Hogs.

Estimated receipts today are 15,000; holdover 12,652. Market steady to 10c higher; light weights active and up most; others slow. Bulk of sales at \$10.90@11.25; tops \$11.40; heavy 250 lbs up \$10.90@11.15; medium 200 to 250 lbs \$11.05@11.35; light 150 to 200 lbs \$11.20@11.40; light lights 130 to

150 lbs \$10.35@11.35; heavy packing sows 250 lbs up \$9.90@10.40; packing sows 200 lbs up \$9.75@10; pigs 130 lbs down \$9.25@10.65.

Cattle.

Estimated receipts today are 8,000. Market active, steady to strong. Beef steers medium and heavy weight 1100 lbs up choice and prime \$9.25@9.75; do medium and good \$7.75@9.25; do common \$6.85@7.75; light weight 1100 lbs down good and choice \$8.40@9.40; do common and medium \$6.60@8.40; butcher cattle heifers \$5@8.40; cows \$4.40@7; bulls bologna and beef \$4@6.50; canners and cutters cows and heifers \$3@4.40; do canner steers \$4@5; veal calves light and handyweight \$7.25@10.50; feeder steers at \$5.65@7.65; stocker steers \$5.25@7.40; stocker cows and heifers \$4@5.75.

Sheep and Lambs.

Estimated receipts today are 10,000. Market steady. Lambs 84 lbs down at \$13.50@16; do culls and common at \$10.25@13.25; spring lambs \$11@12.50; ewes \$6@9.50; ewes cull and common \$3@6; yearling wethers \$11.50@13.50.

BUFFALO

Cattle.

Receipts 3,000; heavy; lower; light handy steady, shipping steers \$7.75@8.50; butchers \$7.50@8.25; yearlings \$8@9; few \$10; heifers \$5.50@7.75; cows and feeders \$5@6; fresh cows and springers \$45@110.
Calves.—Receipts 2,500; 50c lower, \$3@13.

Sheep and Lambs.

Hogs.

er; heavy, \$11.50; mixed \$11.75; yorkers \$11.75@11.85, light do \$11.50@11.75; pigs \$11.25@11.50; roughs \$9.25@9.50; stags \$4@6.
Receipts 9,000; 25@50c higher; lambs \$8@16; yearlings \$10@15; wethers \$10.50@11; mixed sheep \$10@10.50.

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If not you'd better subscribe. "Dollar eggs are easily secured when fundamentals of production are understood," says Prof. Foreman, head of Poultry Dept. at U. A. C., associate editor of MODERN POULTRY BREEDER. "How to Plant for \$1.00 Egg Crop," is the subject of his March article.

Everything we might say about our great March "Baby Chick" number, our special April "Michigan Booster" number and the practical articles by Foreman and other great poultry writers is summed up in our

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ALFALFA

ISBELL'S MICHIGAN-GROWN
Whatever your soil, there's a Bell Brand strain that is fitted to your farm—that will give you a big yield yet is so hardy that it will not winter-kill. Do not risk a crop failure—plant the proven, tested Bell Brand.

FREE Samples of any field seeds to show quality, sent on request with Isbell's 1922 Seed Annual. Big savings on eating quality seeds, direct from grower. Write today.

S. M. Isbell & Company
544 Mechanic St. (33) Jackson, Mich.

TOWNSEND'S PLANTS

At Wholesale Prices
DIRECT TO GROWERS

300 ACRES Of Choice True-to-name

STRAWBERRY PLANTS

Including PREMIER, FORD, and 220 acres Townsend Big Late. The greatest money-making varieties on earth. Catalog Free.

E. W. TOWNSEND & SON, Nurseries
20 Vine Street Salisbury, Md.



The wise, careful farmer builds the Hoosier silo not because they are the best. Perfect anchoring system, convenient doors, strong and substantial door frame. Choice of Yellow Pine or Oregon Fir Standard Lumber for Wood Silo construction.

Hoosier WOOD SILO
Roofs, Chute, Paint, Hollow Building Tile, Glazed Tile Silos
We also manufacture a complete line of roofs, chutes, paint for all farm buildings, glazed building tile and glazed tile silos. Prices reduced to pre-war level. Write for literature and prices before buying.
Hoosier Silo Co. Dept. M99, Albany, Ind.

