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Maple Syrup is the Farmer's First Crop



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VOLUME CLX

NUMBER TEN

DETROIT, MARCH 10, 1923

CURRENT COMMENT

THE MICHIGAN FARMER SAYS:

The man who calls his wife "the woman" is in need of education.

Despite our bemoaning, it takes just about so long to get things adjusted.

Another season is starting and before we know it things will be a humping. Is everything ready?

Farm labor is going to be scarce, so it will be a matter of good judgment to use all the labor-saving devices possible.

The popular song, "Three O'clock in the Morning," reminds us that that is the time when some city folks go to bed, and some farmers get up.

Thinking saves time. The city man who thinks would not stay up until three a. m. And the farmer who thinks does not have to get up at that time.

We like to hear of the farm which is named and on which many of the animals have names, because it indicates a wholesome mental attitude on the part of its owner.

Standard Michigan Cheese

WE have inquired for Michigan cheese at the leading grocery stores in Detroit, to find that the cheese supplies in these stores practically all come from other states. Where has Michigan cheese gone to? At one time the best product manufactured in the country was produced in Michigan factories.

The fact is, that other dairy states and the United States government have standardized cheese. The product put out under these regulations is uniform and guaranteed as to moisture content and against adulteration. It is natural that buyers who are particular about the product they sell, should go to the states where they can be assured that they are buying cheese of standard quality. If shipments do not measure up to the standards they then have recourse in law to make good the damage done.

There is a bill before the Michigan legislature known as the Horton Bill, which purports to standardize the cheese manufactured in this state. This bill has received the support of the senate but portions of it were stricken out in the house.

The opposition to this measure, of course, comes from those who wish to make imitation cheese, or those who fill contracts with an inferior product.

The entire public, however, should be interested in this measure. If passed it would give our Michigan people a superior cheese product. Business men should be interested because our Michigan cheese business would then be placed on a substantial basis, and would be developed to something of its former importance. The farmer would find an improved market for his raw materials which go to make up dairy rations, while the dairyman himself would have the market for his dairy products greatly improved.

Farmers should urge their representatives to give this measure attention. Its effects are certain to be highly beneficial and far reaching.

Standard A Grade

THE recent Paw Paw meeting of the Michigan fruit growers shows that the trend of thought among the tillers of the soil is right. The discussions there were not devoted to calamity howling or begrudgements. Instead they consisted of serious thought regarding the improvement of the grower's own business. This is one of the best signs of advancement.

Only too often when things are not to our satisfaction, we are likely to attach our attention to some far-off subject and ascribe to it and its change the cause and cure of our condition. But most generally the cause of our dissatisfaction is very near by, and it can be largely eliminated by solving the problems nearest us.

Western fruit growers have invaded our markets because they have solved most of the problems of fruit production from the growing to the marketing of it. In the marketing they have set a high standard in grading, have studied the markets and have given the public what it wants.

The retailers and consumers of fruit are not going to give preference to the Michigan products as long as those produced elsewhere fulfill better their requirements. They are not any more likely to do that than you are to buy a home product when you get more for your money elsewhere.

There is no quicker, nor more effective way, to gain loyalty to the home product than to make that product just as good, if not better, than that produced elsewhere. The Michigan fruit growers are aware of this and are going to win their home markets by putting their business on the Standard-A Grade level.

Getting In Marketing Mire

WE are apt to get mired in our marketing operations. This is quite certain to happen where we have but little or no knowledge of the conditions surrounding our market.

Some farmers have advised us personally and through correspondence that we err in giving publicity to the condition of crops, and the supplies of the various farm products on hand. They contend that this is playing directly into the hands of big dealers. This particularly when yields are running high.

But would this be the case? Should the government eliminate the gathering of statistics on farm crops, who would be most handicapped by this act?

Dealers have, or can readily find, ways of securing information on crops. They can afford to do this, especially when no other class of people are able, or take the trouble, to gain such information. It would then be possible for these dealers to claim large crops when buying from the farmers, and then spread the news of small production when disposing of their holdings to the public.

Information, exact information, is the only route whereby this problem of adjusting supply to demand can be most closely approximated. And both the farmers and the public should jealously guard every reasonable and legitimate means of gathering reliable information on farm production. To do away with such service would be a great boon to the speculator in farm products.

Swat Filled Milk

OUR legislators are and have been debating the advisability of prohibiting the manufacture, sale or exchange of so-called filled milk. At various times we have commented in these columns on the need of doing what House Bill No. 73 proposes to accomplish.

We are all concerned. If only the dairy interests of the state were in question, there may be some reason for debate. Even then, a very convincing defense of this measure could be made.

But the matter goes much deeper. The very health of our boys and girls and particularly of our infants, is jeopardized through the regular use of this recently developed product. Other states have had the courage of their convictions and have outlawed filled milk.

We have every confidence that the citizens of Michigan, both men and women, will stand solidly behind our legislators in protecting our health through the enactment of this measure.

The Value of Simplicity

DO we not go into things complexly because we can not see things clearly—because we are hampered with side track thoughts and sensations which always lead us into complications? In the matter of health we have developed myriads of disease with fanciful names because we have disregarded the simple fundamentals of fresh air, pure water and good food. We have changed wheat into white bread because the whiteness appealed to us more, but have left out one of the great essentials, the bran which belongs to the wheat.

With the lack of this we have come to the use of physic and to untold complications in the way of health. Perhaps the practice of feeding bran mash to horses on Sundays could be duplicated with ourselves to advantage instead of taking our Sunday fill of food.

May it not be that those who wish to get the most out of life—out of our civilization, can do so by sticking to simple truths? By so doing can they not enjoy the benefits of present-day life and safe-guard themselves from many of its evils?

The Bumper Crop

BUMPER crops usually bungle prices. When supplies go up prices go down. This teeter-tautering gives the farmer little opportunity to make a "killing."

Farmers generally recognize this fact. Experience has caused them to look with apprehension upon the big crop. When the country grows a bumper supply of one plant or another, then everyone looks for low prices.

But we farmers should not dote on short production as a good physic for our economic ills. Cutting of production beyond a certain point invites competition. High prices coming as the result of low supplies, encourages substitutes. We all well remember how, when the people felt that they could not pay the price asked for butter, that the channels of the butter

trade were soon filled with oleo.

We are, however, confronted with another fact that must not be lost sight of. High yields cut production costs. The man who grows seventy-five bushels of corn per acre can, invariably, produce at a lower cost per bushel than can he who grows but forty bushels per acre.

It would seem, therefore, that when the farmer tries to realize the highest net return from his labors, he immediately confronts a paradoxical situation. In other words, his most fundamental fact in marketing—limited supplies—is in opposition to the most fundamental fact in production costs—high yields.

There is an escape, however, from this situation. The way out is to dodge both the pitfalls of big supplies, and that of high costs by growing more bushels per acre and planting fewer acres. Then use the surplus land for crops in which the freight tariff limits outside competition; as, for instance, alfalfa hay.

The time of the year when we farmers should be planning to put into effect some of these practices is at hand.

Slush.

WE are at the time of the year when everything is nothing but mud. The snow ain't snow, water ain't water, and earth ain't earth, but all of them together make slush, which ain't nothin' agreeable. The white beauty of winter is gone and the green beauty of spring ain't here yet. It's in between; it's the slush season.

This is when the wools begin to itch and the cottons are too cold; your overcoat looks worn, but you feel kinda bold when you go out without it, 'cause you feel kinda undressed. We just get used to the habits of winter, and then we gotta change. Seems like this weather is always disturb-



in' our peace of mind 'cause it makes us change our habits so often, and changin' habits is the hardest thing for most of us to do.

The slush season ain't satisfactory, 'cause it ain't one or the other. Likewise, it is a little of everything and not much of anything. But it seems Old Mother Nature ain't got nothin' on us, 'cause we most all have our slush seasons. Then's when our thoughts and feelins' ain't neither one or the other. Sometimes they're made up of a little good and a little bad all mixed up. Then they're muddy thoughts what don't do nobody no good.

Them's the times when we don't know whether to be real good or to get reckless and be bad. Them's the times when our mind goes to what you call yonder green pastures, instead of bein' in the work shop fixin' up the harness, tools and etc., for the spring work. Them's the times when nothin' is goin' right and everybody is grafters and robbers 'cept us. Them's the times when wife's cookin' ain't no good and her disposishun ain't accordin' to our likin'.

But let me tell you, folks, them's the times when we ought to take a course of bran mashes or some old sulphur and molasses, 'cause the bad is inside, not outside. I've found the best way to make the world look better is to get out all the old slush I got inside of me.

Now, maybe lots of you will read this and say, "Oh, such slush." Now, maybe that's just what this is, 'cause I kinda feel like I was enjoyin' (?) the slush season. HY SYCKLE.

Safety First In Farm Underdrainage

Some of the Things to Do to Make Underdrainage a Success

By Walter van Haitsma

IT is quite generally conceded by farmers who realize the value of underdrainage that it is the most important factor in economic crop production. Much has been said and written on the subject of tile-drainage from the standpoint of higher production,

is actually being tilled from year to year and which is so wet that much of it does not pay for the labor, seed, and fertilizer that are annually in-

sections of their cultivated fields and pastures.

If economy in construction, efficiency in operation, and permanence are to be insured, four important factors must be given due consideration.

Thorough Study of the Farm Essential.

Economy in tile-drainage is impossible unless a thorough study of the soil, subsoil, topographical, and cropping conditions of the farm to be drained is made before a single tile is laid, by a drainage engineer who through experience and training is qualified to make such a study. The conclusions from this survey must be incorporated in a plan or map which will show the

location, size, depth, and spacing of the drains required to adequately drain the entire farm. The possession of such a plan will enable the farm owner to proceed with the construction of any part of the required system with the assurance that it will fit in with the remainder. No part of an investment in tile drainage will bring bigger returns in economy and efficiency than a detailed plan.

The Use of Tile of Known Strength and Durability Important.

Tests made at the Michigan Agricultural College recently, revealed the fact that tile are being made and sold in the state which are so weak that they will do little more than bear the load of earth above them when placed in a

(Continued on page 332).

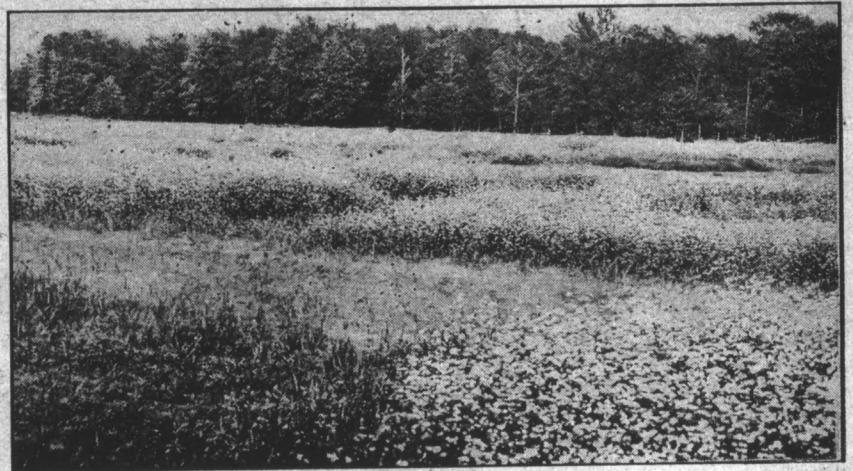


No. 2—Same Field After Drainage. Regular Rotation Does Well.

but the fact that it materially cuts down cost of production while increasing yields is often overlooked. The attention of farmers whose farms present a drainage problem is called to an editorial entitled, "The Drainage Problem," which appeared in the January 27th issue of the Michigan Farmer in which the economic value of tile-drainage is very ably presented.

The slow progress that is being made in tile-draining the more than 4,500,000 acres of Michigan farm land that

vested in it, cannot be entirely attributed to ignorance of the benefits which this farm improvement insures. Many farmers realize the value of tile-drainage but feel uneasy about going ahead with an improvement the technicalities of which they do not understand. The writer hopes in a short series of articles to cover in a general way the details of farm drainage operations so that readers of the Michigan Farmer may proceed with greater assurance of success to tile-drain the poorly drained



No. 1—For Thirty-eight Years Nothing But Buckwheat Would Grow Here.

Fertilizers Bring Bigger Potato Profits

Some Practical Suggestions on How to Increase Your Potato Yield

By Ove Jensen

A COMPARISON of the field per acre of potatoes for the various states is not a favorable one for great potato producing States of the Middle West—Michigan, Wisconsin and Minnesota. It must be remembered, however, that production conditions in these States are not like those of Maine or the sea-board States, in spite of the fact that in the climate and soils of certain sections there is a great similarity. Differences in the type of farming, the nearness to consuming centers, the necessity for long hauls,

successful because they are above the average. In good years they make more than the average and in poor years, they hold their own where the growers of average yields fail.

On the great majority of farms in Michigan and Wisconsin, dairying or livestock farming plays an important part in the farm enterprise. In such a system of farming it is entirely practical to grow legumes, to rotate, and

the farm.

Some farmers, for one reason or another, are not fitted to be livestock or dairy farmers. What, then, is the solution of the fertility problem for those who do not have sufficient manure available with which to cover the tilled acres? There is on the average only slightly over a ton of manure available per acre annually. Is manure indispensable for profitable potato production? Our best soil scientists say it is not. The Eastern potato growers have proven this also. Special attention, however, must be given to maintaining the organic content of the soil by the use of legumes and green manure crops in the rotations. Many farmers are growing potatoes successfully by using liberal quantities of commercial plantfood in conjunction with green crops. A few are proceeding on the erroneous theory that acid phos-

phate is a good potato fertilizer. The more progressive growers are using a complete fertilizer carrying a liberal quantity of nitrogen, phosphoric acid and potash. Those who have accompanied the annual potato inspection tours in the last few years in these States have been impressed with the increasing use of fertilizer by the better farmers. The development is taking place along logical lines, and in most sections the higher analyses are being used.

Where livestock or dairy farming is practiced in conjunction with potato growing, one of the most profitable practices is the reinforcement of manure with acid phosphate. It is an opportunity which is being missed by 90 per cent of the farmers in these States who have come under our observation. There is a need for extensive educational work on this practice.

Mention has been made of the fact that potato growers, especially in the

(Continued on Page 334).



600 Pounds of 8-6-4 Fertilizer Per Acre. A Bigger, Better and Earlier Yield.

and a comparative inexperience in potato production, have a definite effect on the methods of production in these States.

There is much to be said in favor of a farming system which distributes labor evenly throughout the year, and which does not carry all its eggs in one basket. Thousands of potato growers in the Middle West would be ruined this season if they had depended entirely upon the potato crop. The successful producers plant approximately the same acreage each year and are not much concerned by the ups and downs of their business. They are

to have a fair quality of manure available. There is a distinct tendency to give the potato crop special fertility treatment, which is well warranted when one considers that potatoes commonly remove more plantfood than other crops in the rotation. Such treatment, however, usually means that other crops are not receiving their quota of fertility but must depend on the residual effect of the applications on the potato crop. Unless feedstuffs are purchased from the outside, only a given amount of manure can be the by-product of livestock farming which is dependent on the crops produced on



The Unfertilized Portion of the Field.

Senator Capper's Washington Letter

THE outstanding event of the last hours of congress was the message by the President strongly recommending to the senate that the United States participate in the World Court of Justice. There can be no legitimate objection to this court. The best sentiment of America has looked forward with hope to a time when international differences might be adjudicated without recourse to war. The World Court of Justice is an institution which tends toward maintenance of world peace by the orderly settlement of national disputes on the same broad basis of justice and equity that obtains in the orderly adjudication of such disputes as between individuals in every civilized nation on the globe.

The proposal is timely. The world needs surcease from strife. It needs above all things economic restoration. The prosperity of the world depends upon it. American participation in such a court will assure the world that our frequent protestation of willingness to participate in the restoration of world order and world peace, without which economic restoration is an

idle dream, is genuine and not mere fustian.

American acceptance of this court, not a league of nations, as proposed by the President, can and should be accompanied by a clear statement that expressly guarantees the sovereignty of the American government and an unequivocal declaration that our participation is in no sense a pledge that American troops are at the beck and call of European imperialist ambitions. It's a far cry from this World Court to the covenant of the League of Nations.

The world needs new faith in the simple rules of justice and equity. Such a World Court will teach it that faith. The United States, to be true to its best traditions, can scarce in honor fail to take its place in this tribunal.

The Right to be Born Right.

We have too many hasty marriages as well as too many divorces. Divorces granted exceed 112,000 a year in the United States and are steadily

increasing. And the number of boy and girl marriages must be very large when the combined records of several states show: Thirteen thousand girls of fifteen, legally married, and 50,000 more not over sixteen; 1,600 fifteen-year-old husbands, and 3,000 that have just turned sixteen. There are seventeen states with not minority age limit for marriages, and nine in which the legal age for girls is twelve years and for boys, fifteen.

We spent more than fifty million dollars last year to care for the children of feeble-minded, tubercular, or otherwise diseased parents. We have done little to protect the right of the unborn citizen to be born right, to start life right with a sound body, a sane brain and a clean blood stream. In most states we still permit the mating of defectives, of epileptics and of the venereally affected.

Law to Stop Hasty Marriages.

I was chosen recently by the General Federation of Women's Clubs to introduce a bill in the senate for a uniform national marriage and divorce

law. The purpose of the bill as drafted by Mrs. Edwards Franklin White, deputy attorney-general of Indiana, is to prevent hasty and foolish marriages and to make divorce more difficult, with decree in one year instead of six months. Marriage licenses must be applied for and posted in court two weeks before the ceremony. Applicants must present certificates of health and normal mentality.

Marriage for girls under sixteen and boys under eighteen is prohibited without consent of parents.

Marriage is forbidden to the feeble-minded, insane, or epileptic, or to persons having communicable diseases.

I am heartily in sympathy with the purposes of the bill. Anything that affects home welfare, touches national life where it lives. The bill was introduced at this time to bring out discussion with a view to its early consideration by the next congress.

Arthur Capper.

WASHINGTON, D. C.



Comments from the State Capital

SUPPORT for a two-cent gasoline tax is developing steadily in both branches of the legislature. The fundamental justice of this method of raising funds for highway construction and maintenance is impressing itself on the law-makers and breaking down opposition.

The Warner two-cent gas tax measure was reported favorably by the house committee on general taxation and is now up for general consideration. All sorts of substitute and compromise measures are being suggested but none of them have developed the solid backing which has rallied to the support of the Warner straight two-cent gas tax bill.

Highway Policy Big Issue.

Meanwhile, there are all sorts of schemes being advocated in regard to the state's highway policy. The senate highway committee has reported favorably the highway department's appropriation request for about \$11,000,000 of taxpayers' money during the next two years. This is in addition to what will be raised through auto licenses.

Revised Seed Law Sought.

A re-draft of the Michigan seed law, prepared under the direction of the State Department of Agriculture, was introduced by Senator George Leland, of Fennville, chairman of the senate committee on agriculture.

This bill increases the list of weeds declared to be noxious by adding mustard and wild carrot, provides a system of labeling agricultural seed regarding purity and percentage of germination, and gives the state officials power to seize and hold any lot of seed until the law is complied with.

In explaining the need for a new agricultural seed law the fact was brought out that Michigan is one of the leading seed-producing states in the Union and, if it is to retain this position, the quality of the seed sown in the state must be protected.

By Our Lansing Correspondent

Cider and Meat Clean-up Asked.

Other bills by Senator Leland would give the state control over slaughter houses and cider and vinegar mills. Sanitary conditions are said to be bad

in many of these places and a system of licensing, inspection and general clean-up is advocated to protect the public health and foster the demand for product of these establishments.

News of the Week

Wednesday, February 28.

THE United States government paid Norway \$12,000,000 for Norwegian ships seized during the war.—Armour & Co. have taken a \$5,000,000 mortgage on its property as part of its refinancing plan.—Prof. Walter B. Barrows, head of the department of physiology and zoology at the Michigan Agricultural College, died of apoplexy February 26.

Thursday, March 1.

THEY are beginning an agitation in Chicago to increase the price of marriage licenses from \$1.50 to \$5.—Great Britain offers the Ulster government in Ireland troops to assist in subduing riots.—Fifty per cent of the German miners in the Ruhr district have been given a vacation on full pay by the German mine owners in order to curtail the production.

Friday, March 2.

AN anti-flirt club has been organized by Washington, D. C., women as a protest against automobile flirts.—Charles B. Warren, American ambassador to Japan, says there is no more far-east question, as Japan has withdrawn her troops from China.—Twenty-two citizens of Pawnee, Oklahoma, face trial for taking part in masked band activities.

Saturday, March 3.

TWO hundred United States auto and tire makers are uniting to fight British rubber trust by changing control of rubber production to American interests.—Douglas Fairbanks,

Mary Pickford, Charlie Chaplin and other headline screen artists are organizing to fight the moving picture trust.

Sunday, March 4.

THE tension between the German citizens and French troops in the Bochum district is reaching the breaking point.—The Undertakers' Association, of New York, protests against the exhumation of Tutankhamen and other mummies, as exhumation does not show respect to the dead.—The Arizona House of Representatives asked the United States to get a strip of Mexico so that we can have a port at the head of the gulf of California.

Monday, March 4.

WORDS and music sent broadcast by radio from Troy, New York, were heard distinctly in New Zealand, a distance of ten thousand miles.—One hundred of the original Oberammergau passion players will tour America in order to save their village from starvation.—Leon Trotsky, leader of the Russian-Soviet government, repudiates Russian debts, declaring that creditors were short-sighted in loaning money.

Tuesday, March 6.

FRANCE seizes three more towns in the Ruhr frontier, and the German Reichstag calls a special session to consider this invasion.—John Gish, of Milwaukee, intended to kill himself by shooting through his heart, but he lived because his heart was on the right side.

The abattoir bill requires the licensing of all slaughter houses in the state and provides sanitary regulations for their operation. The vinegar bill fixes standards for the production of cider vinegar for commercial purposes, and provides for the licensing of cider mills and vinegar factories.

Would Aid Direct Marketing.

Fostering of direct "producer to consumer" marketing is proposed in a bill sponsored by Representative William J. Deshano, of Auburn, to authorize boards of supervisors to establish and operate public markets to handle farm produce. Public markets of this character have already been established by many of the larger cities and are proving helpful to farmers and city consumers alike.

Eastern Time Still Pushed.

Advocates of eastern time for Michigan are still busy. The most recent development in this direction was the introduction by Senator George M. Condon, of Detroit, of a bill to make eastern standard time the legal time in Michigan. A similar bill has already been introduced in the house. The Michigan State Farm Bureau in behalf of its membership has taken a decisive stand in opposition to these bills. Other farmers' organizations are reported to be aroused over the issue.

Early Adjournment Not Likely.

Several pet schemes are being suggested to complete the work of the session and secure an early adjournment. But the fact is, all the big bills are yet to be acted on and the minor measures are appearing faster than they are being disposed of. Seventy-seven new bills were introduced last week, bringing the present total up to 468, only a very few of which have been finally passed by both houses and sent to the governor. There is a big grist yet to grind.

Fox Raising for the Farmer

A Live Stock Man Finds It a Profitable Side Line

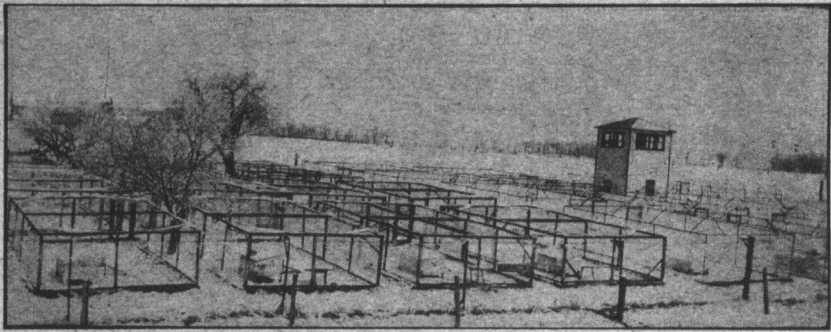
By Richard Hendrick

RAISING of foxes is not as common as many people think. It is true that some people go into it and do not make a success, but that is also true of other lines of endeavor. With proper handling, there is no reason why a man with good judgment cannot make a go of the fox raising business. It might be well at this time to tell of the experience and success we have had in the business during the few years we have been in it.

Our farm, which is located near Flint, consists of two hundred acres. In the year 1919 we decided to start fox raising as a sideline. During the summer every moment that could be

While the price of a good pair of foxes is about equal to that of a carload of fat steers, the price of feeding a pair of foxes for a year does not exceed the cost of feeding a single steer for three months.

These little animals can be raised in any climate where the weather is cold enough to produce good fur. A litter of puppies is grown to maturity in about seven months and are ready to be paired up. Mating takes place in February or March and the young are born about fifty-two days later. These young are about the size of a kitten and are blind for two weeks after birth. The average litters are about four and



Where Hendrick Carries on His Fox Farming Activities.

spared from farming was given to the building of the fox ranch, and in the fall when everything was ready, we procured three pair of high grade silver black foxes.

Much to our surprise, each pair produced a litter; two pairs having two puppies to a litter and the third six, making ten in all. This encouraged me very much, as I thought if an inexperienced man could do so well, I certainly would be able to make a success of the business after becoming more familiar with it.

In the second season two pups were lost, while in the third season every pup out of forty-one was raised to maturity, bringing the total production on our ranch at the end of three years to seventy-four foxes. From the third season's crop about twenty thousand dollars worth of puppies were sold, while the remainder of the stock was kept on the ranch for breeding purposes. Had the entire last season's production been sold, the total receipts would have been thirty-five thousand dollars and we would still have had the old stock left. This, to my mind, is a very satisfactory development in three years from three pair of foxes. It seems almost too good to be true, but nevertheless such a farming endeavor can be started as a sideline on most any sized farm. It can be continued as a sideline while the stock is accumulating and later on the farming end may be dropped entirely. Our farming operations were continued until this, the third year of our fox raising experience. For the coming season, the farm has been rented so that we can give our entire time to fox farming.

I have been a farmer for over thirty years and have had all kinds of struggles to make both ends meet. And you can rest assured that the price of a pair of foxes looked as big to me as to anybody, especially when compared with the price of other stock. I have fed all kinds of livestock, such as cattle and hogs, by the carload and have made a fair profit some years and barely broke even at others. I have also milked as high as twenty cows with just about enough income to pay for the cost of their feed.

Judging from my experience, I can safely say that if the profits of fox farming were cut in two the profits from other lines of livestock endeavor would not be one-half that of fox farming. The farmer who has had experience in raising other kinds of stock can work to good advantage in fox raising.

the young mother has her first litter about a year after she is born. The youngsters grow rapidly when they are properly cared for. They are often seen outside of their dens at the age of four weeks. At this age they usually lap a little milk and soon after learn to eat.