LIVESTOCK WANTED

WANTED to buy sheep, ewes only, for breeding, preferred, Leicesters, any large coarse wool type. Give full description, age, size, weight, price and present condition as to breeding.
DION GERALDINE, Gaylord, Mich.

Wanted one span of mules well matched nine and ten years old, weight about twenty-five hundred.
W. E. BUNN, Romeo, Mich.

WOOL

Although the wool market has become much more quiet in the last fortnight, it still shows some strength. At the final auction of government wools held during the past week, prices were steady to 5 per cent higher than at the previous sale early in February. In the west wool growers have raised their asking prices to a level at which dealers are unwilling to take hold.

The woolen goods market is as pessimistic as ever and mills are not quite so active as they were during the late fall.

The Department of Agriculture has recently called attention to the fact that consumption in most countries is back to normal basis and that a good deal more wool has been consumed in the last year than was produced during the same period.

SUGAR COMPANIES SET MINIMUM PRICE FOR SUGAR BEETS.

A MINIMUM price of \$5.00 per ton for sugar beets is provided in the 1922 contracts offered by the Owosso Sugar Co., it was announced March 1. This is a cut of one dollar from the 1921 minimum guarantee, but provision is made for increased rates in case the price of sugar advances. If sugar rises to \$8.00 a hundredweight, beets will be paid for at \$9.00 a ton. The rates are fixed at this time, in spite of the delay by Congress in fixing a definite tariff rate on Cuban sugar, in order that farmers may plan on their 1922 crops to include, if they desire, an acreage of sugar beets.—M.

MIDLAND STARTING TO SHIP LIVESTOCK.

FARMERS of Midland County have started shipping of livestock for the spring season, the first car going out on February 25, despite the stormy weather. President William Shearer, of the Midland County Farm Bureau, is in charge with directors Ray Gilson and H. S. Hurley. John T. Howe, formerly of the Farmers Elevator Co., is employed as manager. It is proposed to later open a produce station for the shipping of cream, poultry and eggs.

Livestock will also be shipped from Sanford until the Sanford Elevator Co. is able to take up the work. Farmers of Coleman for several years have been shipping successfully, and last season handled 64 cars. With associations at Midland and Sanford, all farmers of Midland County are within easy distance of co-operative shipping service.—M. M.

ST. LOUIS CREAMERY DOES BIG BUSINESS.

AT the annual meeting of the St. Louis Co-operative Creamery Co. the report given by Secretary Pernert showed that the business transacted the past year amounted to 400,672 lbs. of butter, an increase of 97,000 lbs. over the production of 1920. Over 9,000 lbs. of this butter was shipped by parcel post, and the postage required for mail order shipments of butter and eggs amounted to \$3,400. The average test of cream received during 1921 was 34.7 per cent and the average price of 37 cents per pound for butter fat was paid. Aside from paying the farmers prevailing prices for their products, there was still a balance of about \$10,000 to be divided among the stockholders.

The officers of the company for the present year are: A. T. Bush, president; Charles S. Hoyt, vice-president; F. C. Pernert, secretary and treasurer; these with J. W. Campbell and William Vanderbeck form the board of directors.—M.

HURON COUNTY HAD GOOD BEAN CROP.

LAST year's bean crop was one of the very few profitable crops in Huron County and the sorting of beans gives employment to eighty women and girls in Bad Axe the year round. Fifty women are employed in the elevators at Kinde, thirty in one and 20 in the other. On account of the possibility of no acreage in sugar beets this year, it is expected the planting of beans will be heavy and fear is expressed by Ray Thomas of Bad Axe, that it will be overdone. Beans advanced 25 cents per hundred at Port Austin last Monday.—J. C.

Ship to Cleveland

CLEVELAND is a great and growing city. Its stockyards and packing houses have grown in a way that few people appreciate.

CLEVELAND is the largest packing center east of Chicago.

CLEVELAND packers slaughter from 30,000 to 60,000 hogs weekly. Eastern order buyers take large daily supplies here. CLEVELAND butchers slaughter 5,000 cattle weekly with sheep, lambs and calves in proportion.

The CLEVELAND demand exceeds the supply. This forces CLEVELAND packers to buy elsewhere. It also makes strong prices in the CLEVELAND UNION STOCKYARDS.

Bill your stock in your own name in care of any of the following commission firms:

Benstead, Bryans & Co.

The Greene Embury Co.

Bower & Bower

Shippers' Comm. Co.

Meeks, Eoren & Thompson

Nat'l Livestock Comm. Co.

Cleveland Union Stockyards, Cleveland, O.

SOYBEANS FROM SOYLAND

Choice quality and the practical varieties. Enrich your soils while replenishing your pocketbook. Our instructive circular tells how to do it.
FOUTS BROS., Rt. M., Camden, Ind.

Be a RAILWAY TRAFFIC INSPECTOR! \$110 to \$250 monthly expenses paid after 3 months' spare-time study. Splendid opportunities. Position guaranteed or money refunded. Write for Free Booklet G-121. Stand. Business Training Inst., Buffalo, N. Y.

No Agents to Pay Lets us undersell on berries, Raspberries, Hardy Hedges, Flowers, Shrubs, Trees. **GOBLEVILLE, MICH., NURSERIES.**

OATS Registered Wolverine 95% germination \$1.00 per bu. sacks extra at 38c each. Prompt shipment. **S. A. FOSTER**, Okemos, Mich.

SEED CORN Calico, Early Golden Surprise—**FREED & HAMMITT**, Lancaster, Ohio.

WANTED used silo in good condition, not over 50 miles from Detroit. Address B49, Michigan Farmer, Detroit, Mich.

Tobacco Natural Leaf, Sweet, mellow hand-picked 10 lbs. \$1.50; 10 lbs. \$2.50. Smoking, 10 lbs. \$2.00. Furnish free receipt for preparing. Quality guaranteed. **Farmers Tobacco Exchange**, Sedalia, Ky.

Homespun Chewing or Smoking Tobacco—5 lbs. \$4.50. **FARMERS UNION**, Mayfield, Ky.

HOMESPUN TOBACCO, smoking or chewing Collect on delivery, 5 lb., \$1.50; 10 lb., \$2.50; 20 lb., \$4. **FARMERS' ASSOCIATION**, PADUCAH, KY.

SHEEP

FOR SALE

One hundred Black Faced ewes from 1 to 3 years old, most Oxfords grades bred to registered rams, lamb in April and May. **P. O. Box 254, Grand Rapids, Mich.**

Ten Aged Registered Delaine ewes and ten ewe lambs for sale. **CALHOON BROS.**, Bronson, Mich.

HORSES

FOR QUICK SALE

1 pair pure-bred Percheron Mares, coming 3 & 4 yrs., color brown, well matched, weight 3400 lbs.
1 pair pure-bred Percheron geldings, coming 3 & 4 yrs., color black, well matched, weight 3400 lbs.
1 dark brown stallion colt, 9 mos. old, weight 1200 lbs. an excellent opportunity to develop a great stallion.

2 young Shorthorn Bulls, of Imported ancestry that are the equal for any we ever produced, are ready for service.

Anyone interested in the purchase of any of the above animals should communicate at once with owners.

H. B. PETERS & SON,
ELSIE, Mich.

POULTRY



BABY CHICKS

Eight leading Standard Varieties. Every chick from pure bred, healthy, carefully selected stock. We are not jobbers. We personally know what we are selling. Delivered at your door, parcel post prepaid. 100% live delivery guaranteed. Catalogue free.

MUNCIE BABY CHICK CO.
Lock Box 274, Muncie, Indiana

B-A-B-Y C-H-I-C-K-S

Book your order with us and get genuine foundation stock of Rocks, Anconas, English and American White Leghorns. We guarantee best quality and 100% delivery. Large illustrated catalogue free. **Progressive Hatcheries**, Box Q, Holland, Mich.

Baby Chicks and Hatching Eggs from trap-nested stock. Park's strain Barred Rocks. Heavy laying Rhode Island Reds, English White Leghorns. Quality, not quantity. Prices reasonable. Write us. **Lakeview Poultry Farm**, Box 3, R. 8, Holland, Mich.

Bred-to-Lay White Wyandottes
59 hens laid 1170 eggs in Jan. Eggs \$2.00 per 15; \$10 per 100. **EVERGREEN POULTRY FARM**, Blanding & Sons, Greenville, Mich.

DAY OLD CHICKS

S. C. English strain White Leghorns, Brown Leghorns, Anconas and Barred Rocks, free and safe delivery guaranteed. **C. BOVEN**, R. 12, Holland, Mich.