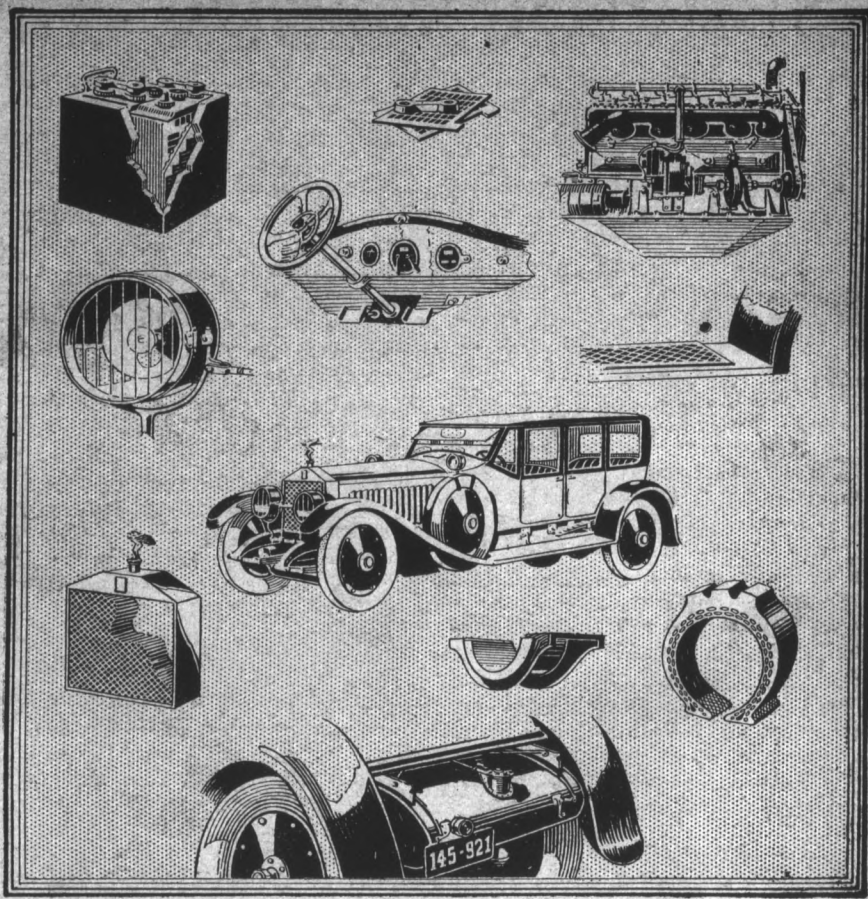
Many fox ranchers claim that the puppies should not be fed meat. However, we find that they do better on meat than anything else we feed them and our practice is to feed the puppies meat twice a day. We also give them a portion of milk with their meat. From the results we have obtained, I am sure that the ranchers who cut out the meat and raise their pups on cereals, dog biscuits, etc., are making a mistake. A short time ago, a young man visited our ranch who dug out a litter of seven wild fox pups and in their den he found parts of chicken and duck, a young pig half eaten and a young lamb just started on.

In the summer time, all kinds of cheap meats, such as butcher scraps and beef hearts may be fed. Rabbits and woodchucks may also be included. In the fall, when the weather gets cold, a larger portion of their diet should be meat. Then old horses, too old to work, but in healthy condition, make the best source of meat. Our experience indicates that foxes prefer horse meat to beef.

Care must be taken not to get the foxes too fat, as they will not make good breeders when in that condition. About six ounces of meat per animal twice per day is sufficient. Foxes fed twice a day do not eat a great quantity of meat, but foxes in the wild state will consume large quantities when hungry and then go without for a long time. Foxes which get away from the ranch always come back to it for feed and can then be recaptured.

Silver foxes in the wild state are very scarce, and if it were not for the raising of them in captivity, they would soon disappear entirely. The U. S. government realizes this and has taken an active part in getting the people to engage in the fox raising industry. It has issued a bulletin on this subject entitled "The Domesticated Silver Fox," which may be procured at five cents per copy from the government printing office at Washington, D. C., or it may be obtained free by writing a representative in Congress.

If you want to read the best horse story since "Black Beauty," turn to Page 20 and start "Beyond Rope and Fence."



What lead does in a motor car

SUPPOSE you took the lead out of your motor car. It might run—a few blocks—but with difficulty and inconvenience. In the first place, without the lead storage battery you would have to start it with a crank, and for lights you would have to return to gas or oil. You would have to carry your gasoline in a bottle; for, with the lead-tin solder out of the gas tank, the seams would leak, and for ignition you would have to return to dry cells.

Lead in the radiator

After you had run a short distance, the motor would be so hot without your lead-tin soldered radiator that you would come to a stop. A good thing, too, for without the lead storage battery you could not blow the horn.

As a matter of fact, without lead you wouldn't have any gasoline to carry in a bottle; for litharge, an oxide of lead, is used in refining the gasoline that makes the automobile go.

Lead toughens the tires

You can not see the lead that is in the tires. But it is there. Lead oxides, added to the rubber at the time it is made, insure a uniform cure and give toughness to the rubber.

Lead is also in the soft rubber insulation around electrical wiring and in the hard rubber electrical devices and switch buttons. It is in the rubber top covering that gives protection from rain. The rubber mat on the car step contains lead. The electric light bulbs are made of superior lead glass because of its great heat resistance and brilliancy. Windings of wire in

the generator which charges the lead storage battery are held in place with lead-tin solder.

The protection paint gives

But none of these uses of lead are so widespread as that of white-lead in the manufacture of good paint. Not only the paint that protects the motor car but all good paint wherever used contains white-lead.

Buildings unpainted crumble from decay. Buildings protected with good paint withstand time and weather. "Save the surface and you save all" is a maxim wise men are heeding. And the more white-lead any paint contains, the greater is its protective power and durability.

Look for the Dutch Boy

National Lead Company makes white-lead and sells it, mixed with pure linseed oil, under the name and trademark of Dutch Boy White-Lead. The figure of the Dutch Boy you see here is reproduced on every keg of white-lead and is a guarantee of exceptional purity.

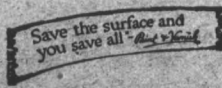


Dutch Boy products also include red-lead, linseed oil, flattening oil, babbitt metals, and solder.

Among other products manufactured by National Lead Company are lead tubing, sheet lead, soldering flux, lead pipe, bar lead, litharge, and lead plumbing materials.

More about lead

If you use lead, or think you might use it in any form, write to us for specific information.



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"How to Get the Most Out of Fertilizers"

Fruit Men Discuss Problems

By Staff Correspondent

THE business phases of fruit growing were the ones which created the greatest interest at the Michigan State Horticultural Mid-winter Meeting held in Paw Paw, on February 28 to March 2.

One can feel assured by the trend of the discussions that the fruit grower realizes that standardization in grading and packing, and efficient marketing methods are essential to bring Michigan fruit the reputation it should have, and the price it should receive.

Some very interesting discussions on grape grades were led by W. P. Hartman, director of foods and markets, State Department of Agriculture, and L. T. Chase, manager of the Paw Paw Cooperative Exchange. Both Mr. Hartman and Mr. Chase recommended that the tolerance of off-grade fruit to be left in the various grades should be cut to the minimum.

The speakers also urged that the growers adopt a distinctive package for No. 1 grade, so the package itself would indicate the quality of the fruit.

The many growers of grapes who fear over-production are borrowing trouble, according to Mr. Chase. He indicated that four states consumed one-half of the last year's crop. This shows that the growers have only made preliminary steps in marketing and that they can have a much larger market as soon as they can help solve the problem of distribution.

A bill before the legislature to permit the sale of colored distilled vinegar caused much comment at these meetings, as the fruit growers believe such a bill would virtually destroy the cider vinegar industry in this state.

In his discussion of municipal markets, Mr. G. V. Branch, director of Detroit's public markets, said that Michigan was being penalized at least fifty cents per bushel on her apples, because her grading and packing is not equal to that of the west. Detroit is consuming far more apples from other states than Michigan-grown products just because of the haphazard way in which Michigan fruit is packed.

If the Michigan growers fully realized this phase of fruit growing, they would have a tremendous advantage, as the freight refrigeration charges on a bushel of western apples is eighty-eight cents, as compared with an average of thirty cents from Michigan points.

Western growers in their study of retail methods found that the grocers prefer the smaller package, and therefore have adopted the box as their universal package.

The Braman apple law was one of the chief subjects of discussion at the Thursday afternoon session. The society adopted a resolution favoring the repeal of this law and the enactment of a new one incorporating all the good points of the Braman Act and adding all the other essentials now deemed necessary.

The off-color standard grade brought a spirited discussion. Some growers objected to the term off-color and suggested under-color, or near-color instead. Others objected to the off-color grade because it might injure the reputation of Standard-A fruit. The proposed bill as finally endorsed by the society omits in the off-grade the letter A which identifies the best grade of apples. Another provision of the endorsed bill is that it definitely fixes the sizes of the various grades and

It also drops the word "Standard" from the B grade.

In his talk before the society, Dr. David Friday somewhat revised his predictions on the agriculture outlook, which were given Farmers' Week. He said that a shortage of labor on the farm equal to the one during the war and post-war periods will develop this summer and production is going to be restricted. He thought the price of corn would go to about a dollar per bushel.

In his reference to the college work, Dr. Friday said that the \$50,000 a year appropriation he was asking for was not for the purpose of increasing the production on the farm, but to show the farmers how they could fire the hired man and still maintain their present production at two-thirds the present cost. He said he sincerely hoped that the one appropriation in his whole budget which the fruit man would insist upon would be the \$400,000 for a new horticultural building. The appropriations he is asking for amount to \$2.50 a farm, whereas the money the college is now getting from the state amounts to seventy-five cents per farm.

True-to-name nursery stock was discussed by George Hawley, former president of the society. He said that the growers could not be absolutely insured of getting correctly named nursery stock until the nursery industry of the entire nation was brought under the supervision of one man and the nurserymen required to get their bud supplies from known sources, or from parentage certified by expert pomologists.

Mr. Hawley told of one case where a nursery distributed 150,000 trees which proved spurious. While the nursery suffered in future business, the real loss was saddled upon the growers. He urged the society to enlist the support of other state organizations in a movement which would hasten the day when nursery stock from pedigreed buds and certified parentage would be available to all.

In his discussion, F. C. Bradford, M. A. C. horticultural research specialist, said that there was more sun-scald injury done to the trees in March than in August and September, or all of the summer months combined. He said that this injury was caused by the rapid change of temperature in the bark of the tree. Often during a March day, the temperature of the bark will run up to a hundred degrees in an hour, due to the rays of the sun, and then drop back to twenty degrees in a half hour.

Other interesting subjects at this meeting were orchard nutrition, with special reference to the use of commercial fertilizer, by Prof. V. R. Gardner, of M. A. C.; the fruiting habit of the raspberry with reference to culture and pruning practices, by H. G. Swarthout; discussion of the grape berry moth, by S. L. Sinonton, Berrien county agricultural agent; the relation of organization to marketing, by James Nichols, chairman of the executive board of the Federated Fruit Growers, and the 1923 spray program by T. A. Farrand, secretary of the State Horticultural Society. J. Hackley Skinner, of Grand Rapids, and Wm. Daily, of Riverside, discussed the various phases of strawberry growing. More about these discussions will appear in a future issue.

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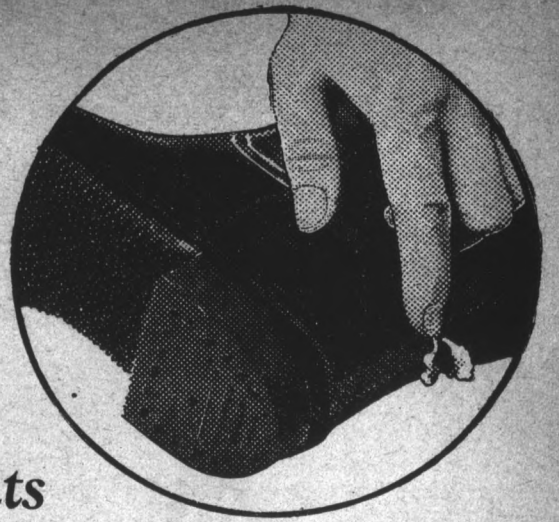
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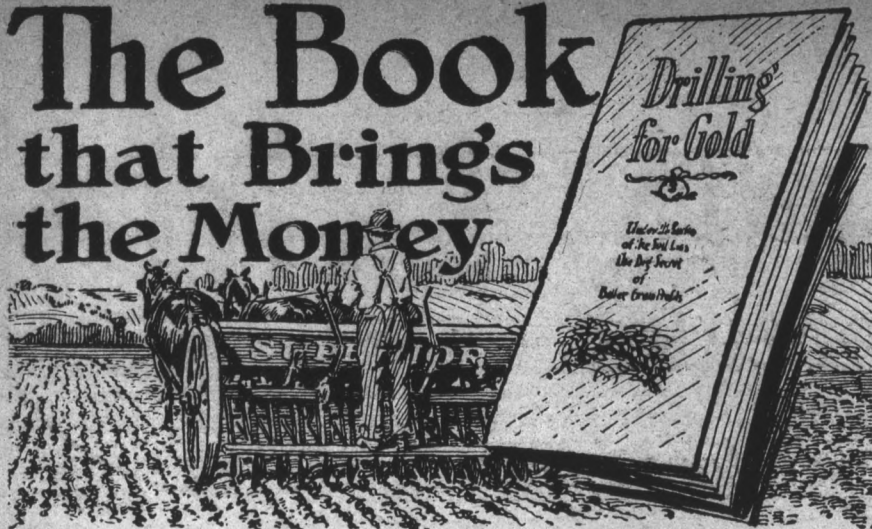


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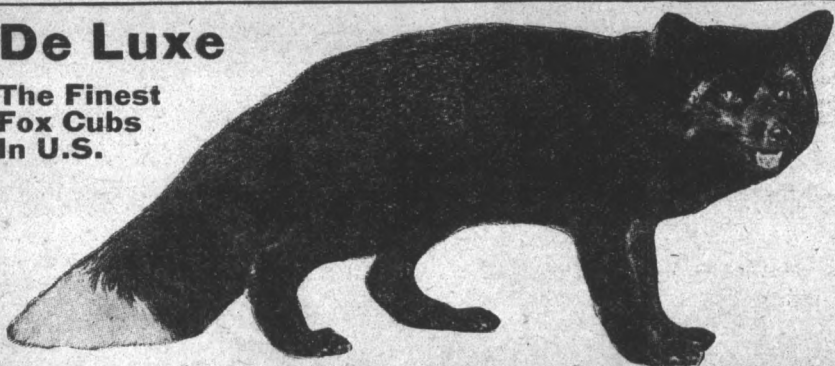
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CHattel Mortgage.

I sold some cattle to a party in Montana, and I allowed him to ship them out of the state. I have a mortgage on the cattle and a team of horses of his. The note is past due two years and no interest has been paid. Now he has sold the cattle and horses. What can I do?—J. H. M.

It is not stated whether the mortgage was recorded according to the requirements of the Montana statute. If so, or if the purchaser from the mortgagor knew of it before purchase it is good against such purchaser, and the property may be reclaimed from him. Otherwise, the only redress is personal action against the mortgagor.—Rood.

GOVERNMENT WHITEWASH.

Will you please tell me how to make government whitewash?—B. W. B.

Whitewash for Outside Exposure.

Slake half bushel of lime with six gallons of boiling water. Keep covered while slaking, strain and add one peck of salt dissolved in hot water, three pounds of rice flour thinned to a thin paste with cold water, one-half pound of Spanish whiting, and one pound of clear glue dissolved in hot water.

Weather-proof Whitewash.

1. One bushel of lime slaked in twelve gallons of hot water.
2. Two pounds of common table salt and one pound of sulphate of zinc dissolved in a gallon of boiling water.
3. Two gallons of skim-milk.

Mix one and two together, stir thoroughly, add three and stir thoroughly.

Lighthouse Whitewash.

1. Sixty-two pounds of quicklime slaked in twelve gallons of hot water.
 2. Twelve pounds of rock salt dissolved in six gallons of boiling water.
 3. Six pounds of Portland cement.
- Pour two and one and add three. Add one ounce of alum to each gallon of water.

For a gloss finish, one bar of common laundry soap dissolved in one gallon of boiling water, add to five gallons of whitewash.

Inside Whitewash.

1. Sixty-two pounds of lime slaked in twelve gallons of hot water.
2. Two and one-half pounds of rye flour beat up in half gallon of water, then add two gallons of boiling water.
3. Two and one-half pounds of rock salt in two and one-half gallons of hot water.

Mix two and three thoroughly, pour into one and mix thoroughly.—F. E. Fogle.

LIME ON GARDENING LAND.

We are gardening on twenty acres here and, of course, we haven't enough manure to cover it. Would it be wise to spread lime on the ground? It is black sand loam. Or would lime and manure do any harm to land? We have a carbide lighting system in the house. Is that stuff good for the land? It's very watery when we charge the plant.—W. G. S.

A few years ago there was a good supply of horse manure, now there is very little. The market gardener, therefore, must resort to clover as the general farmer does for his supply of organic matter. If clover is seeded early in the spring on well prepared fertile land, it will make a wonderful growth in one season. It could be clipped in August and a second growth develop by late fall, and if this whole mass is plowed down, it will furnish the equivalent of many tons of manure. Of course, rye and wheat or Canada field peas can be grown for

this purpose, also other crops, but clover will be found to be the best.

Hubam or annual sweet clover may be found to be very valuable for this purpose. To grow any of these high-class legumes for green manure requires a normal supply of lime.

However, it is not advisable to use lime indiscriminately on market gardens, for some vegetables do better where only a little lime is present and others where there is an abundance. It does no harm to use ground limestone with manure, but you must not use hydrated lime or caustic lime, for it will set free the nitrogen of the manure, which is very much needed for the quick growth of vegetables.

If you grow clover or other legumes for green manure and lime, this portion of the garden that will probably be sufficient for all crops until it comes time again to grow clover on this portion.

The basis of your carbide salvage is lime, but caustic. It would be better to put it on the soil and not on the compost leaf.

CONTRIBUTORY NEGLIGENCE.

A road had only a single track and this was directly in the center. An auto was left standing in the track with the engine running while the owner was in a nearby field just off the road, conversing with a neighbor. A runaway team ran directly into the auto and damaged it badly. The team escaped unhurt. Who should bear the expense involved?—G. H. S.

It was contributory negligence for the owner of the car to leave it in the beaten track. He must bear the loss.—Rood.

CORN FODDER FOR BREEDING PIGS.

I am feeding corn stover, in bundle, to my sheep. A neighbor tells me that he read in a farm paper that corn fodder was not good for sheep feed. Am I likely to get bad results? The fodder is extra nice.—F. M.

Corn fodder is an excellent feed for breeding ewes, provided it does not constitute too large a proportion of the ration.

At least one-half of the ration should consist of some good leguminous roughage, such as clover hay, alfalfa hay or pea vines. The remainder might well consist of corn stover.—G. A. Brown.

ABOUT HUNGARIAN MILLET.

Can you tell me which is the most profitable hay to sow on light sandy loam? Could you tell me whether Hungarian hay will give a good crop and how to prepare the soil for it? I heard some farmers say the Hungarian hay is similar to alfalfa in harvesting. How many times can it be cut in one season?—A. F.

Sudan grass and Golden Millet are better adapted to light sandy loams than Hungarian millet. The Hungarian is well adapted to poorly drained and mucky land. Sudan grass usually gives a heavier yield than millet, is a safer feed for horses, and the second growth is somewhat greater.

Sudan should be sown the latter part of May at the rate of from twenty to twenty-five pounds of seed per acre. Golden Millet should be sown about the first of June at the rate of from twenty-five to thirty pounds of seed per acre. The Sudan may produce two crops if the season is quite favorable. However, one crop of hay and some second growth, that may be used for pasture or plowing under, is usually secured.—C. R. Megee.

A SYSTEM OF FARM COST ACCOUNTING

THE farmer wishes to know how much he is making or losing on his business each, that is, his gain or loss on each crop or each class of animals and how he may improve his business so as to earn more money.

Many farmers are desirous of keeping accounts of this sort, but do not know how to start. Undoubtedly many are deterred from starting because they have no definite method of procedure in mind.

Cost accounts cannot be absolutely exact because they contain many estimates. The time consumed in keeping records is very short each day, and requires part of one day at the end of a year to close the accounts. This time will vary with the type of farming, the complexity of the business, and the degree of accuracy and completeness with which these accounts have been kept.

No bookkeeping knowledge is necessary. Those persons who are trained in commercial bookkeeping have a tendency to insert technicalities and complexity of entry which would be all right for a business house, but which would be entirely out of place for a practical farmer who wishes to do cost accounting. It is not necessary to know the difference between a day-book and a journal, or to know how to get a trial balance in order to keep good farm cost accounts.

A Favorable Time to Start

Accounts may be commenced on an ordinary farm any time after the last crop is harvested in the fall and before the first crop preparations are started in the spring. The exact date will depend upon the geographical location of the farm and the nature of the business or type of farming in practice. The time should be as late as possible, in order that there may be the smallest quantity of last year's crops on hand to be inventoried. However, the date should be early enough to give a farmer sufficient time to close his year's accounts, work out results, plan the next year's business and open new accounts before the spring crop work begins. In a large majority of cases this date will be January 1, March 1 or April 1. For a tenant, the date taking an inventory will, of course, correspond to the date of his lease.

The requirements for keeping a complete set of farm cost accounts are:

1. An inventory at the beginning and at the end of the year.
2. An account of all money paid out or received.
3. A record of all work done by men and horses during the year.

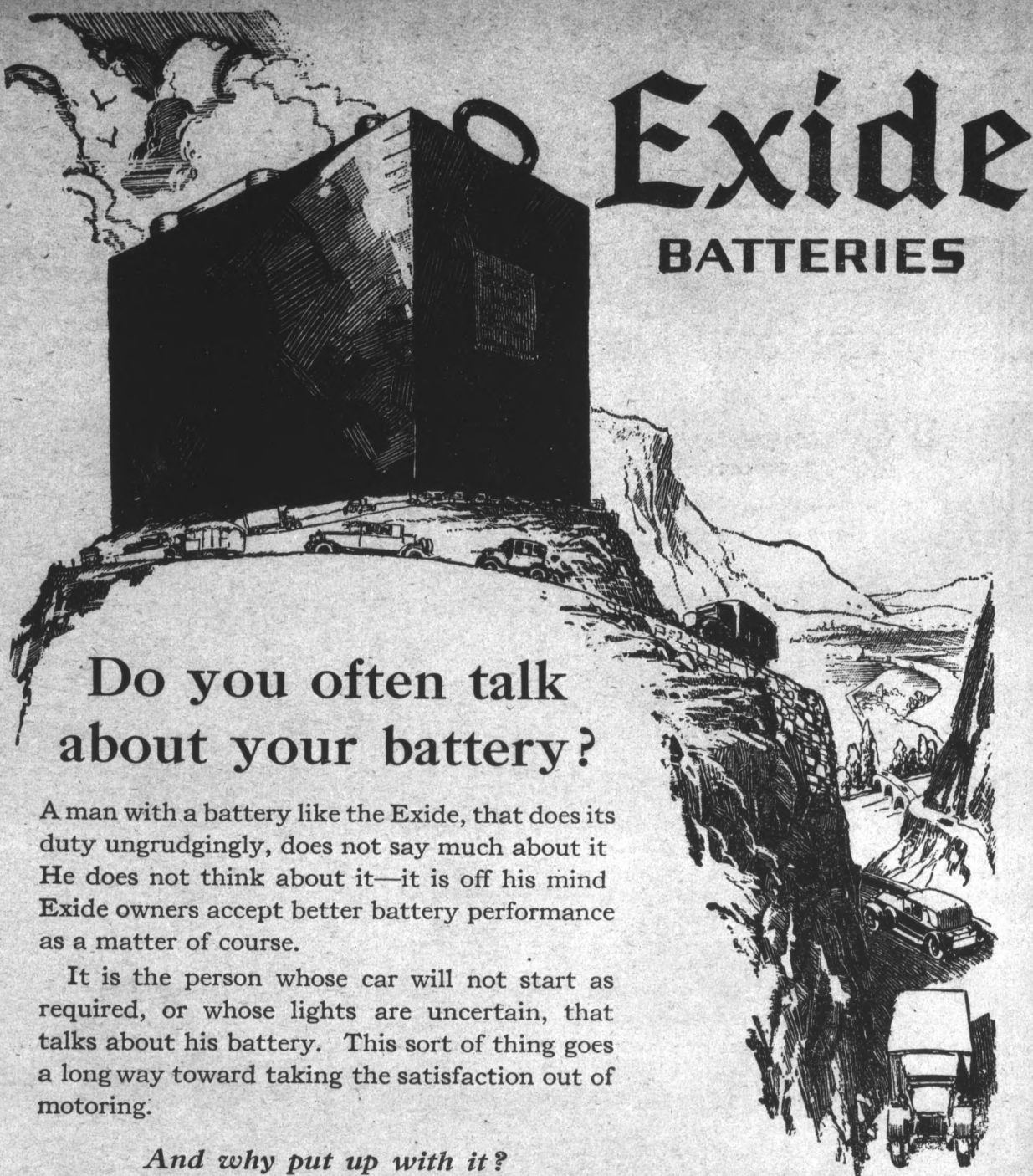
—W. E. McMullen.

REGULAR FEEDING OF COWS MOST IMPORTANT

IT has long been a rule on well managed dairy farms to milk and feed cows at the same hours every day. Regularity was always thought to have a beneficial effect on production. Experiments carried on by the U. S. Dept. of Agriculture have shown that cows of average production milked at the same hours every day produced but slightly more milk and slightly less butterfat than those milked at random, provided the feeding was done at regular times.

When the feeding as well as the milking was done at random hours the cows produced about 5 per cent less of both milk and fat.—Mills.

More man than horse time is lost in turning where the fields are short than where they are long. Plan the farm to increase the percentage of long fields.



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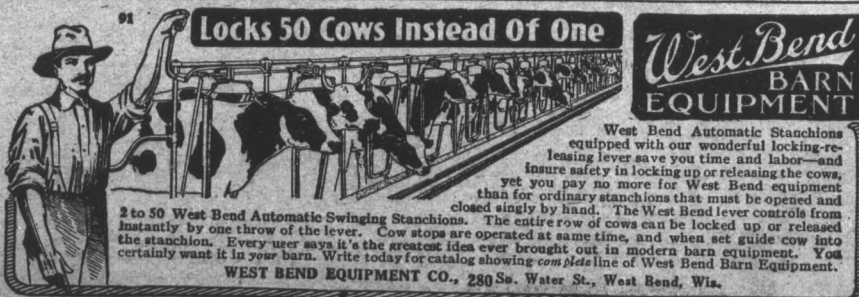
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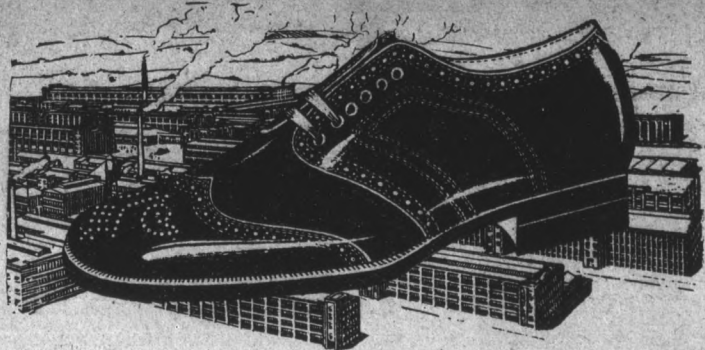
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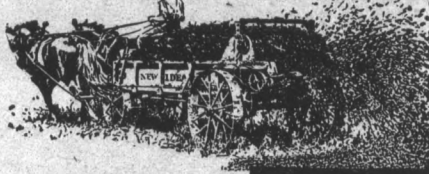
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Opinions & Comments

From Michigan Farmer Readers

ADVANTAGE OF TAX-EXEMPT BONDS.