EGGS \$1 SETTING Parcel Post Paid. Thorough breeds. Barred Rocks, White Wyandottes, Anconas, Buff Minorcas, White Leghorns, Brown Leghorns, Rhode Island Reds, Buff Orpingtons. **Philip Condon**, W. Chester, Ohio.

HATCHING EGGS

\$1.25 setting, \$2 per 30, postage paid. White Wyandottes, White and Barred Rocks, White Leghorns, Genuine Farm raised. Please order from ad. Satisfaction. **GORET BROS.**, Corunna, Mich.

Hagaman's Big Black Minorcas
Single Comb, great layers, 15 eggs \$2.00; 30 eggs \$3.50; \$10.00 per hundred. **E. C. Hagaman**, Hillsdale, Mich.

PARDEE'S PERFECT ECKIN Ducklings EGGS AND DRAKES Price List Free. Box T. Fardee's, Joliet, L. I., N.Y.

English W. Leghorns extra selected winter layers. Eggs 15, \$1.50; 30, \$2.50; 100, \$7.00 prepaid. **ORCHARD KNOLL**, R. 2, Spring Lake, Mich.

Quality S. Wyan. from State Champ, and Detroit Winners. Yearling cocks and chks. for sale. Eggs reasonable. **Triangle Poultry Yards**, Hillsdale, Mich.

Rural Baby Chicks and Pullets
from our choice stock of English Strain S. C. White Leghorns, Brown Leghorns and Anconas at very reasonable prices. We solicit your inquiries. Catalogue Rural Poultry Farm & Hatchery, R. 1, Zealand, Mich.

Rose Comb Rhode Island Whites. The laying kind, selected stock, eggs 15-\$2.50; 30-\$4.00; 50-\$6.00; 100-\$10. **Henry Scholten**, R. 12, Holland, Mich.

STRICTS POULTRY FARM

Hudsonville, Mich., R. R. 4, Box M. S. C. English White Leghorns. Official records from 9 hens of 293 to 244. Chicks and Eggs. Write for catalogue.

PETHLUMA of the mid-west, English White Leghorns, tested flocks, mated to pedigreed males. Won cup best utility pen, largest class in Michigan. Chicks, eggs, Catalogue free. **Forest-Grove Hatchery**, Box M, Hudsonville, Mich.

Single Comb Buff Leghorn
baby chicks. Order now for spring delivery. Send for circular. **Willard Webster**, R. 2, Bath, Mich.

S. C. B. Minorca A few choice Minorca Cockerels, great big fellows, sired by our 12 lb. cock. **R. W. MILLS**, Saline, Mich.

S. C. Black Minorca cockerels Northern Strain choice stock, \$3 and \$5. Hatching eggs, single settings or quantity. **C. J. Deedrick**, Vassar, Mich.

Silver, Golden & W. Wyan. grand winners at Grand Rapids Coliseum show. Choice breeding stock. Prices reasonable. **C. W. Browning**, R. 2, Portland, Mich.

Snowy White Rocks Fisher Strain, dandy layers. Eggs \$1.50-15; \$3.75-50; \$7.00-100. All prepaid. **Mrs. Earl Dehnhoff**, Vanburen, Ohio.

Trap-Nested Strain S. C. W. Leghorns. Heavy winter layers, snow white, high on shank, pelvic bones thin and well spread. Baby chicks and hatching. Have few choice cockerels and pullets for sale, shipped on approval. **Leonard Sumner**, R. 2, Box 97, Romulus, Mich.

TEN EGGS for hatching from pure Toulouse Geese, four dollars and fifty cts. (\$4.50), insured parcel post paid. **MRS. AMY SOUTHWORTH**, Allen, Mich.

Top Quality Chicks Spanish, Minorcas, Rocks, Reds, Wyandottes, Orpingtons. **TYRONE POULTRY FARM**, Fenton, Mich.

WHITE WYANDOTTES

207 egg average. Five special matings. Eggs \$2.00, \$3.00, and \$5.00 per 15. Cockerels \$5.00. **FRANK DELONG**, R. 3, Three Rivers, Mich.

WHITE LEGHORN BABY CHICKS

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

White Wyandottes won second cockerel, twelve birds, all winners. Ann Arbor. Show birds, \$5 up. Write for prices. **David Ray**, Ypsilanti, Mich.