NOTHING could be more disastrous to the Federal Farm Loan System and to the borrowing farmers generally, than the adoption of the amendment to the Constitution of the United States proposed by House Joint Resolution No. 314. This amendment, if adopted, will make the income on bonds issued by federal and joint stock land banks subject to state taxation. If the income from farm loan bonds is made subject to taxation, it will destroy the market for farm loan bonds and will increase the interest rate on the bonds by at least one per cent, and probably more. This will necessitate the same increase in the interest charged the borrower. The farmer will receive no compensating reduction in his taxes. The bulk of the farmer's tax is a direct tax on his land. This amendment does not make these securities subject to direct taxation and to tax their income cannot reduce the farmer's direct tax. The state income to be derived from these securities benefits only the states where the bonds are held, and not the states where the money is loaned. Thus, the agricultural states will be taxed by increased interest rates to furnish revenue for the eastern states where the most of these bonds are held.

The movement for this constitutional amendment was started by the opponents of the federal farm loan act.

The Federal Farm Loan System has loaned nearly a billion dollars on the amortization plan, at reasonable interest and without commission. The good it is doing is not confined to the farmers who borrow from it. The competition of the Federal Farm Loan System has forced down interest rates to all borrowers.

To make the income of the federal farm loan bonds subject to state taxation will not only increase the interest charges of the federal land bank, but will enable the opponents to kill off the farm loan system. When the federal land banks have been driven from the field as a competitor, then the borrowers will have to pay higher interest rates.

The farmers had better study this matter carefully before voting in favor of House Joint Resolution No. 314, which is an amendment to the Constitution.—A Borrower.

FARMERS HARD UP?

FRANKLY speaking, the article entitled "Farmers Hard Up?" in February 17th issue of the Michigan Farmer, made me tired.

If hard work and long hours make a man appreciate his blessings then the farmer is the man of the hour. The average farmer toils 16 to 17 hours per day, from the opening of spring work until the last crop is harvested and the ground frozen so hard the plow cannot turn it. Then the winter feeding of from 10 to 40 head of cattle, 15 to 20 hogs, hauling out manure on mild days, besides the ordinary routine of common chores, keeps him well occupied 10 hours per day.

When sales of livestock are made he often finds he has nothing but the manure left to show for the tons of hay, corn and other grains, not to mention his work. (Just about this time he feels mighty rich.) This fertilizer is valuable, we admit, but we do not estimate it at \$.50 per load as did the minister who was calling at the farm one day. (We don't think he would if he would pitch it for a day.) And

even a farmer gets tired of working for manure.

If one should ask these able-bodied men begging a bite to eat, to come out on the farm, how many would respond?

As for the highly paid men, are they all bachelors? Or did they marry dolls? Or are there no city markets where one can purchase a 5 pound sack of buckwheat flour which will make 100 cakes, for 20 cents? One dozen eggs, at 36 to 40 cents; 5 lbs. cereal, at 25 cents; 1 lb. sausage, at 15 to 20 cents; 1 lb. coffee (100 cups) at 40 to 50 cents; 1 lb. beefsteak, 22 to 25 cents; 1 bushel potatoes, 35 cents; 1 loaf bread, 10 cents. Or better still, 1/4 bbl. flour, at \$1 to \$1.25. This flour will make 12 loaves of bread, each twice as large as a baker's, 4 dozen cookies and 3 pies.

What's the matter with the Detroit women? Can they not cook, bake, or can? If so, the aforementioned man has an equal chance to eat with the ordinary farmer. Fuel is not such a big item if combined with intelligence. It will not injure your city women to sweat a little, I am sure.

Our food products cost as much as they will bring in the market and oftentimes necessity compels us to sell the best to meet our many expenses.

Those who live in the suburbs and can have a small garden, can raise half of their living if they will spend the early morning hours and evenings working in the garden as does the farmer's wife.

Cut out shows, tobacco, candy, expensive meats, bakers' goods, and use your brains and you'll not have any more time to grumble than the farmers do.

A Farmer's Wife.

SOME HEN!

HERE is a little news. I have a hen that commenced to lay the first of December and has laid two eggs each day since. And every day in every way she is getting better and better. She is a White Rock from a Barred Rock. She is a beauty, small head with a small comb. From the first day of December to the sixteenth day of February she has laid 154 eggs. I want to have Michigan first in prize hens.

Pat Fitzgerald.

WHERE DIVERSITY HELPS THE FARMER.

I HAVE just been reading the last report of the research department of the American Farm Bureau. From this I observe that the foreign demand for farm products is the most uncertain element in the agricultural situation, and that wheat, cotton, pork and tobacco will suffer most from any unfavorable turn in European affairs.

I believe right here is where we, Michigan farmers, should stick to our program of suiting our production to the needs of Michigan people. If we, as individual farmers, and through our organizations, could make a close study of our nearest markets to learn what products are now being imported, and then, so far as possible, set about to increase our production of the crops needed and cut down on those where profits depend upon exports. By doing this, I feel, we would not only realize more from our farming in the immediate future but would help establish our business on a permanent foundation.—I. S. Johnson.

The federal office of county agent work, summarizing reports of agents of every state, reports that 277,777 acres of last year's potato crop was planted with seed treated for diseases.

A horse can do the work of ten men, engineers estimate.

USE OF TAMARACK POSTS

I SEE in the Michigan Farmer inquiries in regard to using tamarack for fence posts. I used some tamarack for posts about 12 years ago. I cut them in June when the bark slipped off easily and they seem very firm in the ground at present. Cut in winter and set with bark on, have seen them rot and break over in five years.

All timber used for fence posts will last much longer if cut when the bark peels off easily and is well seasoned before setting.—W. P. Johnson.

HOME MARKETS

I HAVE been impressed with President David Friday's attitude in regard to giving to Michigan farmers, the benefits of Michigan markets, and hope he may work out a practical plan that may accomplish so desirable an end.

If Michigan has population enough to consume the products of Michigan farms, then why should the consumers be obliged to pay long freight hauls in order to supply his wants from other states, while the same or better products are allowed to waste on Michigan farms? We will take fruit and potatoes, large quantities of which are grown by our farmers, and at the same time our markets are congested by fruit from California and Washington at long prices, while thousands of bushels are left on Michigan farmers' hands to be largely a dead loss because there is no demand that will pay the cost of labor and transportation. Every spring car load after car load of potatoes, little, half-ripe stock, is shipped in from Florida and other southern states, every bushel of which takes the place and crowds out our home product at double the price that Michigan farmers can get for stock that should bring a premium on the southern stock, thus contributing to the prosperity of people who contribute nothing in building up the interests of our commonwealth.

—A Reader.

FILLED MILK

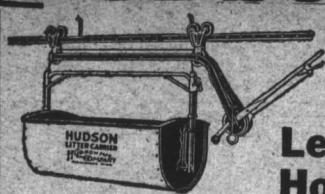
I AM sending in a line to the Senator on the filled milk bill. The way I look at it is this: There are thousands of dollars spent in this state for the benefit of health, to take care of feeble children and for charity work in the cities. If people could have had all the cows' milk and butter they needed when they were babies and while growing, there wouldn't be as many cases of rickets, infantile paralysis and tuberculosis. The way herds of cattle are being tested now, the milk is free from contagious diseases and the cow-testing association work should not end until it reaches every county in the United States. I, for one, want to help get pure milk for children, help clean out diseased cattle and wipe out filled milk. Let us have genuine food for our city babies.—Mrs. C. E. Tracy.

PUREBRED EARNS THIRD MORE THAN COMMON HOG

FEEDING tests have shown that, all things being equal, a purebred hog is capable of earning 38 per cent more than a common hog. The experiments showed that the purebred animal is an improved machine at a profit above the cost of feed and labor.—Mills.

James Oliver Curwood recommends "Beyond Rope and Fence" to all lovers of the open, and outdoor life. It is our new story which starts on Page 20 of this issue.

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Litter Carriers

Speed up your barn work! Roll out 13 bushels of manure in one trip with the Hudson—less effort than handling a single wheelbarrow load!

THE LEVER HOIST, found only on the Hudson, means no dirty chains to handle. It is quick and easy to operate, and forms a handle for pushing. Tub is soldered and will not leak. Clean the barn in your Sunday Clothes if you wish.

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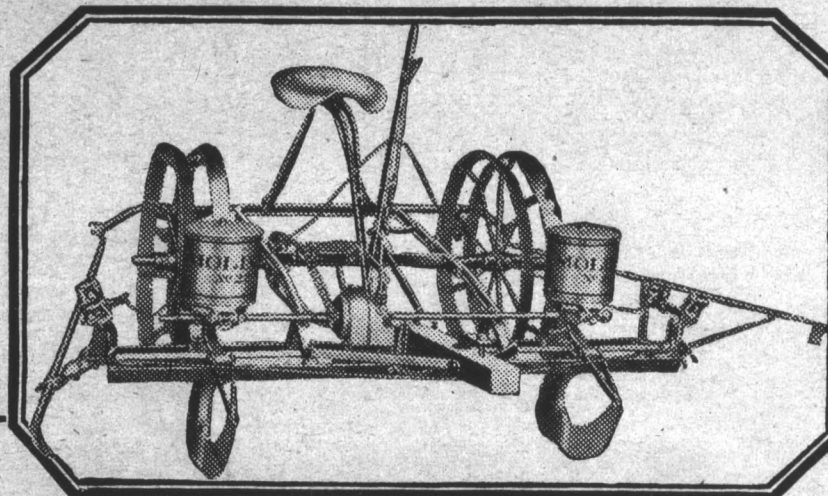
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A New Corn Planter

which will increase your "bushels per acre"

Save and Make Money Under "The Moline Plan"

WITHIN the next few weeks, every farmer will have two opportunities to save and make money—save it in the way he buys and make it on what he buys.

What will you do? Buy in the old-fashioned way and pay the top price which includes all the waste of out-of-date methods?

Or will you cut this waste, save money by buying on "The Moline Plan," and make money by getting better implements which will increase your production and reduce your costs?

You can get the savings under "The Moline Plan" through a Moline Distributor and get better service. He agrees to give you savings—

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(Cash for goods saves the Distributor capital, risk of loss and expensive collections. If you haven't the money, he will help you get it.)

2. Whenever you agree to pay for service as used.

("Free" service is never free—heretofore you have paid for it in the price.)

3. Whenever goods are received in carloads and delivered on arrival.

(Orders placed in time to be shipped in carloads from factory and then delivered on arrival save freight, rent, interest, taxes, insurance, depreciation and extra handling.)

You can make all of these savings or a part of them according to the extent of your co-operation. Regardless of how you buy, you get better implements and better service.

See your Moline Dealer and get his SAVINGS OFFER. If you do not know who he is, it will pay you to get his name by sending the coupon below.

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☐ Please send me the name of my nearest Moline Distributor. I am checking below in the partial list of Moline Implements the tools which I may need in the next six months and on which I would like to have your savings offer.

Plows	Planters	Manure Spreaders	Haying Machinery	Drills and Seeders	Tractor Implements
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An example of the constant improvement of the entire line of Moline Farm Machinery, which maintains its superiority and makes it a better, more efficient line today than ever before in the history of the Company.

We have no hesitation in saying that we believe this new Moline Corn Planter is superior to any planter ever made.

It will not scatter corn; plants at even depth; is easily adjusted to handle ungraded corn, and gives uniformly excellent results with graded seed.

The variable drop can be adjusted from the seat without stopping. It can be changed from check to drill simply and easily. Plate equipment plants any size from onion seed to lima beans.

Above all else, this Moline Planter gets the proper number of seeds into the ground at the proper depth. Cone-shaped plates with either edge or flat drop give the greatest accuracy in checking or drilling.



"Good Old Thin-Skinned Joe!"

"YOU'RE human, ol' horse. Hear me?—mighty near human, Joe. And I came near tradin' you, old pal. I used to think that thin-skinned 'hosses' an' sore shoulders went together—but no more."

Not since you're wearing a *FitZall*!

Whether you consider a horse collar from the humane standpoint or on purely a basis of how fit for work it keeps your horses, there is only one collar you can choose. *That one is the FitZall!*

This remarkable collar (patented) always fits the horse—fat or thin. Instantly adjustable to four perfect-fitting sizes by simply changing pegs on cap from one set of holes to another. No more neck sores, galls, boils, or swee-ney. No more sweat pads. Costs no more than dangerous old-style collars, but lasts longer. Saves doctoring expense and gives you capacity horse power the year 'round.

30 DAYS' TRIAL—Your Dealer is authorized to refund your money if not satisfied after 30 days' trial. Insist on the *FitZall*. There are no substitutes as the *FitZall* is fully patented. If your dealer cannot supply you, write us.

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Clip for healthier horses. They rest better, work better, are more comfortable. Clipped horses easy to clean. Saves your time. Pays you in extra work clipped horses do. Leading veterinarians recommend clipping. Stewart No. 1 Clipping Machine makes it easy to care for your horses. Complete, ready for a lifetime of service, only \$10.75 at your dealer's (Denver West, \$12.75), or send \$2.00, pay balance on arrival. Fully guaranteed. World's standard.

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News From Cloverland

By L. A. Chase

CLOVERLAND TO EXHIBIT AT CHICAGO.

CLOVERLAND will be represented at the National Travel and Outdoor Life Exposition to be held in the Auditorium, Chicago, May 7-14. Exhibition floor space measuring forty by six feet has been engaged by the Upper Peninsula Development Bureau for this display. In this space will be shown descriptive literature, industrial and agricultural exhibits representative of the region, and finally a scene typical of outdoor life in the region and its natural features. There will also be displayed a large wall-map of the Upper Peninsula. Final arrangements will be made at a meeting of commercial club secretaries at Marquette, on March 23.

THE MODERN LUMBERJACK.

THAT there are twenty thousand men working in the woods of the Upper Peninsula, this winter, is the estimate of Rev. William Poyseor, of Crystal Falls, general missionary of the Episcopal Church, whose parish covers the entire peninsula and whose work takes him into the many lumber camps and among the lumber-jacks.

Mr. Poyseor is a successful farmer as well as clergyman, and has a rare faculty for meeting the lumber-jack on his own ground. Speaking at Marquette recently, Mr. Poyseor described interestingly the conditions under which the woodsmen live.

When he first came to the peninsula twenty-eight years ago, lumber-jacks came up from Bay City, Saginaw and other southern Michigan points, and on crossing the Straits of Mackinac, as he expressed it, "left Almighty God behind," and took up the life of drinking, fighting and carousing without limit.

Today the old professional lumber-jack is rarely seen in the northern woods. Every nationality is found there and the lumber companies are taking much more pains to make his life pleasant than once was the case. The present-day lumber-camp consists of well-built, well-heated and lighted frame buildings, usually provided with shower-bath, and other modern conveniences.

Mr. Poyseor points out that these conditions which the newspapers have frequently mentioned in connection with the logging operations of Mr. Henry Ford, are by no means confined to that company but are found everywhere among the better class of operators. This agrees with similar information which I have had from other sources. One large employer has installed phonographs in all his camps, and at one point also a radio outfit, not just because of humanitarian reasons, but because it is necessary to alleviate the loneliness of woods life if men are to be retained in service. This isolation of woods life, Mr. Poyseor points out, and particularly the lack of contact with woman-kind for three to five months, is responsible for the licentiousness which sometimes characterizes the woodsman when he gets into town at the end of the winter. But, after all, the clergyman finds that jack has many good qualities.

SOUR CREAM MADE SWEET.

HOW sweet cream is made from sour cream was described recently before the Iron River Lions' Club. The process is as follows: The sour cream is churned into unsalted butter. Then skim-milk or skim-milk powder

is added in a quantity sufficient to reduce it to the required amount of butter-fat. The mixture is placed in a viscolizer machine and the result is perfectly good sweet cream. This process is often used in the summer months when cream is difficult to keep sweet. It is as rich in nutriment and as valuable for all purposes as natural sweet cream.

SAFETY FIRST IN FARM UNDER-DRAINAGE.

(Continued from page 323).

northern sections of the Middle Western potato producing States, are comparatively inexperienced in some of the profitable methods of production. trench two feet deep. It is inevitable that such tile will break down under the additional load imposed upon them when heavily loaded wagons or tractors pass over them. The practice of using cutls because they are cheaper than a No. 1 grade of tile cannot be too strongly condemned. Quality must be considered before price. None but tile made by a manufacturer whose product has been thoroughly tested in a laboratory and not found wanting, or which has stood the test of years of service, can be safely used. During the recent construction of a large drain on the College Farm soft clay tile which had been laid in a drain over forty years ago were unearthed and found to be in perfect condition, in spite of the fact that they were laid above what is ordinarily called the frost line.

Tile form the foundation upon which the structure of a drainage system is built. Permanent efficiency will not result unless tile of proven quality are used.

Careful Construction Demanded.

Numerous drainage systems fail to function properly because of faulty construction. Many tile-drainage contractors, who are unacquainted with even the rudiments of leveling, who seem to think that a grade is something to be ignored rather than followed, will not only attempt the construction of a complicated farm drainage system but will even attempt to draw up the plan for such a system, with an assurance they are doing the work complete justice which not even the most skillful drainage engineer would feel. Other contractors there are who had considerable experience and training, but who placing quantity of work above quality, seem to think that faults in construction due to disregard of essential details, will, like the mistakes our doctors make, never be discovered once they are covered up. Fortunately, good, conscientious contractors can be found, men who take pride in their work, who would rather do good work at a loss than poor work at a profit. Unless a farmer is qualified and in a position to do his own drainage work, he should by all means engage none but a contractor of this type to do it for him, regardless of whether or not the cost will be greater. Here again the more expensive may prove to be the cheaper in the end. Disappointment is bound to follow, as does the night the day, the hiring of ignorant or unscrupulous contractors.

Maintenance Not to be Ignored.

Drains, like machines and buildings, need a certain amount of attention after being installed in order that they may continue to function properly. Unless outlets are kept unobstructed and protected against the entrance of muskrats, woodchucks, and skunks; unless silt-wells and catch-basins are cleaned out both in the spring and the fall of the year; unless the drains are carefully inspected at the same time in order that spots where surface water is entering the tile directly may be detected; unless these things are done all other precautions may prove to be in vain.

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STEEL MULE owners do more acres per day at less cost than any of their neighbors.

Write for new catalogue today.

Bates Machine & Tractor Co.

1331 Benton Street Joliet, Illinois

GRANGERS STRONG FOR PRISON FERTILIZER PLANT

PROMINENT members of the Michigan Grange are supporting the proposition to establish a fertilizer plant at Jackson Prison, not only as a means of helping the farmers of the state, but to employ some of the surplus labor at the penitentiary.

According to A. B. Cook, chairman of the Michigan State Committee of the grange, the fertilizer conditions of the state are not good. Therefore, the establishment of a plant at the prison at very little expense would be of great help to the fruit growers and farmers who now have to depend upon Chicago concerns. Such a plant at the prison would not interfere in any way with any industry in the state.



A Good Home Products Poster Used During Farmers' Week.

SEVENTY EGGS PAY BOARD.

A HEN that consumes 80 pounds of feed in a year must lay 70 eggs to break even with her owner, is a statement from the head of M. A. C. poultry department. The state average is around 60 eggs per hen, indicating that many farmers are feeding unprofitable birds. Hens with restricted production usually lay during the months when prices are low. High producers extend into the months of high prices.

The grain consumed to produce a dozen eggs will vary greatly, depending upon the skill of the poultryman, but it is assumed that he knows how to feed economically. The general purpose fowls and Leghorns used in this feeding work were kept on the test while yet pullets and yearlings.

The general purpose pullets ate in a year an average of 6.7 pounds of feed per dozen eggs produced and the yearlings at 9.6 pounds. The Leghorn pullets ate 4.8 pounds and the yearlings 5.5 pounds. The general purpose pullets ate 1.9 pounds more feed in producing a dozen eggs than the Leghorn pullets and the difference increases very rapidly with the age of the stock, the general purpose yearlings consuming 4.1 pounds more feed per dozen eggs than the Leghorn yearlings, therefore the latter produced eggs upon much less feed than the general purpose breeds.

Meat scrap or some other animal feed high in protein is the one essential constituent of the mash which can not well be omitted. A pen of pullets on free range which did not get meat scraps, or any other animal protein feed, laid only 90 eggs each in a year, compared with yields of 125 to 150 eggs from hens fed rations containing meat scrap. The eggs from the pen where no meat scrap was fed cost 2.2 cents more per dozen for feed than when the meat scrap was included in the ration.—Mills.



Prize Wheat Land Plowed With Oil Pull

THE sweepstake prize for the best bushel of wheat at the recent Chicago International Stock Show was won by R. O. Wyler of Luseland, Saskatchewan.

Among other important factors in producing this championship wheat Mr. Wyler plowed his land with a 12-20 Rumely Oil Pull Tractor. He had the advantage of a tractor that is built to highest quality standards—that is a source of power to be implicitly depended upon—that has won the highest honors for fuel economy for many years—that reduces upkeep cost to a remarkably low point—that has an average life of ten years and over. These are important advantages for any farmer.

Mr. Wyler is located in the far north. Yet the experiences he has had with his Oil Pull are duplicated many times in every section of the country.

We have letters from the North, South, East and West—from farmers—giving their verdict of the Oil Pull.

Among these letters are some from your section—from home folks. They are well worth reading. They give the verdict of farmers—neighbors. We want you to read these letters. There is no obligation. Merely a note or a post card will bring them and a free copy of our new booklet on Triple Heat Control. Address Dept. C

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"The Cheapest Farm Power"

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The Advance-Rumely Line includes kerosene tractors, steam engines, grain and rice threshers, alfalfa and clover hullers, husker-shredders and motor trucks.

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CHOICE STRAWBERRY PLANTS \$3.75 per 1000 All Standard varieties at \$3.75. Guaranteed first class or money refunded. Cat g. Mrs. Filena Woolf. Allegan, Mich.

PEACH TREES, 20c

Apple Trees 25c each Postpaid. Send for 1923 Bargain Catalog of Fruit Trees, Plants, Vines, Shrubs, Guaranteed Garden and Flower Seeds. Special prices to large planters. ALLEN NURSERY & SEED HOUSE, Geneva, Ohio

FARMERS: Increase your yield and quality by planting my Golden Yellow Dent, pure bred seed corn, 21 years of breeding and field selection are back of my strain of Yellow Dent. Michigan's foremost variety, bar none International and M. A. C. sweepstakes winner. \$4.50 bu. shelled and graded or \$6.00 packed in ear F. O. B. Mason. Limited amount, high germination, guaranteed. Chas. Laughlin, Dansville, Mich

GROW THE NEW MAMMOTH Cooper



The big, healthy, vigorous strawberry without a fault. Gives lasting satisfaction. Nets many of our customers \$1500.00 an acre. Beautiful color, and a flavor you can't forget. 17 to 35 fill a quart. Resists drought. Bears early and late. Many growers will discard all other kinds. We also save you money on the most thrifty and profitable varieties of Strawberry, Grape, Raspberry, Blackberry and Dewberry plants. Grown in the famous Michigan Fruit Belt. Packed to reach you fresh and vigorous. We ship direct to you at wholesale prices. Special rates if you order now. Our liberal guarantee and long experience protect you. Prepare now, and you will reap big profits next year from the growing demand for good berries. Our valuable catalog, with color illustrations, tells the whole story. Write for your copy tonight. Stevensville Nurseries, Box 58, Stevensville, Mich.

Stevensville Nurseries, Box 58, Stevensville, Mich.

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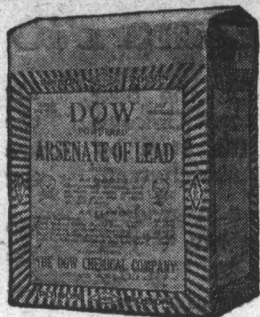
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for 25c we will send—Ten full sized packets Vegetables and Flower Seeds listed below—Value 60c.

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This is an excellent variety, as well as being an interesting novelty. The vines are rampant growers and produce an enormous crop of long, slender pods, many of which grow to three feet or more in length, having the thickness of a lead pencil. Produce late in the summer, very productive, excellent quality for snap beans, tender and of fine flavor. Packet of seed, 10c; 3 for 25c.

Japanese Giant Radish, 10 to 30 lbs. each; Mammoth Prize Watermelon, 50 to 150 lbs. each; Jumbo Pumpkin, 100 to 300 lbs.; Vine Peach, fine for canning, ripe fruit in 80 days after seed is planted; Garden Huckleberry, a big crop of fruit the same season seed is planted; Grown Diamonds, delicious cocoanut flavor, grow anywhere, plant in spring or early summer and harvest a big crop of nuts the following September; Early Giant Rhubarb, produces large, marketable size stalks next year after planting; Japanese Climbing Cucumber, fine variety that can be trained to fence, trellis or poles and save garden space; Chinese Celery Cabbage, celery flavored, fine for salads; String Beans, cook like string or snap beans; Burgess' Earliest and Best Tomato, earliest and best tomato on earth, large, smooth, free from blight and the equal of any late variety; Giant Ostrich Feather Aster, handsome, large, fluffy flowers; Giant Ruffled Spencer Sweet Peas, finest sweet peas grown; Red Sunflower, very attractive.

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Notes from a Michigan Farm

By L. B. Reber

IT'S curious how spuds come and go. The white elephant, the rural New Yorker and Carmen seem to have disappeared. The prize potato of my boyhood days was the peach blow. It was a reddish purple in color, ran medium to small in size but when cooked burst into snowy flakiness which would put to shame the classiest Petoskey ever grown. I sure would like to get a few for seed but I never hear of them any more. Possibly some old timer still raises them. The only potato of olden times which has held its own is the early rose. I raised a few last summer and they were excellent.

I see that K. E. C. disagrees with me on the school question. I gather that he infers that I am ashamed of Michigan's record. I sure did not mean to imply that. I am so pleased with Michigan that I selected it for my permanent home after working and traveling over half the states in the Union. In my mind Michigan is the one, simon pure, blue ribbon, banner state of the Union. I am not a natural born Michigander but my parents rectified that mistake by coming to Michigan soon after that important event. K. E. C. speaks of the great increase in our state population, but I too studied the census report and was saddened to note that any of the communities in which I played as a boy actually had decreased in population.

K. E. C. is right in saying that we should take more care in electing our county superintendents but mere scholarship does not denote administrative ability. The most learned psy-

chologist I ever studied under let his driving horses starve to death with a barn full of feed simply because he forgot to feed them. My best teacher of constitutional history couldn't be trusted to go to the store because he not only forgot what he was sent after but actually forgot where he was going. I could multiply such instances indefinitely and all these men could write strings of letters after their names. For that matter I am entitled to a few letters myself but last fall I mixed my lime and acid phosphate before I sowed it on my wheat so you see a man may be a bonehead and still have some education. I know better now than to mix lime and phosphate.

We have had the finest winter for trimming—beg pardon—pruning, we have had for years. Farmers are farther ahead with their work than last year. I note an increasing use of small tractors on these fruit farms. Fruit farm work comes in a rush when spring opens. Everything seems to come at once and must get out of the way early as the picking season for berries begins in May or early June. The catalogs are coming in now and I note many new everbearers in strawberries and raspberries. One firm even lists an everbearing blackberry. Everbearing berries would give me the nightmare. When you have picked berries for two months with never a let-up you are just one mass of aches and pains. Picking berries is the hardest work I have ever done and I have had my share of pick and shovel work.



Growing Poor Apples Costly

THE cost of producing a bushel of poor apples is nearly as great as that of producing good, marketable ones; in fact, a bushel of the better apples may actually be produced cheaper if the orchard owner practices methods that increase the yield. More frequently, however, the cost of growing the good apples will be slightly in excess of the cost for the poor ones.

The fixed costs of production, such as interest on investment, taxes, insurance, etc., are about the same per acre of orchards producing poor apples as those producing good fruit. If, in attempting to produce good fruit, the yield is also increased, then the fixed charges per bushel are less for the one producing good fruit than the one producing the poor quality product.

The chief differences in costs of production of fruit occur in the operating costs of labor and materials. For instances, the cause of the differences between good fruit in one orchard and poor fruit in a neighboring one may be the use of a greater amount of spray materials or fertilizers, or the greater amount of money expended for labor in thorough or frequent spraying, pruning, application of fertilizers, cultivation, thinning and other miscellaneous items, or most likely to a combination of the above items.

It appears that, under ordinary conditions, the difference in the costs of producing a bushel of good apples and

a bushel of poor ones from commercial orchards are largely due to differences in the amounts of money expended for spray materials, spraying and thinning. The differences in costs are very variable, but it is not likely that they will, under extreme conditions, amount to as much as 15 cents per bushel. At any rate, such practices as pruning, fertilization, cultivation, etc., operate to increase yields to such an extent that the cost of producing a bushel of apples under good management will average less than the costs under conditions that so frequently result in poor fruit.—Mills.

BIGGER POTATO CROPS FROM FERTILIZERS.

(Continued from page 323).

This is readily explained. Potato production on virgin soils ten or twenty years ago was easy and profitable. It was not necessary to spray or fertilize and the ravages of diseases were unimportant. The situation is rapidly changing. More and more attention is being given to seed selection and seed treatment. High pressure sprayers that can effectively control blight and leaf hopper as well as kill bugs, are displacing the old low pressure and knapsack sprayers. These practices are prerequisite to the profitable use of fertilizers. Gradually there will come also a stabilization of the analysis and amount of fertilizer used as has taken place in some of the eastern potato sections. Larger amounts of fertilizer will be used.

REVIVING CHERRY ORCHARDS

TWO horticultural experts at M. A. C., Professors R. E. Marshall and W. C. Dutton, are strongly urging the growers who have had serious trouble with cherry leaf spot fungus to sacrifice this year's crop in order to save the trees for future production.

When these trees became defoliated early in the season last year they had their vitality seriously sapped. In order that they may gain strength again, the best thing to do is to prevent heavy blossoming and setting of fruit. This can be done by pruning quite severely this spring or early winter. The pruning should consist of both thinning out and cutting back, and will involve the removal of considerable wood from two to five years of age. Where trees have opened or headed, cutting back is the most essential thing. But where they are dense, both operations will prove profitable.

In addition to pruning, fertilization will help much in restoring the vigor of the trees. For this purpose, nitrate of soda, or sulphate of ammonia, is the best. An additional acid phosphate will also prove profitable because of its effect on the cover crop.

Matured trees should receive about four or five pounds each of nitrate of soda, or sulphate of ammonia, and acid phosphate. The trees five to six years old should get about three pounds of the nitrate and four or five pounds of the acid phosphate. Mature trees which have not been badly defoliated will get along nicely with only about three pounds of the nitrate instead of five.

The cherry leaf spot has caused many growers serious loss during the past year. They will add to that loss if they permit the trees to blossom and bear normally, as that would have a lasting detrimental effect on the orchard. It is far better to do entirely without a crop this year so that more profitable crops can be grown in the future.

WESTERN GROWERS MAY DROP JONATHAN

IT is reported that the apple growers of the Pacific northwest have decided to discontinue the growing of the Jonathan apple. For some reason or other this variety has met with disfavor with the fruit men of that region.

Such an action may prove of great value to Michigan growers, as there are now thousands of Jonathan apple trees in production along the western coast of the state. The Jonathan apples grown here equal in color those grown in the west and have a much better quality. With proper care, the Michigan Jonathan can easily be made to attain the size of the western product.

THE BEAN GROWING COUNTIES.

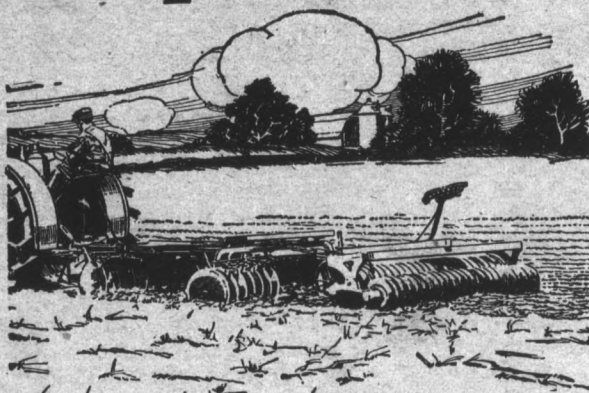
FIGURES gathered by Verne E. Church, the state crop statistician, indicate that the thumb district produces over one-third of the beans in the state. Huron County lead with a production of 484,950 bushels. Gratiot County came second with 421,629, and Tuscola, third, with 365,475 bushels.

The highest yield per acre was obtained in Bay and Gratiot Counties where the average for each county was thirteen bushels per acre. Most counties produced on an average ten bushels per acre, but Arenac and St. Joseph hit the low average of six bushels per acre.

We labor and toil and plod to fill the memory, and leave both understanding and conscience empty.—Montaigne.

McCormick-Deering

Tillage Implements



SEED-bed making will call for fast and thorough work this year as always. The planting season will roll around in a twinkling, but no matter how few the days between plowing and planting you can have a profit-building soil by using efficient equipment.

McCormick-Deering Tillage Implements combine the three essentials—good work, long life and convenience. They are of practical design, their construction being based on ninety years of farm and factory experience. They are priced on the basis of economical quantity production, and as an investment they offer you attractive returns.

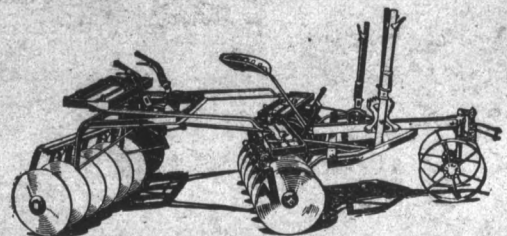
To Fill All Your Tillage Tool Needs See the McCormick-Deering Dealer. It Pays!

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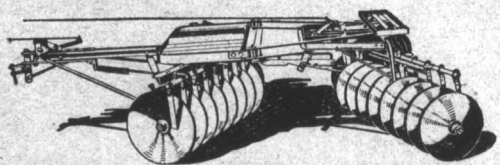
OF AMERICA
(INCORPORATED)

CHICAGO

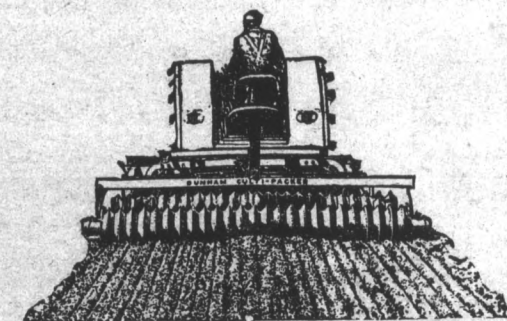
USA



The McCormick-Deering Disk Harrow is a simple and efficient implement, built and trussed like a steel bridge, to serve many years. You will like the details and conveniences—the dust-proof bearings and the bearing oil cups set above the frame, the built-in angle-steel weight boxes, the oscillating disk scrapers, the forecarriage, etc. Made in sizes for everybody—4 to 10 feet. All sizes can be equipped with the tandem attachment which is shown above. Double disk is popular—farmers know that it more than pays for itself.



The McCormick-Deering Leverless Disk Harrow is a genuine tractor disk, not a made-over horse harrow. It is built for heaviest duty. It is controlled entirely from the driver's seat, without levers, yet it is very simple. Merely backing the tractor automatically sets the angle of both front and rear gangs. When the tractor starts forward the gangs hold that angle until released by a pull on the rope. In 5 to 10-foot sizes to fit your power.



The Dunham Cultivator has no equal as a seed-bed finisher. It pulverizes the soil, fills out air spaces, and saves moisture content. Following the drill, it helps the little plants to get a quick start, firmly set in finely mulched soil. Use it to prevent winter-killing of wheat; to rejuvenate meadows, etc. It is far ahead of a roller for small grains. Made in eight sizes, for horse and tractor use.

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Make more profit out of your herd. Save repair and paint bills; reduce fire hazard; keep stock comfortable and healthy; warm in winter, cool in summer; decay, storm and vermin-proof; will not burn. Kalamazoo Tile is made from selected quality fire clay in our own plant located in the center of the finest fire clay district. Let our Building Plan Department help you. Write for descriptive literature. Free estimates on receipt of your rough plans.

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Prices cut more than \$45.00 for 30 days only. Clear stump land in time for this year's crop. No horses or help needed. One man alone pulls big stumps. Write for details and low prices.

No Money Down. Send for liberal 30 day trial, low sale price and written 3 Year Guarantee. Very limited offer.

New Improved 1923 Model

Mounted on wheels, easy to move. One man, alone, moves the Kirstin anywhere. A real portable machine—easy to operate on land where others would be useless. Special sale prices make the Kirstin a big bargain.

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Fastest, most powerful One-Man Stump Puller. Pulls stumps for few cents each. Double action, 4 speeds. Equipped with 55 feet best cable.

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Get Full Particulars on this Very Limited Offer. Clear land at low cost—Special Sale Prices save you more NOW.

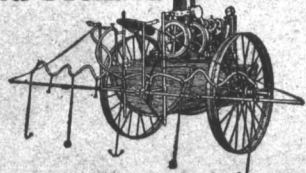
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Grow more and better potatoes by spraying with a dependable power outfit. It pays! The Bean Combination Sprayer, shown above, will take care of your potato and truck crops perfectly, and in 5 minutes can be made ready for orchard work. Just remove the boom and add hose and gun or rods. Low-down and compact. Makes very short turns. Easy to pull. High clearance. Adjustable to any rows. Steady high pressure insures thorough covering of plants. Strong and rigid, and will stand up under hardest work. Equipped with Porcelain-lined Cylinders, which are not affected by Bordeaux or other sprays; complete Rotary Agitator and other reliable Bean features developed thru 38 years of experience. Send the coupon.

Gentlemen: Send me your new catalog and full details of the Bean Combination Sprayer.

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A cement water trough is substantial and permanent. Keeps water sweet and clean.

Easy to make. All you need is sand, stone, ALPHA CEMENT and a little reinforcing. Follow the simple directions in "ALPHA CEMENT—How to Use It," a 104-page, practical Handbook that the local dealer has for you. It illustrates a score of other useful, permanent improvements for home, yard and farm.

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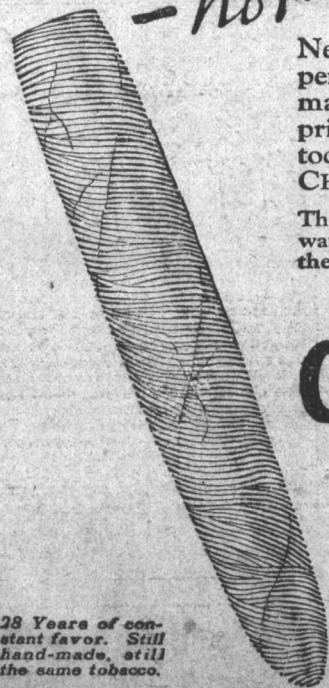
Plants at: Bellevue, Mich. La Salle, Ill.
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New methods in cigar making permit certain economies in manufacture. Most medium priced cigars are machine-made today. Not so with Hemmeter's CHAMPION.

This cigar is still hand-rolled, the same way it has been for 28 years—and with the same unvarying grade of tobacco.

**HEMMETER'S
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No blends or artificial
flavoring — just good
old ripe tobacco

28 Years of con-
stant favor. Still
hand-made, still
the same tobacco.



THE HEMMETER CIGAR CO., DETROIT

The Handy Man's Corner Getting Ready for Spring

The Prize-Winning Letters

HERE are the five prize-winning letters in our recent getting-ready-for-spring contest. We hope they will offer some suggestions which may prove of value to you, even though spring is near at hand.—The Handy Man.

By Fred Ross, Sandusky, Michigan.

I have my hay and grain marketed. I look over all my harnesses, get them in first-class shape. Seed grain cleaned ready for the drill and seeder.

My tractor is all tightened up and oiled. I try it out to see if I have difficulty in starting, or any gas leaks.

All other machinery I look over from top to bottom, and tighten up and replace broken parts, also paint the ones that need it.

Have tires set on wagon and order a couple of extra whiffletrees.

Put extra iron braces on the wagon tongues. Hay rope and pulleys are all put in running order.

My horses are given a round of condition powders. Wife and myself take a good spring tonic. Then I see that hams and shoulders kept for spring are smoked.

Then wife says, "I'll say you are ready for spring's work, Hubby."

Hip hip! hurrah for 1923 crop.

By W. H. Edgar, Clarkston, Michigan.

Getting ready for spring work is one job I like to start after the holidays, for then it gives plenty of time. During my spare time I take inventory of my stock and tools, cleaning up the shop, sorting up bolts, washers and nuts, discarding all that is of no value. After that is completed, I make repairs on wagon racks and platforms, also the other farm tools. What work I cannot do myself I take to the blacksmith.

This is a good time to have the harnesses put in shape, so I take them to the harness shop for repair and a good oiling, which will lengthen the life of them. Next comes the gas engines which need the valves ground, carbon cleaned out and the bearings tightened. I order repairs for broken machinery, also the seeds to plant.

I also figure out how much I can spend for repairs for building and for fences.

I like to have a big supply of wood split, and in the woodshed.

Then as soon as the spring days come, the farmer can start his work.

By Fred Seeber, Barry County.

In regard to what I do to be ready for the spring work:

I keep the manure hauled as fast as made and get the wood cut and split. On stormy days I get in the shop and make new whiffletrees to take the place of the ones broken the past year and eaveners to set on every tool on the farm that needs one; oil and repair the harness. On the nicest days I trim the fruit trees.

I manage to have the lambs come the last week of March and the fore part of April.

By keeping my work ahead, last year I only paid \$21.50 for help, including haying and harvesting on a farm of 120 acres. I went through my thirty acres of corn six times.

By F. R. Clements, Saline, Michigan.

Getting ready for spring on a Michigan farm is very much of an individual problem as each farm has different conditions to meet, but a few things which we are doing here at Burr Oak

Farms this winter we think can be profitably copied by nearly every farmer.

The first of all is the hauling of manure, which we do on a schedule, averaging two loads per day throughout the winter, although we haul only about one day a week. This system leaves only a comparatively small amount to be hauled in the spring when time is limited.

The summer supply of wood has been cut and split and piled in the woodshed, and before spring another buzz pile will be cut, ready to be hauled up early next fall.

A new track and hay carrier has been installed in the big barn this winter, the spring-tooth harrow was taken to the shop and fitted with new shoes and the teeth sharpened ready to harrow the alfalfa field in spring.

Our tractor has been traded in on a new one after five years of service and the truck will be overhauled as soon as we have a warm sunshiny day.

Last week we saw the manager of our local elevator and placed orders for our spring supply of fertilizer, limestone, alfalfa seed, potatoes, seed corn, and seed oats, all certified seed, for spring delivery.

Just now we are busy making crates which will be handy in harvesting our certified potatoes next fall. A few of our tools have broken castings and we shall get orders for them in the mails within a week.

We do not anticipate any delays, on account of broken tools or lack of supplies, when we get into the fields in the spring and we know our crops will be in at the right time.

By W. B. Jones, Cohoctah, Michigan.

Seeing in the Handy Man's Corner that you ask for letters telling how to get ready for spring work, I thought I would like to give a little of my experience.

I have been a farmer all my life, and my son-in-law and I, with the help of one man, run a farm of 290 acres, about 250 acres plow land, and the balance timber. We keep from thirty to forty registered Holstein cattle, about one hundred sheep, besides hogs and horses.

We commence in the fall and each day, except Sunday, draw the manure direct to the field, unless the ground is so soft that we would cut the ground. We manage to cut our wood during the winter, and as soon as April comes, we have that all fitted for the stove. Then there are posts to look after, and we try to scatter posts along where they will be needed, so they are ready to set as soon as spring comes.

We sow our clover seed on wheat about the last of February or the first of March, so that is out of the way.

There are tools to look to, so that when the time comes to use them they are ready. By so managing, we try to have nothing in the way when the ground is ready to work. We try in the fall to plow for oats and barley, also some for cultivated crops. Have now about forty acres all plowed ready to work for crops.

When I go through the country and see a manure pile as high as the barn, it makes me think of the lot of time it will take in the spring to get that out of the way. Besides there is a waste, as it is of more value lying in the field than in a pile at the barn.

These are a few things we have put into practice for the past thirty years.

SPENT SEVEN-FIFTY, INCOME THIRTY-SEVEN FIFTY

RECENTLY, a dairy extension specialist found a dairyman feeding only twenty-two pounds of silage daily. This man had never weighed his silage but thought he was feeding 30 pounds daily. The specialist proved to this man's satisfaction that more silage should be fed to his cows. The dairyman agreed to increase the amount of silage for his 10 cows, and within 10 days he had them eating 32 pounds daily.

The ten cows made a total increase of 50 pounds of milk per day. This milk was sold at \$3 per hundred pounds, making a total increase of \$45 per month from the change in feeding. The increased amount of silage consumed amounted to 100 pounds per day or one and one-half tons for 30 days. At \$5 per ton this silage would be valued at \$7.50, thus making an increased income of \$37.50 per month.—Mills.

HIGH-TEST FERTILIZERS MORE EFFICIENCY

MICHIGAN farmers are not efficient in their buying of fertilizers, as the use of low grade or low analysis materials, in place of high-grade or standard fertilizers, is costing them \$300,000 annually.

Lack of standardization and the use of low analysis fertilizers have resulted not only in an unnecessary high cost of plant food to the farmers, but also in less efficient use. The cost of manufacturing and handling a given amount of plant food in high analysis fertilizers is less than it is for those of low analysis.

Farmers should purchase fertilizers on the basis of their plant food content, rather than on a cost per ton basis. A standard fertilizer is conceded to be one which contains fourteen or more per cent total available plant food.

If the farmer would make a study of the composition of fertilizers, which is easily done through the county agents or the college authorities, there doubtless would be only a relatively few fertilizer brands sold in the state.

A list of fertilizers which have been adopted as standard, together with information concerning their use under different soil conditions for all crops, may be had by applying to the M. A. C. Experiment Station.—Mills.

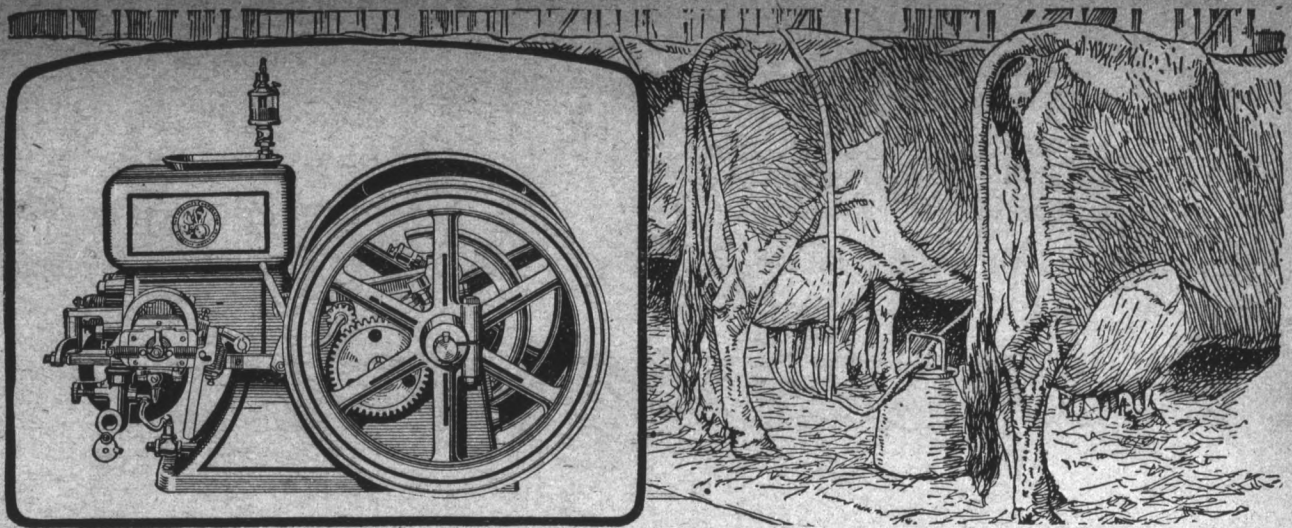
RANK IN VEGETABLE GROWING

ACCORDING to the state statistics recently issued, Saginaw County stands first in the production of cabbage. She grows at least one-fifth of the cabbage produced in the state. In this county there were planted 1,407 acres; while Branch County, which came second had 664 acres; Wayne third with 538; Ingham fourth with 353 and Macomb fifth with 331.

In onion production, Allegan County lead with a total of 628 acres and Van Buren County came second with 277 acres. Ottawa stands fourth in production with 222 acres.

In the production of other truck crops, Wayne County lead with 6,461 acres planted as compared with 6,279 in Van Buren County. Berrien County came third with 4,817; Bay fourth with 3,701; Saginaw fifth with 2,742. Kalamazoo and Muskegon Counties, famous for the growing of celery, have 1,707 and 984 acres respectively planted to truck crops.

While "watching the clock" is cited as a poor business recommendation, nevertheless, the farmer who plans to make good should, at least, keep up with the clock.



"Seven and a half years' service —and still going strong"

IN Rummerfield, Pennsylvania, Mrs. Boyle runs a dairy farm with the help of one steady man and a Hercules Engine. The herd consists of from twenty-five to thirty cows and she says that one man can do the milking in two hours. Here is an extract from her letter:

"Our 1½ H. P. Hercules Engine has spent seven and one-half years running a five-single-unit milker. I could not speak too highly of the engine, as it has been run by all sorts of help. The cost of operating and repairs has been a very small item. 5000 hours would not cover the running time of this little servant."

Mrs. Boyle's farm is one of more than three hundred and fifty thousand where the Hercules is bearing the brunt of the hard work—doing the milking, running the dairy, grinding feed, running the wash-

ing-machine, the workshop, the water-pump, the grindstone—doing the thousand and one things that must be done and that are downright hard work.

A boy can run a Hercules. It starts easily, winter or summer. And sticks to the job till it's done.

Operating costs are surprisingly low. One Hercules owner wrote us that his engine "pays for itself three times every year."

There is a Hercules for your farm. They range in size from 1½ H. P. to 12 H. P. Back of every one of them is the five-year guarantee of The Hercules Corporation.

There should be a Hercules dealer near you. If there isn't, drop us a postal. Let us show you how you can lighten the burden of work on your farm. An inquiry puts you under no obligation.

THE HERCULES CORPORATION

Engine Division

Evansville, Indiana

HERCULES ENGINES

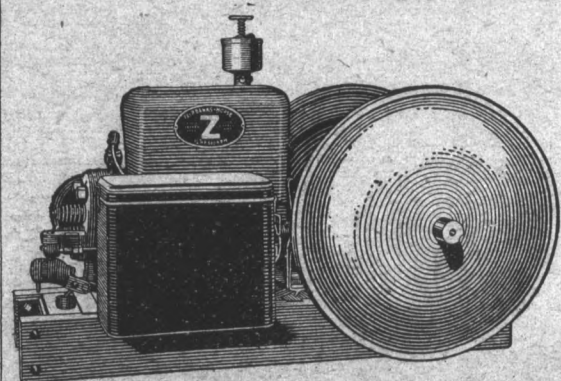
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Write today for free instruction book and "Evidence of Conception" blank. Send sketch or model for personal opinion REGISTERED PATENT

EVERGREENS Hill's Hardy Tested Varieties Fine for windbreaks, hedges and lawn planting. All hardy, vigorous and well rooted. We ship everywhere. Write for free Evergreen book. Beautiful Evergreen Trees at moderate prices. B. Hill Nursery Co., Box 230, Dundee, Ill.

FAIRBANKS-MORSE



'Z' ENGINE
1½ H.P.
BATTERY EQUIP
\$48
F.O.B. FACTORY

Cut down your expenses with this willing helper

Reduce your farming costs. Don't waste your own valuable time and strength—or pay high priced help—to do the hundred time-killing jobs that this Fairbanks-Morse "Z" Engine will do for you so much quicker, easier and cheaper.

At present low prices, this 1½ Horsepower, Battery Equip "Z" Engine is the cheapest farm help any man can have. It does more work for less money than any other aid you can employ.

Uses gasoline alone. Has high tension battery ignition, hit-and-miss governor and balanced safety fly wheels. Control lever gives

six speed changes. Carburetor requires no adjusting. A remarkable value.

The magneto equipt 1½ H. P., 3 H. P., and 6 H. P. are real kerosene engines, but operate equally well on gasoline. Have simple high tension oscillating magneto. Throttling governor assures steady speed. Prices, F. O. B. Factory. Add freight to your town.

1½ H.P. \$71 3 H.P. \$105 6 H.P. \$168 Other "Z" Engines up to 20 H. P.

Write for complete details. See the engines at your dealer's.

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Glass Cloth

a transparent waterproof fabric as efficient as glass for hotbeds, poultry houses, etc. Sample 3x9 ft. P.P. \$1. Cat. Free. TURNER BROS., Desk 22 Bladen, Neb.

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

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The lowest priced, practical, improved mixer made. Built of iron and steel—lasts a lifetime. Ideal for farmer or contractor. Mixes concrete that requires no replacements, no repairs. Use this mixer 30 days at our risk. We guarantee it exactly as represented. Send your name today and get full description of this, the only Reverse Unloading Gear Mixer, and easy payment plan.

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ZEELAND

MICHIGAN

From these ten Hatcheries you can order your baby chicks in perfect confidence that the stock ordered will be delivered as represented.

Michigan Baby Chick Association was primarily organized to protect baby chick purchasers against fraudulent brokers and unscrupulous operators. All members have the greatest faith in the perpetuation of Hatchery Incubation and that scientific incubation is safest, most convenient and economical factor in replenishing the farm flock. Their ethics require strictly honest business methods and truthful advertising.



Northern poultry for years preceding the advent of pedigreed poultry, due to severe winters was a product of natural elimination and a survival of the fittest. Zeeland's several hundred thoroughbred flocks through the preceding natural elimination plus scientific selection which was aided by the State Agricultural agencies are of the best, judged for egg production, and by the American standard of perfection.

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BABY CHICKS

Bargain Prices — Write Quick
Best Paying, Highest Quality Purebred Tom Barron and Hollywood White Leghorn, with Egg Records of 270 to 300 eggs in one year; Brown Leghorns, Anconas, Barred Rocks, Rhode Island Reds, White Wyandottes. All our flocks are **free range, healthy birds**, tested and culled by Michigan Agricultural College experts. **Strong, healthy, perfect. Best Chickens that Money Can Buy.**

We ship prepaid to your door. **Guarantee 100% live delivery.** Guarantee absolute satisfaction or refund your money. Send for free Catalog which describes these wonderful chicks and gives valuable money-making suggestions. **SUPERIOR POULTRY FARMS, Box 101, Zeeland, Mich.**

EGG BRED BABY CHICKS

Guaranteed to Satisfy

English Type White Leg., Brown Leg.

Selected breeders, inspected and approved and headed by large vigorous males from high record hens. 11 years of breeding and hatching experience assures you of good strong chicks that are hatched right, shipped right, and will grow up into real money-makers. Our prices are the lowest, quality considered. 100% live arrival guaranteed. Parcel post paid. Write today for free catalog and prices.