W. Wyandottes. Strong, sturdy, cockerels bred from Chicago Coliseum winners of best display and Hagan tested layers at \$5; \$7.50 and \$10. Eggs \$3; \$5 and \$10 per 15. Cat. free. **H. J. Riley**, Box M, Hillsdale, Mich.

W. Chinese goose eggs 40c each. Pekin duck for 15. **MRS. CLAUDIA BETTS**, Hillsdale, Mich.

Bourbon Red Turkeys We have them. Order your Birds and Eggs now. **SMITH BROS.**, R. 3, Augusta, Mich.

HUBAM CLOVER.

Does Hubam clover make good feed for all kinds of stock? Should it be sown in oats or barley the same as other clover? Does it do well on all kinds of soil?—P. D.

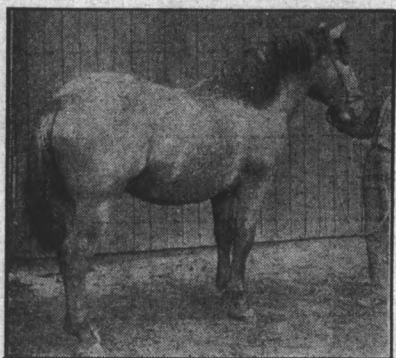
Hubam clover is a sweet clover which matures in a single season. It has only been known for a few years and its exact value has not been determined. It is apparently a promising crop to grow for quick hay and pasture. It is known to be one of the best of honey crops.

Seed may be secured from the Farm Bureau Seed Department, East Lansing, Michigan.

Apparently this crop makes excellent pasturage for all kinds of stock and a hay feed that is comparable to good sweet clover or alfalfa hay, provided it is cut for hay before bloom starts.—J. F. C.

MORE COLTS OF BETTER TYPE.

COLTS are now seen upon farms with greater frequency than for the past five years. These young horses with but few exceptions, are of improved breeding and will develop



into a type of draft animals superior to those generally used on American farms in years gone by. Economy in production is now demanding a more efficient horse and from this demand is certain to come animals built for draft work and also of a disposition that will permit a number of them to be worked smoothly in large teams.

THE RURAL SCHOOL QUESTION.

(Continued from Page 289.)

do his best if he be too cold or too warm. The temperature in every school room in the county should be from sixty-eight to seventy degrees at 8:30 in the morning and should remain constant throughout the day. Of course, this is altogether impossible if the building is heated with a stove, or unless everything is in good repair if heated with a modern plant that takes care of the ventilation.

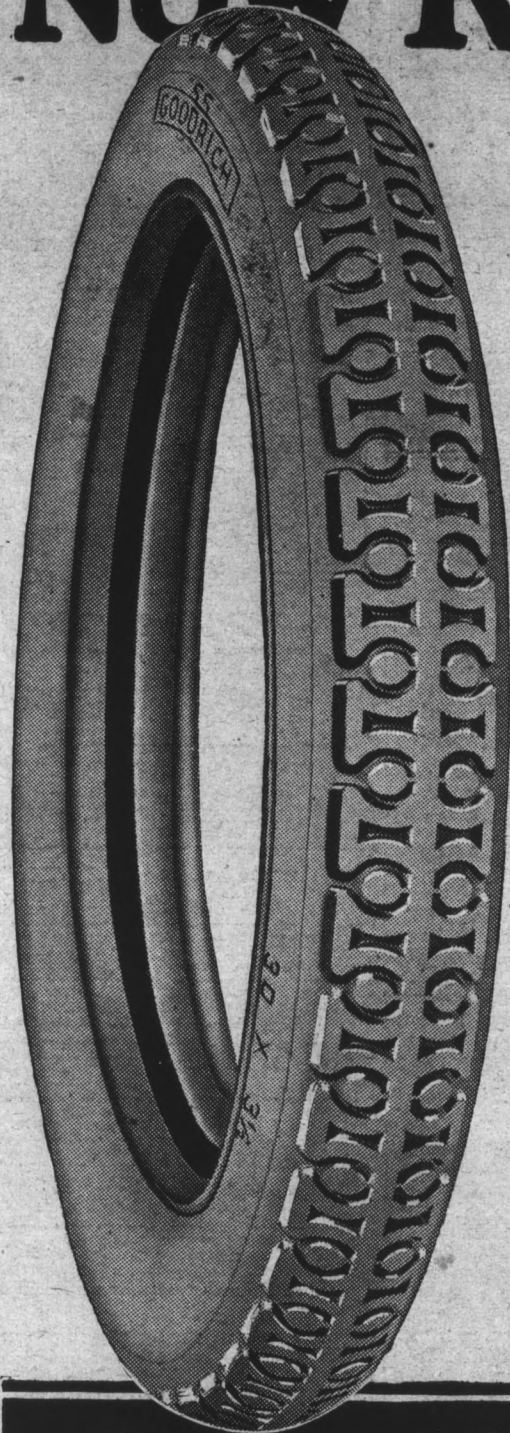
But even with a modern heating plant there are many teachers that can not handle the situation. Many of them never built a furnace fire in their life until the first cold morning at school. I visit school after school in the winter and find the temperature in the first school visited just above freezing. Sometimes the fault is with the plant. I know of a number of heating plants in the county without any grate at all and a number more in which the shaker is out of commission. Now I am not finding fault or criticizing teachers. It takes time and experience to learn to handle a furnace and no normal school that I know of is offering a course along this line. However, the school day is short and when I visit a school and find the pupils at ten o'clock huddled around the stove or the register with their wraps on trying to keep warm, I am sure that something is wrong with the system.