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Buy "Better Quality" Chicks

We are in a position to furnish chicks from some of the best flocks of **English White Leghorns** and **Anconas** to be had, regardless of price. We will be pleased to show any prospective customer the flocks from which we hatch our chicks and have them inspect our modern equipped hatchery. Chicks sent postpaid. 100% good live chicks and your absolute satisfaction guaranteed. Instructive catalogue and prices free on request.

QUALITY HATCHERY, Lock Box. 43, Zeeland, Mich.

Strong Pure Bred Chicks



4½ Months Old
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S. C. English White Leghorns, Barred Rocks, Anconas Direct from our free range farms, by Prepaid Parcel Post to you. Bred for egg production because it means most money to you. Returns on your investment in 4½ to 5 months. Well hatched chick is half raised. A Post Card will bring our free Catalog and details of our contest offer. Highest quality—Bargain prices—Satisfaction guaranteed. Most modern equipped Hatchery in Michigan.

Riverview Hatchery and Poultry Farm
Ten Years in Poultry R. No. 2 Zeeland, Michigan

GUARANTEED BABY CHICKS

From World's Champion Layers That Grow Quick, Lay Heavy, Pay Big Profits
S. C. White Leghorns Trapnested, Pedigreed, direct importation from Frank Snowden, England. Egg Records 250-291 Eggs.
S. C. Anconas, Sheppard's 331 Egg Strain.

GET BIG PROFITS IN WINTER LAYERS

My parent stock is bred for high egg production and is able to reproduce its kind. My Monarch Strain Chicks make wonderful heavy winter producers when prices are high. Strong healthy chicks. Real money makers. Thousands of satisfied customers order from me year after year because they get absolute satisfaction. Order direct from this ad. Prices, Ancona or White Leghorn Chicks:
Extra Star Mating Chicks, \$22 per 100; \$105 per 500; \$200 per 1,000.
Grade A Chicks, \$18 per 100; \$85 per 500; \$160 per 1,000.
Grade B Chicks, \$15 per 100; \$70 per 500; \$130 per 1,000.
Chicks ready for shipment every Monday. 97% live delivery guaranteed, prepaid to your door.
Satisfaction Guaranteed. Order today. Send for free catalog.

FRANK A. VAN BREE, MONARCH POULTRY FARM, Box 32, Zeeland, Mich.

256 Eggs in One Year



Lady Snowden

SILVER WARD HATCHERY

Will furnish you with pure bred chicks

**TOM BARRON
ENGLISH
S. C. WHITE
LEGHORNS**



**SHEPPARDS
FAMOUS ANCONAS
DIRECT**

Bred from heavy laying stock. Honest values, prompt service guaranteed. Write for free catalog. Reference 2 Banks.

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BABY CHICKS

From selected, heavy-laying, vigorous hens. White and Brown Leghorns, Anconas Barred Rocks. Well hatched in modern machines. Carefully and correctly packed and shipped. Postpaid, full live arrival guaranteed. Bank reference and this guarantee makes you perfectly safe in placing your order with us. Prices low. Get them when you want them. All orders have our careful personal attention. We want your business. Catalog Free.

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Globe Barred Rocks and English Strain White Leghorns

Barred Rocks of the 200 to 304 egg strain. Early maturing. Capacity producers. Special flocks on free range, state inspected and culled. Guaranteed winners at show and egg contests. Act now. Heavy type White Leghorns, English Strain. Descendants of trapnested 198 to 297 hens. Chicks from vigorous males and high producing dams. Send for catalog for complete information.

GLOBE HATCHERY AND FARMS

DEPT. 939 ZEELAND, MICH., R. R. NO. 3



Baby CHICKS

Attractive Prices

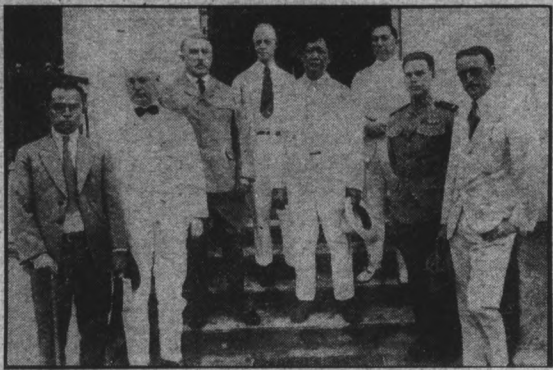
Anconas, Black Minorcas and Brown Leghorns also. Send at once for full information and attractive prices. Don't delay.

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Order your baby chicks now from the West Michigan Poultry Farm & Hatchery in the heart of the poultry raising industry. We specialize in breeding and hatching Single Comb English Strain White Leghorns and hatch nearly 25,000 weekly. Our flocks culled for years for heavy egg production. Chicks hatched under the most modern conditions, strong and healthy and guaranteed to arrive in perfect condition.

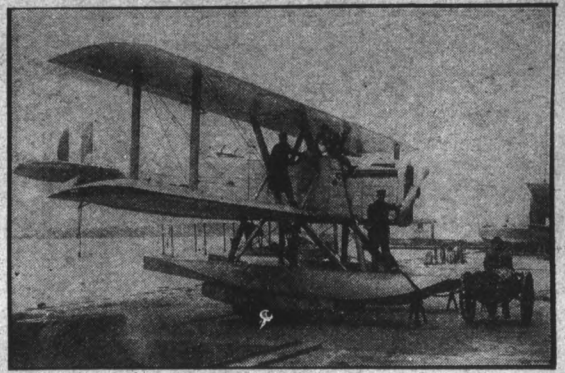
WORLD EVENTS IN PICTURES



The board of trustees of the Philippine Anti-Leprosy Society made a recent visit to the Cullion leper colony.



This proves that at seventy-six the "Edison smile" is still in excellent working order.



This Davis-Douglas torpedo plane has gone to Key West, Florida, to join the torpedo bombing plane squadron for winter practice.



All that was left of the home of M. A. Corrigan, Free State official, at Rathmines, Ireland, after the explosion which had been ordered by the Republicans.



English and American visitors have been allowed in the tomb of Tutankhamen to view the golden sarcophagus of the Pharaoh and the other treasures of gold and jewels.



Miss Winifred C. Blair, of St. John, was chosen as "Miss Canada" in the Carnival Queen Contest, while Miss Muriel Harper was placed second as "Miss Winnipeg."



This German sign, "No goods will be sold to French or Belgians because of the Ruhr occupation," shows the spirit of that country against the invaders.



By means of mirrors real human actors are enjoyed on this stage, 9x12 inches.



Rev. Peter MacQueen claims to have explored Mt. Kilimanjaro, 19,700 feet high, in Africa. It is always covered with snow, even amid the equatorial jungles.



Our trio of congresswomen, Mrs. Winifred Huck, Mrs. May Nolan and Miss Alice Robertson.

BEYOND ROPE and FENCE

By DAVID GREW

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Foreword.

IN THE fall of the year, the farmers and the ranchers of the northwest prairies of Canada release their horses for the winter. Strange as it may seem to those of us who shudder at the very thought of raging blizzards on the open plains, the horses that are left free to roam over unsheltered space and are obliged to dig down through feet of snow for their grass, not only survive the severest winters but are generally found fat and strong the next spring.

If while you are out riding you happen upon a group of these free horses, they will stare at you curiously until they begin to fear that you have come to gather them up and to take them back to the farm yard, then with angry, defiant tossing of heads they will turn and gallop out of reach, going so fast that you will not see them for snow dust. The horse you are riding, if he has ever enjoyed a winter of that freedom, will struggle to get away from you so that he may join them. Because you will not let him go, he will show his displeasure like a petulant child and long after you have forced him to abandon the attempt to get loose, long after the happier group has disappeared, he will keep turning his head back and calling yearningly to them.

The farmer who releases his horses in the fall rarely loses any of them. Every farmer knows every horse within a radius of twenty-five miles or more, knows them by name and color, knows their histories and peculiarities. When the farmer is in doubt as to who some distant rider may be, you can hear him think aloud thus:

"That's Skinner's sorrel, Billy. Skinner's goin' for his mail." Or: "That's Spicer's white nag, Madge. I'll bet Spicer's comin' to see about them oats."

So in the spring of the year, when the farmers are all out searching for their horses, they know those they come upon, and if some farmer sees Skinner's sorrel, Billy, he will drive him in the direction of Skinner's homestead, talking to Billy as he does so, in some such fashion as this:

"Well, Billy, you little devil, you ain't any the worse for the worst winter in twenty years. You're fat as a pig. Go on now, get home! I know you don't like the idea of gettin' back to work, but it's soon seedin' time, you know!"

The farmer who works beside his horses daily, who gets to understand every expression of these beautiful, intelligent creatures, always talks seriously to them. This sounds strange to us until we have come in contact with these animals for a short time. They certainly understand many words

when, hardly being conscious of it, we soon start talking to them ourselves, and I have seen evidences of horses recognizing at once what sort of temper or mood men happen to be in as soon as they approach them.

Just as they learn to understand us, we learn to understand them. Every neigh or whinny takes on the meaning of a word, and their scowling or angry

er's particular brand, is pressed upon the shoulder until the insignia is burned through hair and skin, where the mark remains as long as the creature lives.

The ranch horses are wilder and more spirited than the farm horses, but when the latter are released for the winter, they often mix with the former, breaking up into groups of those who

on a sandy spot or on the snow and roll over from side to side. It sometimes happens that he selects a spot that has a deep rut, or that is near a wall, a stone, or a straw-stack. He will roll over and strike the wall or the strawstack or get caught in the rut in such a way that he cannot force himself back. He will remain helpless on his back till some one comes to his rescue. If he gets no assistance he will die in a very short time, sometimes within less than an hour.

But I am interested in the horse as a fellow being, subject as we are to limitations; and, to a degree less perhaps than we are, capable of joy and sorrow. In so far as these beautiful creatures are able to communicate to others an indication of the emotions out of which their lives are built, I have taken my story directly from them. My story, too, comes fresh from the prairies. I did most of its planning while riding on horseback over hundreds of miles of rolling Alberta plains, often coming upon hills from which I could see a perfectly circular horizon without a sign of human life, save perhaps some telltale arrangement of stones, laid on the hilltop by Indians whom fate had long since swept from the plains of their fatherland. At such times my pony, whose wild and exciting history forms the greater part of this story, seemed as much moved by the open vastness and the stillness as I; and, each in his own way, we held communion with the spirit of the wilderness.

For the Love of Her Foal.

ROLLING hills and shallow valleys—an ocean of brown waves with fast drying sloughs, like patches of sunshine on the surface of the sea—such was the Canadian prairie that autumn day—such were the miles and miles of Alberta range, bounded by a barbed wire fence that was completely lost in the unobstructed play of sunshine. It was an open wilderness, so vast that it seemed to stretch on almost endlessly beyond the horizon, which lay desolate and unbroken like a rusty, iron ring, girding the earth. Its immensity, by an inexorable contrast, dwarfed everything that crept over the surface of the plains into a helpless puniness.

The hundred horses on the range, range, scattered and grouped by their predilections for each other, looked, in the distance, like ants crawling over the surface of a rock. Within sight of each other, bound by the ties of race, they nevertheless had their loves and their preferences. Most of the mothers with their little colts grazed in a group by themselves; while a few mothers,

GOING OUT OF DATE

Answer to "No Place to Tie Old Ned"

By C. R. Cook

Yes, the hitching post is missing—

Al, you'd better buy a car
And get in among the hissing
So you'll know just where you are.
When you are driving into town
You can park your car instead
Of looking, all up and down
For a place to tie Old Ned.

You can park your car securely

Without a rope or tether,
And you needn't look demurely
In any kind of weather.
You won't have to buy by proxy,
For you won't have any sled,
Nor any horses feeling foxy,
Home's the place for dear Old Ned.

There's no need to look and hanker

"Like a Chinaman for dope."
Ned won't need to have an anchor
That is fastened with a rope.
Let him go escapading
In the pasture or the shed.
You can do your little trading
Without a thought of Old Ned.

In the spring you'll need a tractor

For to hurry up your work.
Ned has been a faithful actor;
He has never been a shirk.
Yes, he has been a faithful friend,
But the iron hand of fate
Brings his service to an end,
And he's going out of date.

shaking of heads, and their protests against certain discomforts we impose upon them appear as clearly as the similar expressions of people. The most amazing fact, however, that slowly dawns upon us, is the fact that these lovely animals live in a conscious world of their own, not half so different from ours as we had allowed ourselves to think.

The rancher is not as intimate with the horses he breeds and rears in virtual wildness on the vast ranges which he leases from the government and about which he builds his barbed wire fences. Naturally so. He has from several hundred to several thousand horses and they are virtually in a wild state until he sells them, when they are broken-in and most of the untamed spirit is crushed out of them by heavy labor.

A rancher can rarely tell you how many horses he has. During the spring when colts are most often born, his stock may double for all he knows. He does not attempt to find out until the fall, when he rounds them up. The young colts are separated from their mothers and branded. The poor young things are tied and thrown and the red iron, with the shape of each ranch-

seem to feel themselves more congenial to each other. Every animal has a character and personality of his own, and while he will get along beautifully with one horse, he will fight all the time with another. From my observation, it seems to me that the wild free horse does much less quarrelling than the horse that has toiled on the farm, which would indicate quite clearly how much like ours his nature is.

Very few of the great herds that rustle for themselves all winter long die while they are away. Those that die are horses that either have been kept in the barn too late in the season or else that were in a starved condition when they were released. A horse that has been kept in the barn till after the cold season has set in and has been injured to the warmth of the barn, when suddenly exposed to the unsheltered open plains, if the weather happens to be severe, will sometimes die because it finds it is unable to adjust itself to the change in temperature.

But there is one peculiarity of horse nature which sometimes kills the best horse, not only in the wilds but in the pasture or barn yard, if no one is about to come to its assistance. Every horse loves to roll. He will lie down

AL ACRES—We Hope Al Does'nt Stop Work on his Invention now That Mother has Come Back.

—By Frank R. Lee.



as if they felt that their children were better than their neighbor's children, kept themselves apart from the herd, though always within sight.

Among the latter was a shapely, light-brown or buckskin mare who was grazing peacefully about her precious buckskin colored daughter. The little one was asleep on the grass. Her graceful little legs were stretched as far as she could stretch them. Her lovely little head lay flat on the ground. Her fluffy tail was thrown back on the grass with a delicious carelessness.

She was only six months old, but already the very image of her mother. From the white strip on her forehead and the heavy black mane down to the unequal white spots on her two hind fetlocks, she was like her. Only her wiry, delicately wrought little legs seemed somewhat too long for her.

Suddenly the old mare's head went up high in the air; her grinding teeth ceased grinding as a broken machine comes to a dead stop; and the round, dilated, knowing eyes pierced the slight haze in the atmosphere. The little head on the grass raised just a bit, looked inquiringly at her beloved mother—quite near; then with the innocent confidence of childhood, dropped back again, rubbing the soft fragrant grass in an ecstasy of contentment.

But the old mare continued to gaze intently, standing motionless as a stone. She saw that all the other horses were gazing just as intently as she was. Small moving objects—two men on horseback—had broken over the line of shadow along the southern horizon. One of them was loping away to the right and the other to the left. The old buckskin mare had already lived more than twenty years. Not only had she herself suffered at the hands of man, but she had had so many of her babies taken from her and cruelly abused—often before her very eyes. Her mother's heart began beating fast and apprehensively.

The other mares, not far from her, also showed signs of extreme nervousness. The buckskin saw them run off for a short distance as if in panic, then stop and gaze anxiously at the approaching riders. It was time to act. She looked questioning a moment toward the north; but she realized that that direction would soon be closed to her, for she could tell that the riders, loping straight north, meant to turn in time and come back upon them.

She called nervously to her little one. The little thing sprang to its feet, sidled up to her and gazed at the dark specks that were coming together in the north, with fear glowing moist in her large, round eyes.

Until she had seen a group of horsemen dismount, one day, she had thought that man was a monstrous sort of horse with a frightful hump on its back. What little she had been able to learn about him since that time had served only to intensify her fear of him; and despite her abiding confidence in her mother, she trembled timorously as she heard the ominous hoof-beats in the distance.

The animals instinctively gathered into a bunch and started away at full speed. While one of the horsemen remained some distance behind, ready to prevent the group from going off to either side, the other plunged into the midst of them and deftly separated the mothers and their colts from the rest of the bunch. Then they allowed the single horses to run off to the north at their will; while they came together behind the mothers and their colts and drove them southward toward the long line of shadow that lay like a black elongated reptile, below the horizon and parallel to it.

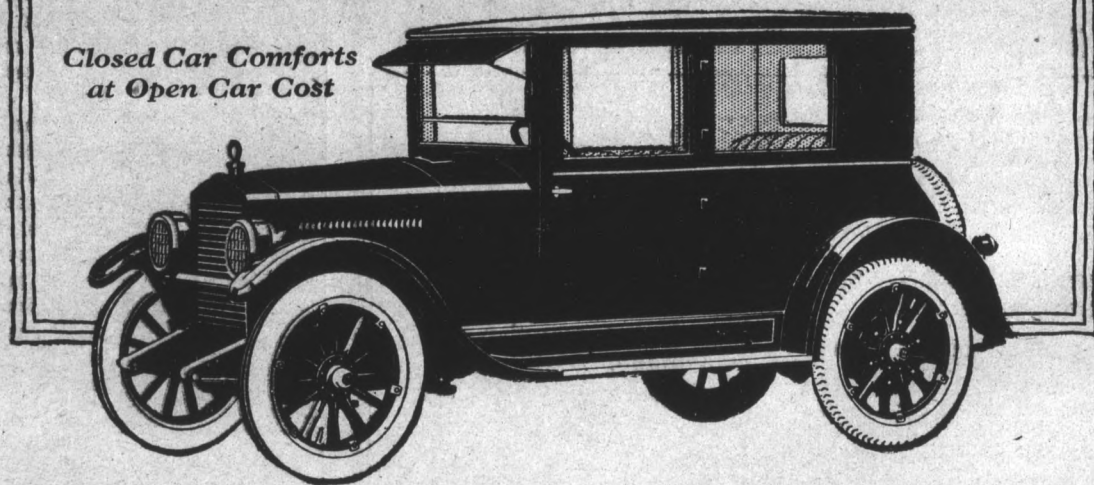
That long line of shadow, which widened as they neared it, was a great canyon which the Red Deer River had cut out of the level plains. From the jaws of the mouth of the canyon, which were a mile or so apart, the floor of the prairies fell away sheer in places, to a depth of a thousand feet. In many spots there were several parallel

(Continued on page 343).

ESSEX COACH

\$1145 Freight and Tax Extra

Closed Car Comforts
at Open Car Cost



Hidden Values in Every Essex They Keep the Car Young in Long Hard Service

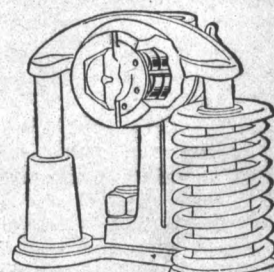
All models have the noted Essex chassis. European and American experts call it the greatest of its size.

After fifty, sixty and seventy thousand miles, Essex cars keep the dash and action of new cars. They stay tight and quiet. They keep their economy of operation and maintenance.

Service like that is not accidental. It results from hidden

values which are fully revealed only in long hard service. Attention to detail extends to parts you never see. Finest roller bearings are used where commonly plain bushings are used. For the weight carried the Essex frame is the sturdiest built, save one.

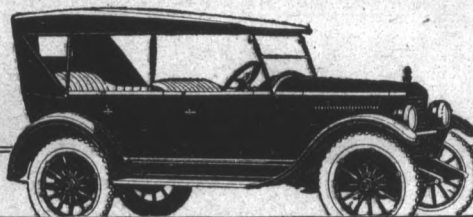
Qualities like these make Essex cost less in the long run than the lowest priced cars, because of the difference in repair, maintenance and replacement costs.



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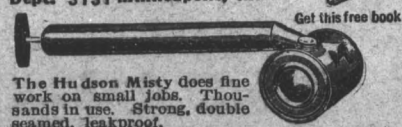
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The Story of Gethsemane

Our Weekly Sermon—By N. A. McCune

THE Bible opens with the story of a garden, and its greatest scene is near a garden. There are many references to gardens, for Palestine is, much of it, a dry country, and the garden must be watered by hand. Isaiah says that when the Lord shall comfort Zion, "He will make her wilderness like Eden, and her desert like the garden of the Lord." When the prophet is thinking of the glorious days to come, he cries, "And the Lord shall guide thee continually, and satisfy thy soul in drought, and make fat thy bones, and thou shalt be like a watered garden." The best thing that Jeremiah can think of, is that his people shall "be like a watered garden, and they shall not sorrow any more at all." Gethsemane means, an oil press, and the garden belonging to it was



the scene of our Lord's agony.

Gethsemane is still shown to visitors at Jerusalem. It contains eight very aged olive trees, believed by many people to have been there when Christ passed through His bitter experience just before the crucifixion. That, however, is probably not correct, as we are told that in the year 70 A. D., all the trees around Jerusalem were cut down by the Romans during the long siege. But at any rate if not the identical trees, they are the same variety which existed there in Christ's day, and some of them may be from the same stock. Dean Stanley says: "In spite of all that, the doubts that can be raised against their antiquity, the eight olive trees will remain, as long as their already protracted life can be spared, the most venerable of their race on the surface of the earth. Their gnarled trunks and scanty foliage will always be regarded as the most affecting of the sacred memorials in or about Jerusalem."

GETHSEMANE has in all the nineteen centuries of Christian history been looked upon as the most sacred spot on earth, for it was there that the Son of Man suffered in prayer for the human race, and it was there that He decided to "carry on" to the bitter end. Hymns have been written on Gethsemane, sermons beyond counting have been preached on it, it has been the symbol of holiness and of submission to Christian duty.

Now it is commonly assumed that Christ's prayer was not answered. He asked that the cup might pass from Him, that He might be spared the ordeal that lay before Him, but He went on to the cross, nevertheless. God, we are told, did not see fit to answer His prayer. But the book of Hebrews says differently. The old version has it thus: "Who, in the days of his flesh when he had offered up prayers and supplications with strong crying and tears unto Him that was able to save him from death, and was heard in that He feared;" and a modern version translates it: "Crying aloud and weeping as He pleaded with Him who was able to bring Him in safety out of death, and he was delivered from the terror from which He shrank."—Heb. 5:7. Was it physical death from which our Lord shrank?

Many ordinary humans have not shrunk from that. No, it was something else; something more fearful, more terrible. It was His becoming the sin-bearer of the world. He had never been sinful. Sin, in any of His forms, had never laid its clammy hand

on Him, and He recoiled from becoming identified with the sin of the world. In fact, so terrible did the ordeal become that it seemed to Him that even God had forsaken Him. In the words of another, "Think how you would feel if a leper twined his rotting arms around you, hugged you to his foul breast, breathed his fetid breath into your nostrils, and kissed you. But leprosy was only the emblem of sin. Compared with the pressure of sin itself on our Savior's soul the embrace of the leper on your body would be as the touch of a finger to the thrust of a sword." No, He was not afraid of death, but of something worse. If we were all as afraid of the contamination of evil as He was, 'twould be a happier and more livable world.

SAINT LUKE was a Greek physician, and he is the only one to mention the dripping of blood, as Christ agonized in prayer. Luke tells us in the first two or three verses of his book how he gathered his materials for his life of Christ; how he consulted eye witnesses, and got the most definite and authentic information possible. He was not one of the Twelve, hence he must have gotten the information concerning the sweating of blood from some one else, perhaps from one of the three men who went with Christ into the garden.

It is recorded of Charles the Ninth, of France, that, as he was dying, he was so overcome by the pangs of remorse concerning the massacre of St. Bartholomew, that blood came from the skin and stained the bed on which he lay.

It is another indication of crisis, that the three most trusted disciples should have slept, thru the Gethsemane prayer. "He found them sleeping for sorrow." It seems like a queer combination of words, doesn't it? One would think they would be very much alert and awake. But they had evidently been on a long strain, and momentarily they dozed off. But its effect on Christ was most pathetic. "Could ye not watch with me one hour?" If He was affected by this seeming indifference then, what is His attitude toward us Christians now, as we apathetically face wrong in the world, and are not active in combating it?

The other day I read that the church has no interest in the peace question. The average congregation will doze off like Peter, James and John, as soon as the minister begins to talk about international peace. The church simply has no interest in it.

A few weeks ago an American came back from Europe. He had been in Germany and Austria. He stayed a day or two with a German professor. During the days of the armistice a baby was born in the professor's home. There was no milk for the baby, and the professor walked the streets trying to get a few drops for the crying child, and never got any. That child now suffers from the lack of food at that time. Peter, James and John went to sleep while their Master was in an agony of prayer. The church is asleep now, while He agonizes over the possibilities of more war, and more pain to the innocent.

SUNDAY SCHOOL LESSON FOR MARCH 11

SUBJECT:—Jesus in Gethsemane.
LESSON:—Luke 22.

GOLDEN TEXT:—"Christ also suffered for sins once, the righteous for the unrighteous, that He might bring us to God."—1. Peter 3:18.

Beyond Rope and Fence

(Continued from page 341).

cuts in the edge of that floor. Where, unable to remove the loose earth, it lay along the bank in steep hills which rose up from the bottom of the canyon like gigantic teeth, all crumbling more or less, all dotted with stones and covered here and there with blotches of sagebrush and cacti.

In the centre of the flat-bottomed canyon, as if an ancient torrential flood had spent itself and narrowed down at last to a small, shining stream, a quarter of a mile in width, ran the Red Deer River. In the middle of the half-mile wide space between the river and the hills that made the wall of the canyon, stood the buildings of the ranch. The house, a small single struc-



ture, stood on the east end of the spacious, sandy yard; while opposite and facing it was the long, red barn with its open door below and the gaping window space in the loft above. North of the barn and against its blind wall there was a big corral, divided into two parts by a partition. The corral walls as well as the partition were made of logs laid horizontally, a foot apart and rising to a height of some eight feet. Each of these two sections had huge swinging gates which opened inward.

As helplessly as the waters of Niagara, the frantic mothers, stealing side glances at their little ones and feeling them at their sides, poured down the steep incline, between the giant teeth, into the mouth of the canyon, slipping, sliding, and leaping downward riskily, in haste and fear. On the level bottom of the canyon, the buckskin mare made an attempt to turn from the path which led to the rancher's buildings in the hope of getting to the river beyond; but one of the horsemen divined her rebellious intention and shot by her like a flash of light, heading her off and forcing her back. She realized the futility of baffling their superior wills; but went back with an angry shake of her wise old head and a deliberate scowl of hatred for the tormenting man and the servile horse under him who was betraying his kind.

However the old mare happened to feel, the little buckskin, since the forces of evil had as yet made no attempt to separate her from her mother, shook the fear from her heart and took all the delight there was to take in this unexpected excitement of the day. Healthy to the last cell in her body, the race had merely accelerated the circulation of her blood; and the ease with which she was able to keep up with her mother made her conscious of a great and thrilling power. Her eyes and nostrils dilated, her mane bristling and her tail unfurled, her springy legs carrying her with ease, there was an expression of boundless joy in the motion of her graceful body.

The gates of the corral stood wide open. Being so driven that they could not swerve from the path, half the group poured into one section of the corral and the other half into the other. When they turned at the opposite walls realizing that there, there was no way out again, and came back toward the gates, they saw the men closing them.