There are many particulars in which the rural school is not meeting the demands of the age. I have named only four, but I think this article is long enough. You can probably think of more. And what are we going to do about it?

Now Ready!

Goodrich "55"

CLINCHER FABRIC TIRE



The NEW 30x3½ for \$10.90

HERE is a real tire of real quality, at a price most remarkably low. It has everything that you demand — construction, appearance, long life, low price.

It's a GOODRICH — Great Value!

Made with all the skill of Goodrich, of high-grade quality throughout and perfected with its scientifically constructed, anti-skid tread of thick, tough, specially-compounded rubber.

Ask your dealer to show you this remarkable tire. Remember the name — Goodrich "55" — price \$10.90. Also made in 30 x 3 size.

THE B. F. GOODRICH RUBBER CO.
Akron, Ohio

MAKERS OF THE SILVERTOWN CORD

Goodrich "55"

The Tire for Small Cars

— Goodrich Tires give longest service with Goodrich Tubes —

Fire protection for your home

If you are a farm or suburban home owner the matter of protecting your property against fire is really important. Usually by the time a bucket brigade can be formed a fire has made such great headway that the property is destroyed beyond repair.

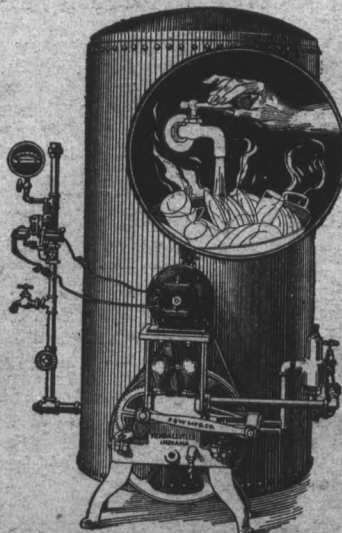
Running water, under pressure, is one of the most efficient means used for getting a fire under control.

HOOSIER Water Service

equipment will afford fire protection for you. In addition, it will furnish an every-hour-in-the day water service for use in and about your home. Water may be piped into barn for watering stock. Running water also lessens the chore hours for everyone in the household. Hoosier equipment may be used with any well and any power.

Send for free catalog showing complete installations suitable to your needs.

FLINT & WALLING MFG. CO.
Dept. C — Kendallville, Indiana



Hoosier shallow well installation. Capacity, 250 gallons an hour, pumping against 50 lb. pressure. Controlled automatically.

Cyclone Lawn Fence



CYCLONE FENCE COMPANY WAUKEGAN ILLINOIS

KITSELMAN FENCE

Get It From the Factory Direct
PRICES WAY DOWN
We've knocked the bottom out of high cost of fence building. We pay the freight and save you money. Here's a man that
Saved 38 per cent
Mr. R. D. Dillard, Milton, Okla., writes: "I found all the fence as good or better than I expected. I saved \$28.65 on my \$75.00 order."
You will never know how much you can save thru our
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