Only the soul that has been trapped knows the crushing torment of four relentless walls. Round and round they went, madly and stupidly, and clouds of beaten earth rose from under their feet and choked them. Finally becoming aware of the fact that the men were not pursuing them any longer, they packed into a corner of the corral

and, looking over the corral walls and between the logs, sought to learn what they were doing. They saw one man building a fire in the open, but a few paces from the corral; while the other was calmly and portentously making preparations that were only too familiar to the old mares.

The little buckskin, beside her mother, always beside her mother, clinging to that big beloved body as the soul clings to life, was wedged into the very corner and right against the logs of the wall, so that her frightened eye, in the middle of the open space between two logs, could see the rancher's house some four rods away.

Her sides were still throbbing violently when she saw the house door open. A little girl appeared. The little filly did not know what kind of animal that was except that she guessed that it was some sort of man. She perceived with renewed trepidation that the little girl was hopping and skipping directly toward her. In her fright she pressed tight against her mother, but her mother, much more concerned with the men and apparently indifferent to the little girl, would not move an inch. When suddenly the little buckskin felt the touch of the little girl's hand on her back, she called out frantically to her mother. But the old mare bent down her long neck, touched the little head with her soft, warm lips, murmured reassuringly and then looked away again. By that time the filly realized, uncomfortable though she was, that the little hand was not going to hurt her.

The little girl climbed up two of the logs, moved slowly toward the little buckskin's head, talking softly and coaxingly as she moved. The filly listened with ears pricked high. In the stream of meaningless prattle, the foal became aware of the existence of the combination of sounds, "Queen," as one becomes aware of a constantly repeated melody in a piece of music. By the time the little girl had carefully push-

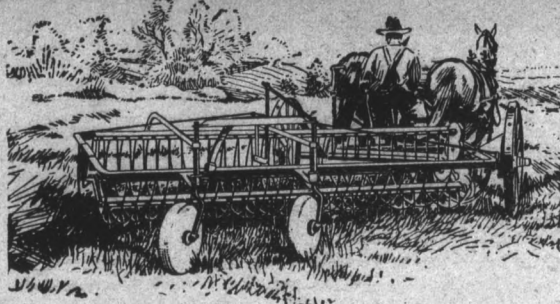


ed her head through the space between two logs, directly in front of the filly's muzzle, the little buckskin, though frightened again, became exceedingly curious. There was something very disarming about that soft voice and the soothing repetition of the word "Queen." She cautiously stretched her muzzle, sniffing at the little mouth, moving it closer and closer and just when she touched the little girl's face, with a cry of delight the little girl kissed her fervently on the nose.

She drew her muzzle away quickly and looked with a frightened eye. It had interrupted her attempt to sniff, however, and once more assured that there was nothing harmful about the little girl, she made a second attempt. The little girl continued calling her "Queen," coaxingly, till the little muzzle touched her lips again and once more she kissed her, crying out again with delight.

(Continued next week).

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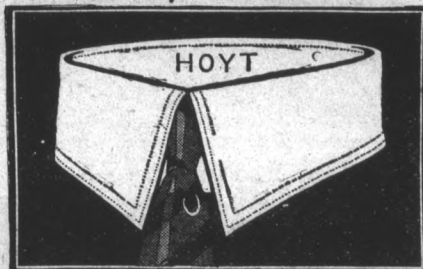


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Woman's Interests

Modern Home Improvements

By the Prize Winners

WHAT one change or improvement would be the greatest benefit to your home, or which would you rather have installed? The answer to this question by the readers of this department indicated their keen appreciation for the things that go to make up an ideal home. No matter what was lacking in the way of minor improvements, they chose to solicit the greater improvements and to do without the lesser. In selecting the improvement that would save an ample amount of labor and add to the contentment and comfort of the whole family, the housewife was choosing one which would give herself the most pleasure.

The improvement most preferred by the housewife of the rural home was running hot and cold water in the kitchen. In fact, 48 per cent chose this improvement. Some wished for just a cistern with the soft water pump at the sink. Others desired the installation of a complete system of running hot and cold water.

Without a doubt this convenience is one which would tend to lighten the labor of the farmer's wife and add convenience to every member of the family. The actual daily labor represented in carrying water in and out and in transferring it from one receptacle to another is estimated from careful surveys to be two thousand foot pounds. On wash days the labor involved in handling water is increased to the amazing total of six thousand foot pounds, or sufficient labor to raise six thousand pounds one foot from its resting place.

Running water in the kitchen can be provided by a simple outfit costing a few dollars and consisting of a pitcher pump, kitchen sink and drain. The sink may well be considered as a necessity. Running water means health, less need for hired help, less money for doctors and medicine and a respite from back-breaking, nerve-racking drudgery of carrying water.

In the remainder of the letters, 15 per cent desired the use of the numerous conveniences of electricity in their home. Fifteen per cent wanted a bathroom, seven per cent spoke for furnaces, four per cent for a kitchen cabinet, four per cent for a handy wood box, four per cent for a separate kitchen and three per cent for a built-in wardrobe.

First Prize.

Mrs. J. R., Engadine, Mich.

The one improvement I consider to be the greatest benefit to my home and the one which would be most preferred is running hot and cold water. I have a family of six to wash for, to say nothing of the cooking and cleaning to be done, all of which require an abundant use of water. Were there running water in the house, the steps and energy thus saved are incalculable, after having carried the water for household use from a creek near the house and up a steep hill.

I think I am justified in taking first choice for the installment of hot and cold water in my home. The results would be a contented and happy mother, with plenty of time to devote to her four little ones just emerging from babyhood which need the presence of an untired and contented mother.

Second Prize.

Mrs. L. E. F., Parma, Mich.
In March of 1922
We moved out on the farm.
Leaving our modern home
With all its city charm.

I was told that I might have
The first improvement made,
But I must hurry and decide
On the wish that I most craved.

The "furnace" was a heating stove,
Which we would use only 'til May.
And I thought I better decide
On something to use every day.

Our lights were only kerosene lamps
But we would only use them at night,
And I knew that I could read or sew
What I needed to by sunlight.

There was no shed to keep fuel dry
But the cellar was large and barren,
We took out a window and chucked
The wood in,
It came up as dry as a "herrin'."

Now the water question puzzled me.
I decided to make that my plea.
That instead of going after it,
It would be brought in to me.

A trench was dug from well to house,
And a tank was put up high.
And the overflow goes to the barn
For the cattle, when they are dry.

Now I can turn a faucet,
In the pipe by the sink,
And always, when I am thirsty,
Can get a nice, fresh drink.

Now every day, in every way,
The idea grows brighter and brighter,
That I decided the right way
To make my housework lighter.

Third Prize.

Mrs. O. B., Howell, Mich.

My choice for the greatest improvement in my home would be the installing of an electric light plant.

To any of our farm sisters who are planning to add some convenience or improvement to their homes, here is hoping that it will not only afford pleasure and comfort to the well-deserving parents but that it may be a life benefit to every member of the household. If possible, let it be something that will help to strengthen the bonds of the family affection and open the door to a better and brighter kind of life lived upon the farm.

There is no other place where the family spends so many evenings together as they do on the farm. We feel safe in saying that it has been the brilliant lights of the city streets that has led many of our dear boys and girls from a life of usefulness on the



One of the models for the new spring suit that has good lines and is strikingly simple in design. This three-piece walking suit of emerald green altime silk, a new rough jersey fabric suitable for street or sports wear, is trimmed with white soutache braid.

farms. We, as parents, are only beginning to realize and appreciate the wonderful possibilities and influences for good that electricity brings to the farm home.

One has only to press a button and a room can be instantly filled with light and cheer. This factor alone could not help but create an atmosphere of good feeling and, by having all the farm buildings lighted, it will be no longer necessary to stumble about with a lantern. As time passes, many of the numerous conveniences, such as the electric iron, washer, vacuum cleaner, etc., may be purchased.

Fourth Prize.

Mrs. S. R., Pontiac, Mich.

Since coming from town to our farm several years ago, we have transformed an old-fashioned farm house into quite a modern looking home. A dining room was made by taking out the partition between the pantry, that was not needed, and a bedroom that was seldom used. A bathroom that opens from the kitchen was also added. New potches and windows, a cupboard on one side of the kitchen, and a good cistern inside with sink also have their part in the change.

But the one improvement needed to make the work easier and the home more comfortable and pleasant is an electric lighting system. This would supply lights for power upstairs and down as well as running the washing machine, iron and sweeper. In the evening it is almost impossible for the whole family to read and study at the same time, unless three or four lamps are burning in different parts of the room. The cleaning and filling of so many lamps takes up much time and energy.

The lamps are burned in the morning from five-thirty until eight on some mornings, and again must be lighted in the early evening on these short days. So a good share of the work during the winter must be done by artificial light. I hope that in the future every farm home will boast a complete lighting system of some sort.

Fifth Prize.

Mrs. E. H. C., Allen, Mich.

I believe the greatest benefit to my home would be a bathroom with all its modern conveniences. I am always much interested in home improvements of any kind. The women haven't had enough of the home improvements that belong to a modern home.

Boost the home improvements along and if we don't live long enough to enjoy them, the next generation will. Some homes think their children ought to begin the way the old people commenced, but that is not an improvement. Brick ovens are not in style any more. They have stepped aside for the modern gas and wood ranges. Hand sewing has also taken a back seat, and the sewing machine follows for the use of the housewife when doing the family sewing.

To have the home thoroughly modern and for the health and contentment of the entire family, a bathroom is a much needed improvement.

POTATO PUFFS.

Mash two cups of hot boiled potatoes and add the beaten yolk of an egg. Stir well and add half a cup of rich milk, salt, and a piece of butter the size of an egg. Beat until light and creamy and fold in the beaten white of an egg. Heap in a baking dish and bake until eggs are firm.

Household Service

PREPARING FOR THE NEWCOMER.

What material is best suited for the babies' first clothes, especially the nightgowns, dresses and coats? Can you tell me the numerous accessories I will need at first?—Mrs. H. C.

Nainsook, cotton flannel, wool flannel or wool and cotton flannel is quite suitable for the nightgowns, according to the time of the year. The little dresses may be made of nainsook, batiste, fine dimity or handkerchief linen. For the coat, use challis, cashmere, henrietta cloth or corded silk with china silk for lining.

On receipt of a stamped envelope I will send you an address where all the needed accessories may be obtained at a reasonable price.

TO FILL THE CRACKS.

Will you please tell me what to use as a crack filler on painted floors that will stay in? I used a commercial filler last spring. It held till furnace fires were started and then rolled out.—Mrs. G. H. B.

A good formula to follow in making a home-made crack filler is: One pint of linseed oil, one and one-half quarts of turpentine, one pint of whiting or cornstarch.

This will make a white filler. To darken for oak add one teaspoon of raw umber; for walnut, add one teaspoon of Venetian red, half teaspoon yellow ochre; for mahogany, add one-quarter teaspoon of yellow ochre, half teaspoon Bismarck brown, and a teaspoon of burnt senna.

Would advise that you explain your your difficulty to the merchant who sold you the commercial crack filler, and perhaps he can recommend a different brand.

TO MAKE SHORT CHURNINGS POSSIBLE.

A recent inquiry by Mrs. R. M. asked what could be done to convert cream into butter more readily. I have always followed this method and have had no trouble with long churnings.

After straining the milk into suitable receptacles let heat until it is scalded, not boiled, and then set it away until the cream rises.

The butter will come in five or ten minutes after beginning to churn, providing the cream is of the right temperature when placed in the churn.—Mrs. R. F.

Fashion Book Notice

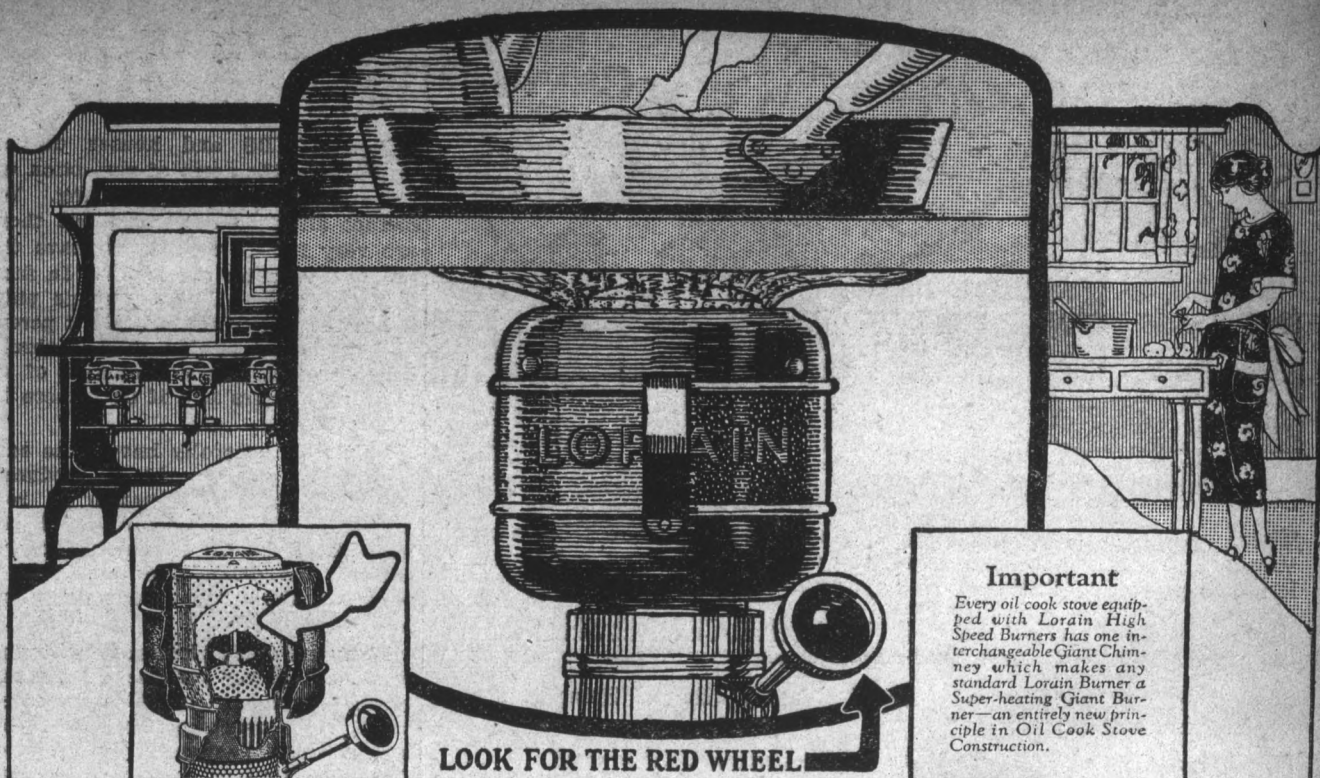
OUR up-to-date spring and summer fashion book is now ready for you. It contains many attractive spring models that will help you in your spring sewing as well as a comprehensive article on dress-making and some points for the needle.

Send twelve cents in stamps or coin for this useful pattern catalog, to the Michigan Farmer, Pattern Department, Detroit, Michigan.

A CORRECTION.

THERE was a mistake in the statement concerning Warren Wood, of Kingsley, who was winner of fourth prize in the Michigan Farmer Better Baby Contest. This youthful citizen is three months old, weighs twelve and three-quarters pounds and is twenty-four inches tall.

The 1920 census values American farm property at eighty billion dollars.



LOOK FOR THE RED WHEEL

Read the "Lorain" Guarantee

BECAUSE the short chimney oil stove burner produces an intense flame which strikes directly on the bottom of the cooking utensil, the heat generated has, in the past, caused the early destruction of its vital part, the inner combustion tube.

This fault has been completely eliminated in the Lorain High Speed Oil Burner by making the inner combustion tube of "Vesuvius Metal" which is not affected by the destructive action of this intense heat.

Therefore, American Stove Company now gives the following unconditional guarantee with each Lorain Oil Burner.

Guarantee Should the inner combustion tube of the Lorain High Speed Oil Burner burn out within 10 years from date of purchase, replacement will be made entirely free of charge.

Flame Strikes Against Cooking Utensil

If you want an Oil Cook Stove that cooks as quickly and as well as a Gas Stove you must get one with a short chimney burner, where a clean, odorless, blue flame strikes directly against the cooking utensil.

For more than ten years the Lorain High Speed Oil Burner has given perfect satisfaction in thousands upon thousands of homes. It gives an intense heat. It's easy to operate. It seldom gets out of order, or needs cleaning. The wick won't stick, and the vital parts won't burn out. Read the Guarantee.

Many famous manufacturers of oil cook stoves now have adopted the Lorain High Speed Burner as standard equipment. Among these many makes you'll surely find a stove that will exactly suit you in size, style, color and price. If you can't locate a dealer near-by, write us, and we'll gladly send you the name of the nearest one.

Important

Every oil cook stove equipped with Lorain High Speed Burners has one interchangeable Giant Chimney which makes any standard Lorain Burner a Super-heating Giant Burner—an entirely new principle in Oil Cook Stove Construction.

Special Features

Patented Wick-Stop stops wick at Correct Lighting and Burning Point

"Boil-Over's" Can't Reach Wick
Wick Seldom Requires Trimming

The Wick Won't Stick
Easy to Re-Wick

Many famous makes of Oil Cook Stoves are now equipped with the Lorain High Speed Burner, including

QUICK MEAL—Quick Meal Stove Co. Div., St. Louis, Mo.

DIRECT ACTION—National Stove Co. Div., Lorain, Ohio.

DANGLER—Dangler Stove Co. Div., Cleveland, Ohio.

CLARK JEWEL—George M. Clark & Co. Div., Chicago, Ill.

NEW PROCESS—New Process Stove Co. Div., Cleveland, Ohio.

AMERICAN STOVE COMPANY, St. Louis, Mo.

Sole Manufacturers of Gas Ranges Equipped with the Lorain Oven Heat Regulator
World's Largest Manufacturers of Cooking Appliances

LORAIN HIGH SPEED OIL BURNER

MICHIGAN FARMER PATTERNS.

No. 4247—Ladies' Corset Cover. Cut in four sizes: Small 34-36; medium 38-40; large 42-44; extra large 46-48 inches bust measure. A medium size requires 1½ yards of 36-inch material. Price 12c.

No. 4238—Ladies' Blouse. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires three yards of 36-inch material. Price 12c.

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Send for our new book of Wall Paper Samples and see the MANY OTHER big values we have ready for you. It shows our complete new assortment—grass-cloths, tapestries, oatmeal papers, leather patterns, fabrics. And all at prices to suit your pocketbook. Among the better grades, we have a big variety for only 50c and up per DOUBLE LENGTH roll. And remember, you get twice as much wall paper in one of our 16-yard DOUBLE LENGTH rolls as in the ordinary 8-yard single roll.

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Contains over 100 Actual Samples

Be sure to get a copy of this book before planning your Spring decorating. It is made up of actual large-sized samples. With each side wall is shown a sample of the border to match. Easy and pleasant to select your wall paper this way.

Send for this interesting and valuable book today. Ask for Wall Paper Sample Book, No. 1923 W. Address our House nearest you.

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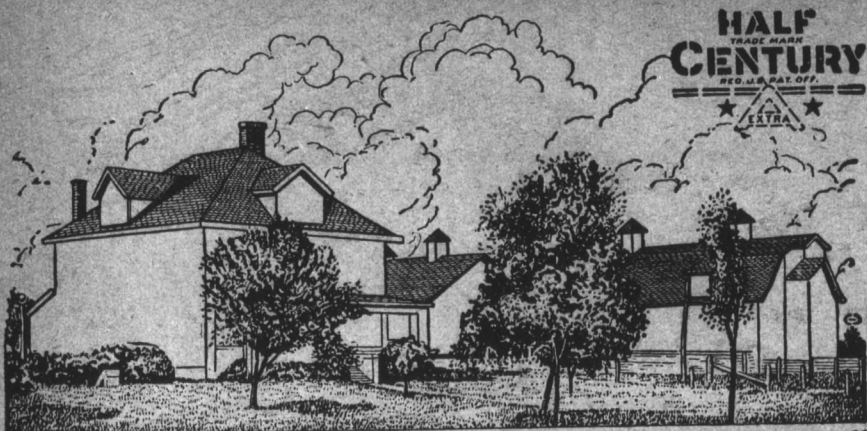


No. 4283—Child's Set of Short Clothes. Cut in four sizes: Six months to one year, 2, 3 and 4 years. It requires 1½ yards for the drawers, and 1½ yards for the petticoat, of 36-inch material, for a two-year size. Price 12c.



No. 4289—Child's Dress. Cut in four sizes, 4, 6, 8 and 10 years. A six-year size requires 2½ yards of 36-inch material. Price 12c.

(Other patterns on page 346).



"NO HOUSE or BARN is BETTER THAN ITS ROOF"

There can be no permanent satisfaction, economy or real investment value in any structure if it does not have a durable weather resisting, long lasting roof. That's why it pays to roof with

"HALF CENTURY" BRAND WHITE CEDAR SHINGLES

Laid with Galvanized or Copper Nails

Here are four reasons why "Half Century" Brand Shingles are a superior investment.

First, because White Cedar is the best "weather-wearing" shingle wood.

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Fourth, because they are White Cedar they take any shade of stain or paint beautifully.

"Half Century" Shingles live as long as their name. It pays to insist on having them for your roof. All lumber dealers can supply you. Insist on seeing the above Trade-Mark on every bundle. It's your guarantee of quality. And remember this: "Half Century" Shingles outlast common steel nails by a long, long ways. Be sure to use galvanized or copper shingle nails.

Write for valuable booklet, "How to Lay a Shingle Roof." FREE.

WHITE CEDAR SHINGLE MANUFACTURERS

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Michigan Farmer Pattern Service

in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires five yards of 36-inch material. The width at the foot is about two yards. Price 12c.



No. 4269—Ladies' Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 2½ yards of 36-inch material for the waist, and 2¾ yards for the skirt. The width at the foot is 2¾ yards. Price 12c.



No. 4273—Ladies' Dress. Cut in six sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires four yards of 40-inch material for the dress, and 1¾ yards of 36-inch material for the guimpe. The width at the foot is 2¾ yards. Price 12c.



No. 4257—Misses' Dress. Cut in three sizes, 16, 18 and 20 years. Age 18-year size requires 5¾ yards of 36-inch material. The width at the foot is about 2¾ yards. Price 12c.



No. 4262—Ladies' Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5¾ yards of 36-inch material. The width of the skirt at the foot is 3¾ yards. Price 12c.



No. 4268—Ladies' Apron. Cut in four sizes: Small 34-36; medium 38-40; large 42-44; extra large 46-48 inches bust measure. A medium size requires 3¾ yards of 36-inch material. Price 12c.

No. 3882—Ladies' House Dress. Cut



No. 3959—Girls' Dress. Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size requires 2¾ yards of 40-inch material. Price 12c.



No. 4253—Girls' Dress. Cut in four sizes, 8, 10, 12 and 14 years. A 10-year size requires three yards of 40-inch material. Price 12c.

Send all orders to Pattern Dept.

The Michigan Farmer,

Detroit, Mich.

Diamonds and Roses

By R. D. Cooper

DIAMONDS and houses do not reach the acme of perfection until in the proper setting. We cannot all have diamonds, but there are very few of us but can have the proper setting for our homes. In fact, a house is not a home complete until it has the proper setting. Be it perennial or annual flower gardens, shrubbery or roses, or a combination of all these, it matters not, if only there be the setting.

If it were generally known the ease with which roses could be produced, we would become a nation of rose growers. There are types of hardy roses adaptable to the most rigorous climate, that will give a wealth of beautiful bloom throughout the warm months.

Many are deterred from growing this wonderful flower because of the supposed "exacting conditions required. True, roses reach perfection in clay soil, require a sunny spot protected from strong winds, and there are numerous bugs that like them so well they cannot resist eating them." But on the other hand, by using care in the selection of varieties adapted to needs of your particular locality, creating soil conditions and furnishing wind breaks, anyone can grow roses.

Here in central Michigan, we grow the hybrid ever-blooming teas and hybrid perpetuals, grown on their own roots, not budded, and are very seldom troubled with disease. Our soil is a light clay loam, just ordinary good garden soil, and we have a succession of bloom from Decoration Day until killing frosts. Our circular beds of teas are on the north side of the house, far enough away from the buildings to get the morning sun, but shaded from the heat of mid-day.

We built a lattice work fence to the north and west of these beds in the form of the letter L, planting alternately White Spirea and Dr. Van Fleet climbing roses. The wall of vines and the thick growth of the spirea have been sufficient protection, in spite of the fact that the position is a very exposed one away from the protection of adjoining buildings.

The hybrid perpetuals or bush roses are to the south of the house, in rows without any protection excepting that of the house, yet they thrive, grow and bloom every season. Unfortunately, our front yard is too shady to permit of growing any flowers.

After many years experience growing roses we have found the following varieties of teas as being perfectly hardy in this latitude: Jonkheer Mock, the Killarneys, Lady Hillingdon, Mrs. B. R. Cant, La Detroit, Radiance, Richmond, Sunburst and Wm. R. Smith. These are planted two feet apart.

Of the perpetuals, we have cut the list to American Beauty, Paul Neyron, Frau Karl Drushki, Ullrich Brunner, General Jack, and, of course, the old-fashioned Harrison Yellow. We plant this bush type three feet apart.

In the climbers, we have the unparalleled American Beauty and Dr. Van

Fleet, both wonderfully vigorous and hardy, the buds borne on long stems, equal in beauty and fragrance to any hot house rose. The American Pillar, as rugged as any, covers an archway, a mass of large single pink blossoms, with their golden yellow stamens, a sight for sore eyes. Of the cluster type we, of course, grow all the Perkins, using Excelsa for red, and Gardenia for the yellow.

Now to get back to soil conditions. If your soil be heavy clay or light sand, it will produce an abundance of roses if properly handled. If you have heavy clay that hardens and packs during the drier months, in the early spring, spade in well rotted manure, the deeper the better, and mix thoroughly. If fine sand devoid of humus, use the same method, with the addition of plenty of fresh cow dung.

When this work is done, cover bed an inch thick with hydrated lime, raking it well into the soil. If soil is in the least dry at planting time, puddle the young plants, that is, add water and soil alternately until the consistency of thick mud, finishing the operation by hilling the young plant with dry dirt. Later, if any of your charges have a tendency to stand still or some are inclined to make poor growth, a tablespoon of bone meal worked in around the plant will give them a new lease of life and promote growth. Repeat this about once a month.

For all chewing and sucking insects, we spray with a solution composed of a heaping tablespoon of Arsenate of Lead and one-third of a teaspoon of black leaf No. 40, to a quart of water. If mildew appears we sprinkle dry sulphur on the bushes while the dew is on in the early morning. If black spot bothers we spray with Potassium Sulphide, one ounce to three gallons of water. We use an ordinary quart sprayer, the first spray being applied as soon as the leaves are out in full, repeating as soon as the rain or dew has washed off the lead and nicotine. With the varieties we have named, you will have little trouble with mildew or black spot.

The climbing American Beauty is the first to bloom, about Decoration Day, followed quickly by the Van Fleets, then the teas and perpetuals.

In conclusion, please allow me to repeat an old phrase, "anything worth having, is worth working for." The things that come the easiest are the things we least care for. If you love roses you may have them; if you do not love them, you will be bettered by acquiring and cultivating the habit.

POTATO GEMS.

To one cup of mashed potatoes, add two eggs beaten light, two teaspoons of baking powder, salt, and three tablespoons of lard or other shortening, and one cup of sweet milk. Mix thoroughly and add enough flour to make a stiff batter. Drop into greased gem pans and bake in a quick oven. Serve hot with butter.



"When we Both Got Spanked," Son of Mr. and Mrs. Lentz, Charlotte, Mich.

Rural Health

By Dr. C. H. Lerrigo

PREVENT WHOOPING COUGH.

"If I thought," said the young mother, "that by keeping my child away from the disease at this time, he would get along all through life without ever having whooping cough, I would go to any amount of trouble to see that it was done. But it is so contagious that he is sure to get it some time. Why not now, before the big disadvantage of having him lose time from school has to be considered? While he is a baby I can keep him under my care and look after him much better than when he is bigger and harder to manage."

This sounds so much like a real argument, at first hearing, that I am anxious to expose its fallacy. Whooping cough is a dangerous disease, no matter when it comes, yet most of us have had it at some time in our lives; and because we are all living, and make no count of those who did not survive, we fail to credit the deadliness of this very common disease. Remember, therefore, that twice as many children die of whooping cough as die of scarlet fever. This will help you to classify it more accurately.

The most significant thing about whooping cough is that its chief virulence is among the younger children. Of all deaths from whooping cough, fifty-five per cent occur in children less than one year old, and ninety per cent in those under three. Therefore if your baby is unprotected until school age the chances of his getting through in good shape, if he does not take the disease, are very good indeed; far better than if he takes it before he is three years old.

Even a young child has a good chance of getting well, under good care, but it must be of the very best. My little girl of five gave the disease to her baby sister when the latter was only three months old. My wife and I had an interesting time for several weeks. There were many restless nights in which each took care of a coughing child the whole night long, to the exclusion of sleep. But both children recovered without ill effects and have grown to college age.

Let no one count whooping cough a light matter. Do your best to save your children from exposure. If they do take the disease see that they get the very best treatment available; and be very careful that you, for your part, do not take them around in public conveyances or to public places where they may give the disease to others.

EATING RAW CABBAGE.

Please tell me if it is safe to eat raw cabbage.—E. R.

Safe enough, if it is cleaned and served properly. There is danger if human excrement has been used as fertilizer, of course.

CONSTIPATION IN CHILD

My little girl of two years old is troubled with constipation ever since she began to cut teeth. What can I give her?—Mrs. M. B.

You must adjust this difficulty by diet. Possibly you may have to use an enema of water for a time, but it is better to do so than to give laxatives to a little child. She should be able to take a good variety of laxative foods by now. She may eat scraped apple, oranges, prunes, oatmeal with cream, graham bread and even a little bran. Are you quite sure that she gets enough water to drink every day? This is quite an important

thing for regulating the bowels. Another very important matter is to see that she is given an opportunity to evacuate the bowels at a regular hour every morning, regardless of her own inclination.

RECOVERY FROM INFLUENZA

How long should a person who has had influenza stay in bed? What can be taken as a tonic when getting over it?—J. O.

The person who stays in bed a sufficient length of time after an attack of influenza will need no other tonic than nourishing food. It is a serious mistake to think that one can get out and back to regular work sooner by whipping up one's forces with a tonic. After influenza the patient should stay in bed until all fever is gone and he begins to feel the buoyancy that indicates that the influenza poison is conquered. He should take up work again very cautiously.

NO INFORMATION PASSED ON.

C. M. writes that if the person signing certain initials will send to her his name and address she will write to him of a remedy. This is just to make it known that it is quite impossible to pass on such information to inquirers. We consider all communications as strictly confidential and destroy them as soon as answered. In any event, an interchange of suggestions for remedies would be a hopelessly involved affair.

FATTY TUMOR.

I am much interested in the Rural Health column and have a question to ask. Are fatty tumors dangerous? I have one on my back below my shoulder blade. It seems to be growing a little and has some aching. Is it best to have it removed?—R. M.

If one could be quite sure that a fatty tumor would not break down and become malignant there would be no objection to letting them alone, so long as they were not situated in such a position or were of such size as to create inconvenience. But such tumors do sometimes become malignant. It is therefore wise to have them removed while they are still in an innocent stage.

DETERMINATION OF PREGNANCY.

I am very much interested to know at what stage a doctor can say for sure whether or not a woman is pregnant. Can it be done without a physical examination?—K. P.

The diagnosis of pregnancy is not an easy matter in obscure cases in which the patient does not show any of the obvious and well known symptoms. Generally it can be made with a fair degree of positiveness by the third month of pregnancy, but I have known many cases in which this was quite impossible. It requires a physical examination; otherwise it is bound to be more or less guesswork.

PEROXIDE POISONOUS?

Please say if peroxide hydrogen is poisonous.—G. G.

No. Certain drugs are used in order to make a more stable preparation and these make it unpleasant, but it is not a poison in itself.

To get a higher appreciation of the horses on your farm, read our new story, "Beyond Rope and Fence," which is conceded to be one of the best animal stories ever written. You will find the first installment on Page 20 of this issue.



Get your vitamins naturally

Vitamin and mineral elements are part of the splendid nutriment which Nature stores in the field grains for nourishing and vitalizing the human body.

Grape-Nuts, made from wheat and malted barley, has for over twenty five years supplied vitamin and other elements necessary for perfect nutrition.

There's a crispness and flavor that delight the taste—and there's natural health-building goodness that makes Grape-Nuts with cream or milk a complete food—and wonderfully delicious!

Grape-Nuts is truly economical because a small quantity provides unusual nourishment.

Grape-Nuts FOR HEALTH

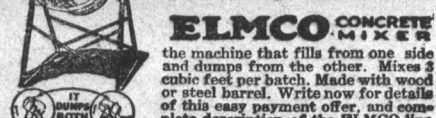
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That's all it takes to make you the owner of this handy mixer for concreting on the farm.



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ALL FREE

COUNT THEM Gold finished Necklace, Handsome stone set Bracelet, Cameo Ring, Persian Brooch, Hawaiian Ring, Signet Ring with your initial and your Birthstone Ring. All Gold-Plated, Complete Jewelry Outfit FREE for selling 20 packages of Bingo Perfumed Ironing Wax at 10c each. Extra present if you order now. Send no money. BINGO CO. Dept. 987 BINGHAMTON, N. Y.

GOOD FARMING PAYS

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MICHIGAN FARMER Classified Liners bring results. They cost little. Try one.

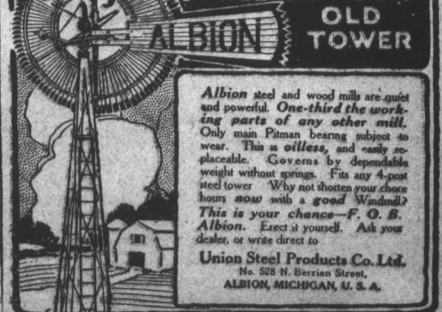
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Our paint has to be good, because we guarantee it. We can't afford to have it any other way. That's why we make our own paint—to be sure it is good—and why you can be sure, too. And why you save money on

Coverall House Paint \$168 to \$189 per Gallon

This price represents only one small profit over actual cost. You get full benefit of our huge purchases and quantity production. We sell direct to you, without any middleman's profit. We challenge comparison both with the quality of our paint and its low price.

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Prepotent



Every man who milks cows for a living knows that prepotency, ability to "breed on," is one of the best reasons for Holsteins.

HOLSTEIN PREPOTENCY MEANS:

Influence of 2,000 years of Breeding for Great Size and Ruggedness combined with highest yield - Strong Healthy Calves - Assured improvement in grading up common cows with Holstein bulls.

Let Us Tell You the Story
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EXTENSION SERVICE,
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For Sale, Senator Dunlap and Gibson Strawberry plants \$3.50 per thousand.
E. S. SWANSON, R. 2, Paw Paw, Mich.

\$7.50 After 30 Days Free Trial

The Belgian Melotte Separator - with the wonderful Self-Balancing Bowl. No other like it.

30 days' free trial—then, if satisfied, only \$7.50 and a few easy payments—AND—the wonderful Belgian Melotte Separator is **YOURS**.

No Money Down!

Catalog tells all—write.

Caution! U.S. Bulletin 201

shows that vibration of the bowl causes cream waste! The Melotte bowl is self-balancing. Positively cannot get out of balance therefore cannot vibrate. Can't tremor cream with milk. The Melotte has won 24 Grand and International Prizes.

Catalog FREE

Write for new Melotte catalog containing full description of this wonderful cream separator and the story of M. Jules Melotte, its inventor. Don't buy any separator until you have found out all you can about the Melotte and details of our 15-year guarantee which is infinitely stronger than any separator guarantee. Write **TODAY**.

The Melotte Separator, H. B. Babson, U.S. Mgr.
Dept. 91-03 2843 W. 26th Street, Chicago, Ill.



Runs so easily, bowl spins 25 minutes after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is porcelain lined.

Our Boys' and Girls' Department

Found In Our Letter Box

Letters from Pals for Our Correspondence Corner

Dear Uncle Frank:

I haven't written before as I didn't know whether you would accept my letter or not.

I am eleven years of age. I live in the edge of town on a ten-acre farm, and like farming very much.

I love to bake. I make candy nearly every week and help my mother bake cookies. The way I make fudge is as follows:

I take two cups of granulated sugar, two squares of chocolate, one-half cup of milk, one teaspoonful of vanilla and butter the size of a walnut. Boil until it threads. Then beat until creamy, put on a buttered plate, and cut into squares.

My paper is running out, so I will



Leah Gilbert, Memphis, and Brother.

close.—Respectfully yours, Bonita O. Dell, Vandalia, Mich.

I hope that hereafter you will not be so backward about coming forward. No letters are refused. I bet that's some fudge. I'd like to try it.

Dear Uncle Frank:

Received my pin O. K. Thank you very much for it. It is certainly worth trying for.

Say, Uncle Frank, just a simple question, why don't you give us more room, our space is getting so small. Can't the advertisements be kept on a different page? Why make us suffer? I am sure the boys' and girls' letters are increasing, as I heard from quite a few boy and girl friends of mine who read my poem and letters recently. So you see, they will make some effort in writing. Please say, yes, uncle, will you? If the room would be more generous we could have more letters, essays, poems and stories printed and the page would be more interesting. How many boys and girls are on my side? Now please print this and give me your idea. Bye, bye. Goldie Kleinhart, 3944 Mt. Elliott St., Detroit, Mich.

I wish I could say "yes." But we can't have more than our just share of space. That wouldn't be fair, anyhow. I guess we'll just have to do the best we can with what we get, won't we?

Dear Uncle Frank:

Hello, Uncle Frank! Here I am again, my fourth letter to you, and I give you fair warning I shall keep on sending them, although I never see them in print.

If you think I don't appreciate my Merry Circle button and membership card, here's where you are mistaken. I surely do, and I give you many thanks for them. The motto on the membership card means a lot, and I am going to try and live up to it.

Wishing you good success, Ruth Allyn, Mt. Pleasant, Mich., R. 3.

That's what I like to see, four times and still intends to try. I am very glad you are going to try and follow the Merry Circle duties.

Dear Uncle Frank:

I want to tell Edgar Gascho that he isn't the only one who can work that writes to you. I can run a car, plow, harrow, cultivator or binder. We have

some chickens, hogs, horses and cows. One thing I like to do, is to work with the plow, because we have a steady team. They walk steady.

Well, I guess this is all for this time.—Your nephew, Clayton Goetz, Elkton, Mich., R. 3.

I am glad you are so handy. Being handy will undoubtedly come handy to you many times. I would like to hear from some other handy fellows.

Dear Uncle Frank:

I received the membership card, and the wonderful Merry Circle button today, in good condition.

I thank you very, very much for it. It is surely beautiful. I am going to wear it every day to school, and will be proud to show it to all of my teachers. I have eight of them.

When I got home from school this afternoon, mother said to me, "Uncle Frank's picture is in the Michigan Farmer." I jumped up and said, "Oh, Goody!"

When I opened the paper, my, what a surprise. I didn't expect that picture, but it sure is a sweet one.

You surely were a darling little boy at the age of three, weren't you? I wonder who wouldn't think so? I wouldn't mind having a cute little baby brother like that.

I was sorry that I didn't win a prize last time, as I spent most of my time at the contest, but I am satisfied with the pretty button, but I hope that I'll win this time.

This is the fourth time I've written to you, so if this letter isn't in print, I guess I won't write any more. It's four times and out.

I didn't realize my letter was getting so long. My! oh! my!

Thanking you again, very, very much, I will close with best wishes from a niece, Florence M. Dirker, Saginaw, W. S., Mich., R. 1.

I was half tempted to leave your letter out this time to find out if you would be a quitter. But, you see, it got in, didn't it? I'd make some baby brother now, I guess.

Dear Uncle Frank:

I see a few that tried the second time and succeeded. So I thought I would try again.

I am eleven years old, have brown eyes and dark hair, but not the least bit pretty. So I guess you know how I look if I am not pretty.

I hope that you look like that picture yet. And I hope you smile oftener now than you said you did when you were three years old, because I like to have uncles that smile once in a while.

I live on a farm, so you see I have a lot of things that the boys and girls of the city can't have, and I think that the farm is the only place to live. My dad gave me a little calf and I sold it for \$68, which he is going to give me after I am a little bigger.

I think I had better close or Uncle Frank will take the broomstick to me. From another niece, Miss Beulah Herford, Elkton, Mich.

If you are as nice as your letter you are not very homely. I guess I'll have to smile once in a while so you'll like me. You have the right attitude about the farm.

Dear Uncle Frank:

I received my Merry Circle button and membership card, and wear it every day. Almost every day someone wants to know what I have joined. I tell them The Merry Circle Club, of the Michigan Farmer.

I have never noticed letters written from anyone from Clarksville, and so thought I would let you know that it is on the map, although it isn't very large. I have written once before, but I guess my letter must have hit the basket under your desk. But what's the use of giving up, the first time, especially?

Say, I think you were the cutest little "toady" when you were three years old. Now, I would like to know, have you changed any since then? Do you always smile like that?

I live on a farm, and would not live in the city for anything.

I am going to be a school "marm" when I graduate. Everyone says I'll make a crabby one. But looks are deceiving sometimes.

Please tell Emma Spatka, of Wellston, not to be surprised if she has company next August, because I simply love watermelons, don't you, Uncle Frank?

But I must close. If my letter doesn't pass I'll try again and again, until I run out of stationery.—Sincerely your niece, Evelyn Brooks, Clarksville, Mich., R. 2.

I am very glad you are one of those keep-a-trying folks. I know you will make a good school teacher because you will keep on trying until you do. I have changed some since I was a "toady," but not much. That's what I say, "what's the use of giving up?"

TELLING NORTH WITHOUT A COMPASS.

MANY a joyous hiking trip has been ruined, and many a life saddened or destroyed through parties being lost in the woods or mountains because of their inability to tell direction. And yet, in nearly every party of three or more there has been a very simple device at hand which, had the owner but known it, would have saved much anguish.

Hereafter, when you go on a hiking trip, suppose you let your time piece guide you through the wilds. For it is nothing more nor less than a watch which can guide you if you should lose your bearings; that is, if it is a sunny day.

Hold the watch so that the hour hand points in the direction of the sun. The point that is exactly midway between the hour hand and the figure twelve on the dial will be due south.

Simple; but how few are aware of it!—G. D. O'Neil.

HALF MILLION CLUB MEMBERS.

OVER 505,000 farm boys and girls, representing practically every agricultural county in the country, were enrolled in agricultural extension clubs in 1921. They raised or produced in their work, 30,000 acres of corn; 2,000 acres of potatoes; 31,000 swine; 3,700 beehives; 6,000 dairy animals; 566,000 chickens; 2,600,000 quarts of canned fruits, vegetables and meats; 347,000 articles of clothing, and 370,



By Mildred Helfer, Ithaca.

000 loaves of bread, as well as wheat, beans, sheep, garden and orchard products, and others, totaling \$7,069,877 in value. Some 2,500 county extension agents directed the activities of these boys and girls, and 10,000 local men and women volunteered to assist in the work. For the fiscal year ended June 30, 1922, \$1,045,583 was provided jointly by the department and the state agricultural colleges for club work.—Turner.

Girls Smarter than Boys?

Some Interesting Letters Received in Recent Contests

By Albert Juillerat, Muskegon, Mich. for president, then we'll see who is smarter than the boys be the smartest.

1. They take more interest in school and church than most boys do.

2. Girls have more time to study than boys.

3. Girls are forced to use their heads more, because a man can usually find work for his hands.

4. They seem to realize that they may have to be the family book-keeper.

5. Girls get better acquainted with their teachers.

These are my reasons and I have five sisters and a mother to back me up.

By Percival Gifford, Ludington, Mich.

During the war, with no former training whatever, they took men's places and did men's work satisfactorily. Most of them did the work better than men.

Their sense of touch is fine and the firms for whom they work said that for fine work they were better than men.

Women have always been guarded by man while he learned to fight and procure food. Thus, she becomes proficient in the finer arts.

Boys smoke, chew and drink. All this puts them behind girls.

In school I have watched both closely and I find that the girls are one or two years ahead of the boys.

There are few things on earth which men do which women have not done.

By Harold Coles, Montgomery, Mich.

I think the boys are the smartest. If the girls were, they would not wear those "knickers" to make people snicker, and make themselves look like boys. And they would not use rouge and powder, bob their hair, or wear their skirts up to their knees. You never see boys doing such foolish things.

Well, I guess this is enough to show which is the smartest, so will close.

By Opal Bogant, Lapeer, Mich.

I think girls are smarter than boys because boys are always playing and acting up, throwing paper wads in school and tying the girls' sashes in knots and pulling their pig-tails, which isn't very smart at all.

Girls are more quiet and like to stand at the head of their class. Of course, there are smart boys, too, for if there were not, they wouldn't get to be president.

Well, just wait until the women run

By Anna Wetzel, Romeo, Mich.

I am a girl, so naturally I think girls are smarter than boys, for the following reasons:

1. Girls are a better hand to cook and sew than boys.

2. Most girls are just as active and bright about helping in the field as boys.

3. Girls are more company to strangers than boys, as boys don't think of entertaining because they all like to be by themselves.

4. Girls could make their own living without the aid of men if it were necessary.

5. A home is complete if there is a woman around, and it does not have that lonesome feeling.

By Agnes Kulbokas, Grand Rapids, Michigan, R. 6.

I think that the girls are smarter because I have seen many girls do the field and housework. But I have not seen very many boys do housework. My brother can do a few things in the house, such as sweep the kitchen floor or help wash dishes. But on the girl's side, I have seen most of our neighbor girls and myself go out in the fields, plant corn, weed corn, weed the garden and cultivate beans.

THE TALE OF A PEPPER-POT.

By Agnes Erickson, Lake City, Mich. Little Jimmy went and got His mother's great big pepper-pot, And showed it to his daddy's horse. Who took a sniff at it, of course.

Jimmy thot the horse to please For getting pepper makes you sneeze. Then Dobbin sneezed, oh! such a lot, That Jimmy dropped the pepper-pot.

And then instead of being pleased, Dobbin simply sneezed, and sneezed, He sneezed for twenty times or more, And sneezed poor Jimmy off the floor.

After a shake of collar and cheek, Jimmy surely picked his feet. Dobbin to ruminate went once more, Tho' nose and eyes were red-hot sore.

THE CLOCK.

By Pauline Jenny, Crivitz, Wisconsin. The clock goes tick, tock, And never stops to rest. It sings the same old song, And always does its best.

It never stops to play, And never thinks of resting. It works the whole day long, To us this would be testing.

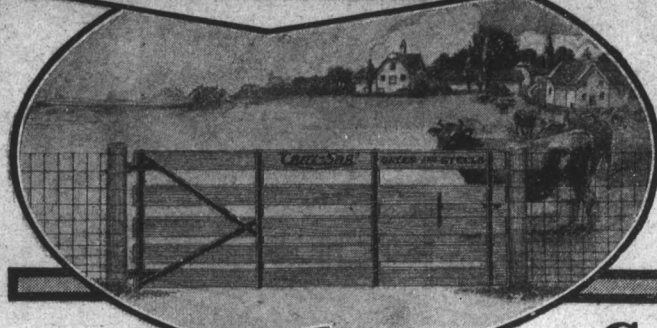
Its face is always clean, It toils on with a will. It never stops to grumble, And it is never still.



"What ails the cow?" the Curate said. Alas, sir, and alack! She stepped upon a cowslip, sir, and fell and hurt her back."

—Virginia C. Wiley, Kalamazoo, Michigan.

"Can't-Sag" Gates



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Cheap Enough to Use Everywhere

Cost Less Than All Wood—Last 5 Times as Long

Every landowner will save money by having a free copy of my big new book of Can't-Sag Gates. Shows a full line of these strong, sag-proof gates of wood and steel built in the world's largest gate factory for less than you can build clumsy, all wood gates at home. Can't-Sag Gates have no wood joints to rot, no nails to rust or pull out. Every board is double bolted between four pairs of angle steel uprights. They always hang plumb and trim. They can't sag, warp, or twist out of shape. The steel and wood construction makes them flexible. They give under pressure but don't break. Top hinge is self-locking when gate is closed. Hogs can't root them off hinges. Elevating attachment can be furnished to let small stock pass under.

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My free Gate Book shows complete Can't-Sag Gates painted, ready to hang with your name or name of your farm, or "No Hunting" sign lettered on boards. Or, if you prefer I'll furnish everything but the boards and you can build your own Can't-Sag Gates at home and save still more money.

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Leland Stanford University Ranch, California.

Blue Valley Cream's Co. Chicago Farms of Joseph Leiter, "The Wheat King."

Post Estate, Postum Cereal Co., Battle Creek, Mich.

Funk Farms, Bloomington, Ill.

R. E. Olds, Automobile Manufacturer, Lansing, Mich.

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For Sale Nevada Farm and Grazing Lands

Large holdings, the property of one family, located in Western Nevada, in vicinity of the modern city of Reno, are being subdivided. Small or large acreage is available at reasonable prices and on attractive terms. These lands are adapted to beef and mutton production, dairying, intensive truck farming. Principal crops are alfalfa, potatoes, onions, vegetables and grain. Irrigation water is plentiful under old established rights. Come West—there are wonderful opportunities for the farmer. Deal with the owner and eliminate commissions. D. C. Wheeler, Inc., P. O. Box 731, Reno, Nevada.

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In Minnesota, Dakota, Montana, Idaho, Washington or Oregon. Crop payment or easy terms. Free literature. Mention state. H. W. Byerly, 71 Northern Pacific Ry., St. Paul, Minn.

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200 acres, clay loam, slightly rolling, located in Calhoun County, 1 mile from Battle Creek. Large house, large barn, silo, fences, all well kept up. The best of markets. One of the best kept up farms in miles. Owner, too old to work farm, must sell. We invite inspection. \$80 per acre. Communicate with Albert J. Huggett, Bancroft, Michigan.

80 Acres Convenient Detroit 8 Cattle, 3 Horses, Poultry

TOOLS, implements, seeds; grows big crops wheat, rye, oats, barley, corn, beans, hay; schools, stores, churches; pleasant surroundings; 70 acres tillable; wire-fenced pasture, woodlot; variety fruit; comfortable 6-room house overlooking lake, basement barn, silo. Owner called away. \$7500 takes all. Part cash. Details page 26 new illus. catalog. Bargains many states. Copy free. STROUT FARM AGENCY, 427KH Marquette Bldg., Chicago, Ill.

FOR SALE soil. Good buildings. 1 mi. to State road; 8 mi. to Ionia; 35 mi. to Grand Rapids. Must sell. This means money to you. H. A. Buehler, 5837 Calumet Ave., Chicago, Ill.

Wyoming Agency Dry and Irrigated Ranches, Chicken, Dairy and Stock Farms, Homestead Relinquishment, Cheap, Trade City Lots, Stores, Summer Homes, 16 Mi. Mts. Licensed and Bonded Dealer, Glensco, Wyo.

Wanted To hear from owner of land for sale O. K. HAWLEY, Baldwin, Wisconsin

Buy a Farm in the great fruit and farming country of Northwest Arkansas where land is cheap and terms are reasonable. For free literature and list of farms write J. M. Doyel Mountainburg, Arkansas.

FOR SALE 80 acre farm, 4 miles from railroad, town of 3500 population. 1 1/2 miles to school. Best of soil. Good well, house, barn, granary, young orchard, 12 acres fall wheat, 17 acres meadow, 10 acres fall plowing, balance pasture, all fenced. Wm. Greenfield, Onaway, Michigan.

80 A Clay Loam 50 A new seeding balance spring crops. Good 6 room house, barn, garage, 12x30 chicken house, young orchard. Price \$4000.00 — \$500.00 cash. H. S. HICKS, Lake City, Mich.

FOR SALE Farm. 80 acres adjoining south limits of South Haven on East side Fruit Belt R. R.; has good future for increase in value; price low; terms to suit buyer; address A. L. Foster, Room 620, 39 S. LaSalle St., Chicago, Ill.

FOR SALE 80 acres improved, 4 mi. city; horses, milking machine, cream separator and farm implements included. Good roads. One-half mile school and church. C. Zimmer & Son, R. A. Jackson, Mich.

WHY RENT When you can buy a farm in the famous Milk River Valley on easy terms? This Valley was once the bottom of the Big Missouri River. Most productive soil in the world. If farmed well two crops pays for the land. Write for FREE illustrated booklet and latest price list. FARMERS' LAND EXCHANGE, Saco, Mont.

MUST SELL to settle an estate 240 acre farm about 1/2 under cultivation. Balance timber and pasture well fenced. Good house, basement barn, shop, granary, hog and poultry house, good water, some fruit. Close to school and market \$25.00 per acre for quick sale. GEO. MUNN, Executor, Blanchard, Mich.

Sell your property quickly for cash, no matter where located. Particulars free. Real Estate Salesman Co., 515 Brownell, Lincoln, Neb.

Poor Man's Chance \$5 down, \$5 monthly buys 40 acres productive land near town. Some timber. Price \$225. Other bargains. Box 425-Z, Carthage, Mo.

80 Acres Improved \$65 per acre \$1000 proved \$67.50 per acre \$1000 cash. THE ALLEN COUNTY INVESTMENT CO., Iola, Kansas.

We Have Cash Buyers for farms at real bar gain prices. Describe fully. Central Land Bureau, New Franklin, Mo.

CASH YOUR PROPERTY QUICKLY, location immaterial. Give best price. Universal Sales Agency, Box 43, N. Topeka, Kans.

If You Want To Sell Your Farm Write, JEROME PROBST, Ann Arbor, Mich.

Our List of Central Michigan farms now ready. If you wish to buy or sell write us. MILLER & MORSE, Edmore, Mich.

Want to hear from party having farm for sale Give particulars and lowest price. JOHN J. BLACK, Copper St., Chippewa Falls, Wis.

Additional Farm Ads. on Page 359



DIRECT
TO
FARMER

Why Jamesway Service Must be Direct to Users

YOUR farm problems are distinctively your own. Your dairy barn, hog barn, poultry house and other buildings must all be designed, planned, equipped, ventilated or remodeled to meet your individual needs and conditions. Only by direct-to-user contact can this engineering service be properly rendered.

Jamesway Service is rendered direct to you. You and the Jameswayman meet on your farm—you to tell your needs, and the Jameswayman to supply them direct to you from the Jamesway Engineers and factories. Direct dealing also means direct-to-user prices based upon lowered selling costs and the doing away with unnecessary expense. For example, think of being able to buy Jamesway stalls—real Jamesway quality for only \$6.50 each.

Write and Get Jamesway Direct-to-Farmer Prices

Get Jamesway ideas and suggestions on building or remodeling. Ask the Jameswayman to outline a plan that will save you money, time and labor—enable you to own a better barn, with better equipment, at lowest cost.

Our new book, "What We Should Know About Each Other," tells what Jamesway Service can do for you—and how you can employ it for your needs. Send us your name and learn about Jamesway Service along building, remodeling, planning, equipping and ventilating lines. Ask for Book No. 75.

Also ask about Jamesway poultry equipment. Get our free book, "Poultry Pays," which tells you what to do to make your flock more profitable. Ask for Book No. 75-A.

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Jamesway Planned Dairy Barns mean less work and a bigger income.



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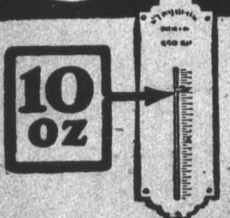


Write for chart No. C-29, "How to Feed Calves," giving important authoritative information for farmers. Send you FREE. **BLATCHFORD CALF MEAL CO.** In business over 125 years Ill. Waukegan

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Prevent this by using **ABORNO**. Easily administered by hypodermic syringe. Kills abortion germs quickly without harming cow. Write for booklet with letters from users and full details of Money-Back Guarantee. **ABORNO LABORATORY** 44 Jeff St. Lancaster, Wis.

UDDER HEALTH means milk profits



ANY injured or unhealthy condition of the udder or teats is such a positive check on the milk flow, that it pays well to watch them carefully.

Bag Balm, the great healing ointment, is the reliance of thousands of dairies for keeping these tender tissues healthy and normal. Bag Balm quickly heals cuts, scratches, bruises, sores, inflammation, hardened tissues, Caked Bag. Valuable for treating Bunches and Cow Pox.

Bag Balm costs very little to use. Big 10-ounce package is only 60c. Sold by general stores, feed dealers and druggists. If your dealer is not supplied we will send postpaid. Write for free booklet, "Dairy Wrinkles."

To those who have not yet tried Bag Balm, we will mail a liberal trial package FREE—if you give dealer's name and clip this ad.

Dairy Association Co., Inc., Dept. D
Lyndonville, Vt.



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Dairy Farming

SON MAKES DAD HUSTLE.

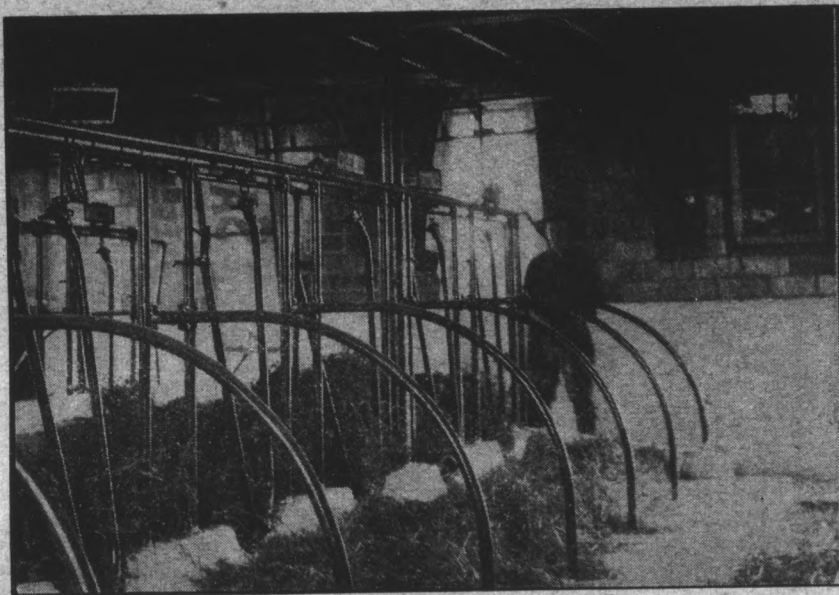
LESTER DURR, a farm boy, started in calf club work in 1920. At that time he bought a purebred Holstein Calf. He took good care of her. The heifer freshened last October and is now standing in the barn with three other cows belonging to his father.

Lester has taken upon himself the duty of weighing and making a record of each cow in this small herd. He finds that his heifer, which is the only purebred in the stable, is producing an average of 36 pounds of milk a day. This is just one-half of the milk produced by the entire herd.

It is to be expected that in the very near future three cows will find their

extra pounds of grain a day has made Bow a \$200 cow. In the past nine months she has made a net profit for Mr. X of \$128.71 as the following records will show. Bow is ten years old. In the past nine months she has produced 10,453 lbs. of milk, 471 lbs. of butter fat at an average price of 42.87 cts. per lb. or \$209.16. She has eaten in the nine months 2,995 lbs. of grain costing \$53.76, plus \$19.49 for roughage totaling \$73.25, leaving a net profit from butterfat sales of \$128.71.

Cows like Bow are found by the cow testers. Other cows also are found by cow testers, for during a five month period in another Michigan Cow Testing Association 35 unprofitable cows have been found "wanting" and sold.



Modern Equipment Means Greater Sanitation and Less Labor.

way to the shambles and some owner of purebred stock will be solicited for the sales of a few of his surplus heifers.—D.

COW-TESTING ASSOCIATIONS INCREASE.

MICHIGAN is climbing up in the number of cow-testing associations. Three new organizations have been added the past month, and by the close of February three more will be listed. At the present thirty-one of these dairy efficiency promoters are in active operation.—B.

KNOW YOUR COW.

OUR cows are like our hired men: We do not know what they can do until we try them out. It is fairly easy to judge what the hired men does but with the cow it is more difficult to learn her production.

The only workable plan is the cow testing association. We farmers should take the initiative in the matter of bringing a cow tester into our midst. From observation and a little experience, I feel certain that no step will prove more profitable to us than this one. Every community where dairy cattle are kept in any numbers is paying far more not to have a cow tester than it would cost to put one at work. T. P. Sims.

GOOD FEEDING MORE THAN TRIPLED PROFITS.

FRED LEONARD, tester, in the Parma-Jackson County Cow Testing Association, makes mention of the following facts on the pure bred Jersey cow "Bow":

In past years Bow has been a failure as a producer. Last spring Mr. X offered her in exchange for another cow or for \$50 in cash but was offered only \$35. When I suggested heavier feeding he thought it not worth while, but agreed to feed her a full ration and watch results. He now says that a few

It seems to be quite easy for many dairymen to have Visitor cows and not know it. It is one aim of the Dairy Extension Department, M. A. C., to try and have these Visitor cows "spotted" and sold in many places throughout Michigan where at present no Cow Testing Associations are operating. Thirty Cow Testing Associations are working in twenty-four counties at present. This is a good start in the right direction, but so far only the surface has been scratched for more efficient dairying in many localities. Additional good can come to many other Michigan dairymen if all Cow Testing Association members and testers will advance the ideas embodied in the slogan "Efficiency in Feeding, Breeding and Weeding."

THAT BULL AND THE MILK PAIL.

YOU don't milk a bull, but just the same over half the amount of milk or butterfat your cows give comes through inheritance from their sire. The better the sire the larger your milk or cream check. Possibly you are not in a position to buy the kind of a bull you ought to have to insure a bigger milk or cream check three or four years from now. Better talk the matter over with two or three neighbors and jointly decide on that BETTER SIRE.

YEAR BOOK IS BEING PREPARED.

THE new year book of the Department of Agriculture will be issued much earlier than usual this spring, according to the Department. The 1922 book will contain exhaustive articles on hog production and marketing, the dairy industry, and on small grains other than wheat. There will also be a report of the Secretary, and valuable figures recently compiled on various farm operations.

The whole family will like "Beyond Rope and Fence," our new story which starts on page 20 of this issue.

DAIRY HERD KEPT DISEASE-FREE
SEVENTEEN YEARS.

TWENTY-TWO years of tuberculin testing in the same herd is a record. The New York Agricultural Experiment Station herd at Geneva has been under supervision for that time. For the past 17 years there has not been a demonstrated case of tuberculosis in the Station herd, showing that the disease can be stamped out and infection of the healthy animals prevented if the proper precautions are taken, says the Station dairy specialist.

Twenty-two Reactors Found.

In 1900, a veterinarian pronounced one cow tubercular after a physical examination. When the animal was slaughtered the diagnosis was found correct. The entire herd was then tested with tuberculin and 18 of the 28 animals reacted. Upon retest in 1901, four more animals reacted. Owing to the excellent breeding of the diseased animals it was decided to follow the Bang method of handling a tubercular herd and the 22 reactors were separated from the healthy animals and kept for breeding purposes. By 1905, the Station herd comprised 30 healthy animals and the diseased cows were killed.

The Station herd is tested each year, and every precaution is taken to prevent infection of the healthy animals by isolating and testing new individuals before placing them with the herd and otherwise guarding against outside infection. The fact that the disease has not reappeared in the herd in the past 17 years is thought to demonstrate the importance of proper precautions to prevent reinfection of a herd after the diseased animals have been detected by the tuberculin test and removed from the herd.

NERVES GO BAD, NOW A LEADING
GUERNSEY BREEDERS.

A NERVOUS breakdown that sent Fred C. Holbeck to the open air; two Guernsey heifers; and a strip of cut over timber land in northern Michigan, all contributed to the development of a new class leader in the Guernsey cow, Holbeck's Nordland Daisy 85129. She is owned by Mr. Holbeck at Long Lake, Michigan. After two years of testing only, this herd has produced the cow that now takes eighth place in class E, with a production of 14276.6 pounds of milk and 744.26 pounds of butter fat.

Holbeck's Nordland Daisy 85129 was only milked twice a day during her first three months. Weighing 875 pounds at the beginning of her test period, she has maintained a steady growth, and now weighs nearly a hundred pounds more. None of the cows at Nordland Farm are kept in box stalls, and all records are made with milking machines that have been handled by no less than a dozen different men during the last two years. The severe winters make ventilation and comfortable temperatures a problem, but the herd has been on the accredited list for the past three years.

This new class leader is a working cow, keeping up a remarkably consistent flow of milk throughout the year. She derives much of her producing capacity from her ancestors, as her pedigree reveals a number of names of animals that have made their mark in the Guernsey world. Her sire came from the famous Anna Dean Farm herd, where so many world's records were developed.

HORSE SALES INCREASE.

INCREASED horse sales are reported from the 67 principal horse and mule markets of the United States. Reports just issued by the United States Department of Agriculture show that in 1921 there were 317,445 horses and mules handled at these markets and in 1922 the number increased to 442,646, making a gain of 39.4 per cent.

"Sure I am, we can never be wise but by our own wisdom."—Montaigne.



The Neck of the Bottle

Last year almost two and a half billion dollars' worth of milk was produced in the United States by approximately 23,000,000 dairy cows. To milk these cows by hand requires the time of 2,300,000 people two hours a day, or 4,600,000 hours of human labor each day (based on the supposition that a man can milk ten cows an hour, which is fast hand milking). At the extremely low rate of 10 cents an hour it costs the farmers of the United States \$460,000 a day—just for milking.

Just think of a two billion dollar industry, the largest and most profitable branch of agriculture, operating on such a slow and costly basis. No other industry or branch of farming at all comparable is so handicapped. Hand milking is the limiting factor in dairy farming; it is "the neck of the bottle"—because when milking can be done faster there is more time for other farm work.

Of course cows are not milked for the love of it; on the contrary, dairymen have wanted and waited for a better way of milking for

many years. "The Better Way of Milking" has arrived, and it is the De Laval Milker. There are now over 10,000 De Laval Milkers in use in all parts of the country, giving unqualified satisfaction and proving every day that they can milk at least twice as many cows with the same amount of help—thus cutting the cost of milking squarely in two, or enabling twice as many cows to be milked with the same help.

But even if the De Laval Milker didn't save a minute of time, its use would still pay because its uniform, gentle and stimulating action causes the cows to produce more milk than can be obtained by any other method of milking; and it produces cleaner milk.

The De Laval has proved conclusively that it cuts the cost of milking, produces more milk from the same cows, and produces cleaner milk. It pays for itself in a year's time and is sold on such easy terms that you can use it while it is doing so. Why wait any longer? See your De Laval agent or write us for complete information.

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Leading hen over all breeds Nat'l. Laying Contest 293 eggs, 4 birds averaged 239. Pen of my birds are leading Indiana Contest to date over all breeds. At Mich. Agr'l. College Contest, my pen laid more eggs than any pen in Contest in winter months. 80% of birds I entered in Contest have gone over 207 eggs, so why take chances. Order now. Catalogue Free.

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Rosewood Farm Healthy, Hardy Chicks

Well-hatched, carefully packed, and shipped. Select, heavy laying WHITE LEGHORNS, 50, \$7; 100, \$13; 500, \$62.50; 1000, \$120. Select ANCONAS, 50, \$7; 100, \$14; 500, \$65; 1000, \$125. Single Comb Reds, 50, \$8; 100, \$16; 500, \$75. Hatched by modern methods in best machines under our personal supervision. Carefully packed and sent Postpaid and 100% live delivery guaranteed. Bank reference. You take no chances in ordering STAR BABY CHICKS. Place your order now and get them when you want them. Star Hatchery, Box O, Holland, Michigan

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Hardy, healthy Chicks from selected heavy laying flocks. Wh. & Br. Leghorns, 50, \$7; 100, \$13; 500, \$62.50; 1000, \$120. Barred Rocks and Reds, 50, \$8; 100, \$15; 500, \$72.50; 1000, \$125. Single Comb Reds, 50, \$9; 100, \$17; 500, \$82.50. Postpaid, full live delivery. Bank Reference. Free Catalog.

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Big Value Baby Chicks

Are Guaranteed to Live. 12 popular breeds—easy to raise, husky, healthy, vigorous. Write today for free catalog showing many breeds in full colors.

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64 BREEDS Most Profitable chickens, choice, pure-bred northern raised. Fowls, eggs, incubators at reduced prices. America's great poultry farm. 30th year. Valuable new 100-page book and catalog free.

R.F. NEUBERT Co., Box 14, Mankato, Minn.

Baby Chicks \$12.00 per 100 and up

Hatching eggs, \$1.50 per setting to \$15.00 per 100. We are listing 17 varieties of pure bred fowls; Chickens, Geese, Ducks & Guinea, also breeding stock. Send for prices and circular. Booking now for early delivery. CLINTON HATCHERY & POULTRY FARMS, Wilmington, Ohio.

PERFECT WHITE LEGHORNS

Lay 265 to 301 eggs per year. Winners at 50 shows. Chicks, eggs, pullets, hens and males shipped C.O.D. at low prices. Write today for catalog and complete information to the World's Largest Leghorn Farm. GEO. B. FERRIS, 934 Union, Grand Rapids, Mich.

WASHTENAW



HATCHERY CHICK PRICES: following hatches: March 26th and Red, 50, \$3.50; 100, \$15; 500, \$75. White Rocks, White Wyandottes, 50, \$9.50; 100, \$18; 500, \$85. White, Brown, and Buff Leghorns, 50, \$7.50; 100, \$14; 500, \$65. From hatches due March 12th and 19th add \$2 per 100 to delivery guaranteed. paid, full live delivery guaranteed. Our flocks are carefully selected and bred for high egg production. Order from this ad.

Reference, Farmer's & Mechanic's Bank.

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JUST-RITE LOOK! Baby Chicks

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NABOB HATCHERY, Dept. 15, Gambier, O

Pioneer BABY CHICKS

Pure bred, Tom Barron, English White Leghorns and Barred Rocks. Chicks that satisfy, 100% live delivery guaranteed with right prices. Send for our illustrated catalogue and price list before ordering. We save you money.

PIONEER POULTRY FARM & HATCHERY, Box A, R. 10, Holland, Mich.



WOLVERINE BABY CHICKS

Are chicks that satisfy. Bred for egg production 13 yrs. We hatched and shipped chicks for 12 years. This assures you success. English type white and brown Leghorns. 100% safe arrival guaranteed. Write for catalogue. It's free.

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Good Chicks--Fair Prices

Barron Type W. Leg. B. Rocks, S. C. Reds. Pedigreed Chicks from M. A. C. cockerel mating. Utility grade from pure-bred, heavy-laying, free range inspected flocks. Pullets laid at 4 mos., 20 days last year. Guaranteed delivery. Discount on Feb. orders. Instructive catalog. Bank Ref.

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From strong sturdy stock of White and Brown Leghorns, and Barred Rocks, best strains of laying stock of money makers. 100% live arrival guaranteed. Prices reasonable. Write today for valuable catalog.

HIGHLAND FARM HATCHERY R. 9, Holland, Mich.

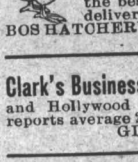


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White Leghorns and Anconas. Our stock is scientifically culled by experts and headed by large vigorous males. Thus assuring you strong, healthy, bred-to-male chicks. That will live and grow. Real money makers. 100% live delivery guaranteed. Post Paid. Catalog free. Sterling Poultry Farm & Hatchery, Zeeland, Mich. (Member Michigan Baby Chick Ass'n.)

Guaranteed Chicks: S.C. Tom Barron Eng. Leghorns, White Leghorns, 13c each. We have class A flocks therefore we sell no class B but Class A chicks. We sell the best chicks money can buy. 100% safe delivery. Postpaid. Catalog free.

BOS HATCHERY, R. 2M, Zeeland, Mich.



Clark's Business Leghorns.

Baby Chix and Hatch ing eggs. Young, Wyckoff and Hollywood strains. Also Barron. Customer reports average 22.5 eggs for December. Circular. GLEN E. CLARK, Hopkins, Mich.

BARRED ROCKS cockerels from M.A.O stock, extra quality and vigorous \$3-\$5. Rosemary Farms, Williamston, Mich.

Baby Chicks White Leghorn Barron Strain from our own selected flock \$15 per 100 up. White and Barred Rocks, Buff Orpingtons, S. C. R. I. REDS. DURAND HATCHERY, Fenton, Mich.

Karston's FARM

GUARANTEED RURAL CHICKS

EXCEPTIONAL VALUES IN HIGHEST QUALITY, PROVEN LAYERS PURE BRED S. C. English White Leghorns, Heavy Laying Brown Leg. Selected Anconas. Heavy winter layers. Result of constant breeding for high flock averages. Large modern hatchery and 70 acre poultry farm. We guarantee absolute satisfaction and live delivery of strong healthy chicks. Sent postpaid. LIBERAL DISCOUNT ON ALL ORDERS BOOKED NOW. Write at once for our fine new catalog. Its free. Ref. Zeeland State Bank. RURAL POULTRY FARM, R. 1, Dept. M, Zeeland, Mich.

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CHICKS ENGLISH WHITE LEGHORNS, BROWN LEGHORNS (Holland Importation Strain) 50, \$7; 100, \$13; 500, \$62.50; 1000, \$120. BARRED ROCKS; REDS, BUFF LEGHORNS, 50, \$8; 100, \$15; 500, \$72.50; 1000, \$140. WHITE WYANDOTTES (Heavy Laying Flocks) 50, \$9; 100, \$17. Postpaid, full live delivery guaranteed. All flocks composed of Selected Heavy Layers. Order now from this advertisement and get them when you want them. I have been producing good chicks successfully for the past 20 years and KNOW HOW. I want your business and will try hard to please you. Free Catalog. Bank Reference. Meadow Brook Farm, Henry De Pree, Proprietor, Route 1M, Holland, Mich. Member Mich. B. C. A.



Quality Chicks Bargain Prices



Barron English White and Br. Leg. and Anconas. Strong, sturdy chicks from scientifically culled M. A. C. Inspected free range breeders. Ten years of consistent breeding for heavy egg production. Wonderful winter layers. Winners at leading shows. Buy direct from Modern 65 acre poultry farm. Shipped postpaid. 100% live arrival and absolute satisfaction guaranteed. Illustrated Cat. free. Write today. Townline Poultry Farm, Dept. M., Zeeland, R. 1, Mich.

Pedigreed State Approved S. C. W. Leghorn CHIX

American--English Strain

Are you going to buy them from a hatchery or from a BREEDER? Buy from Michigan's Largest Leghorn Farm and insure success. We hatch our own eggs only. Supply limited. Prices reasonable. Satisfaction guaranteed. Descriptive circular tells all about them. It's free. Simon Harkema & Son, R. 1, Holland, Mich.



Hardy Northern Bred CHICKS

Barron S.C. White Leghorns. Parks' Strain Barred Rocks. The greatest egg producers known. Heavy winter layers. See record of our pen 16 now at the Michigan International Egg Laying Contest. Get Quality Chicks at Reasonable Prices from HOLLAND'S PIONEER POULTRY FARM. Catalog free. PINE BAY POULTRY FARM R. 4 Holland, Mich.

OTTAWA CHICKS

STRONG VIGOROUS CHICKS from our "SUPERIOR QUALITY" S. C. White and Brown Leghorns and S. C. Anconas, that Lay and Pay. Safe arrival guaranteed. Catalog free.

Ottawa Hatchery & Poultry Farm Holland, R-10 Michigan

Baby Chicks

Barred Rocks, R. C. Rhode Island Reds, Anconas, and White Leghorns. Chicks that grow fast, mature quickly and lay early. Our prices are exceptionally low. Write for catalogue and price list.

THE DUNDEE HATCHERY, Dundee, Mich.

BABY CHICKS of SUPERIOR QUALITY

From 12 select heavy laying varieties of Standard bred poultry, free range and Hogen tested, \$12 per 100 up. Full value for your money. Shipped by prepaid parcel post and 100% live delivery guaranteed. Send for free catalogue and prices.

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5 to 6 lb. White Leghorns

Larger hens, better winter layers. Send for free catalog full of information. A. W. WAUCHEK, Gobleville, Mich.

BABY CHICKS

We hatch leading varieties of Standard-Bred vigorous, heavy laying stock. Postage paid. Live arrival guaranteed. Send for our prices, open dates and large illustrated catalogue free. Write today. Superior Poultry Co. Box MF, Windsor, Mo

CHICKS from good selected heavy laying flocks of S. C. Buff Leghorns. We keep just the one breed. Write for circular. Willard Webster, Bath, Mich.

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. H. JUMP, R. 5, Jackson, Mich.

White Leghorn BABY CHICKS of superior quality, from our own breeding pens exclusively. Safe arrival guaranteed. Circular free. THE MARION HATCHERY, R. 6, Marion, Ohio

Single Comb Black Minorcas. Few choice cockerels, grandsons of our 12. R. W. MILLS, Saline, Mich.

R. C. Br. Leghorn c'h'rls, \$1.50 to \$3.00 each. W. Chinese geese \$5.00 each. Eggs for hatching now ready. Mrs. Claudia Betts, Hillsdale, Mich.

Barred Plymouth Rock Cockerels \$5.00 each. Prize winning laying strain. J. A. BARNUM, Union City, Mich.

Quality Chicks

that will lay and pay. The FAMOUS BARRON STRAIN ENGLISH WHITE LEGHORNS, ANCONAS and BROWN LEGHORNS QUALITY BABY CHICKS can now be purchased direct from Karsten's Farm and at prices unheard of before. Send for catalog and instructions on card and feeding of poultry for profit—it's free.

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MEADOW BROOK FARM

CHICKS ENGLISH WHITE LEGHORNS, BROWN LEGHORNS (Holland Importation Strain) 50, \$7; 100, \$13; 500, \$62.50; 1000, \$120. BARRED ROCKS; REDS, BUFF LEGHORNS, 50, \$8; 100, \$15; 500, \$72.50; 1000, \$140. WHITE WYANDOTTES (Heavy Laying Flocks) 50, \$9; 100, \$17. Postpaid, full live delivery guaranteed. All flocks composed of Selected Heavy Layers. Order now from this advertisement and get them when you want them. I have been producing good chicks successfully for the past 20 years and KNOW HOW. I want your business and will try hard to please you. Free Catalog. Bank Reference. Meadow Brook Farm, Henry De Pree, Proprietor, Route 1M, Holland, Mich. Member Mich. B. C. A.



BABY CHICKS



Bargain Prices—Write Quick. Best paying, highest quality, Pure Bred Tom Barron and Hollywood

White Leghorns—Egg Records 270 to 300 eggs in one year—Brown Leghorns, Anconas, Barred Rocks, Rhode Island Reds, White Wyandottes. Book orders now—get liberal discount. Valuable catalog free.

We guarantee to save you money—give you strong, healthy, perfect chicks, the best that money can buy, guarantee live delivery, and absolute satisfaction. Write today sure.

SUPERIOR POULTRY FARMS Box 101 Zeeland, Michigan

HIGHEST QUALITY CHICKS

Michigan's Old Reliable Hatchery (The most modern and best equipped Hatchery in the state)

Pure Bred English and American S. C. W. Leghorns; S. C. Anconas; Barred Plymouth Rocks and R. I. Reds. Strong, well hatched chicks from tested Hogenized free range stock that make wonderful winter layers.

Chicks sent by Insured Parcel Post Prepaid to your door. 100% live delivery guaranteed. Fifteen years of experience in producing and shipping chicks has given absolute satisfaction to thousands. Write for illustrated free catalog and price list. Get lowest price on best quality chicks before you buy.

W. VAN APPELDORN, R. 7, Holland, Mich.

Whittaker's R.I. Reds

Michigan's greatest color and egg strain. Bred from winter layers for thirteen years. Customers report flock average of 24 eggs per hen for January, 2 pound broilers at 7 weeks, 2½ pound broilers at 9 weeks. Write for free catalog quoting prices on eggs and chicks. Rose and Single Combs.

INTERLAKES FARMS

Box 39, Lawrence, Mich.

CHICKS

Barred Rocks White Rocks Rhode I. Reds Wyandottes Orpingtons Leghorns—Wh. Br. Buff Anconas Orders may now be placed for March, April, May, or June delivery. Our Poultry Circular describes 11 breeds; all guaranteed and sent postpaid. Note particularly our Superior White Leghorns and Superior Barred Rocks; Hens that are making egg records in the hands of our customers. Send for price list.

STATE FARMS ASSOCIATION 201 Chase Block, Kalamazoo, Michigan.

Baby Chicks

From purebred egg type birds. Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds, White Leghorns. Prompt delivery and safe arrival guaranteed.

The Milan Hatchery, Milan, Mich.

CHICKS \$10.50 AND UP

From Hogen tested flocks. Wh. Br. & Buff Leghorns, 50, \$7; 100, \$13; 500, \$62.50; 1000, \$120. Bar. Rocks, Anconas, 50, \$7.50; 100, \$14; 500, \$67.50; 1000, \$125. Minors, 50, \$8; 100, \$15; 500, \$72.50; 1000, \$125. Mixed, 100, \$11; 500, \$52.50. Order now. Catalog Free. Eggs for Hatching. Ref. 4 Banks. Tri-State Hatcheries, Box 512, Archbold, Ohio

CHICKS THAT MAKE PROFITS.

Strong, vigorous, well hatched from leading breeds of heavy layers. Moderate prices, 100% live delivery guaranteed. Postpaid. Catalog giving full particulars free. Bank reference. BLUFFTON HATCHERY, Box M, Bluffton, Ohio.

QUALITY CHICKS

White Leghorns, Barred Rocks, DEAN Anconas, 5000 culled breeders. 12 yrs. experience. New Smith Egg 40,000 egg hatchery. Member Baby Chick Ass'n. Send for Folder C. and Farm & prices. BIG BEAVER, Michigan Hatchery

CHICKS We ship everywhere. Safe arrival guaranteed. 20 thoroughbred varieties. Hatched right. Member Int. Baby Chick Assn. Catalog free.

Mammoth Hatchery, R. F. D. 30, Glen Ellyn, Ill.

CHICKS 12 Leading Breeds

Free range, purebred, heavy laying flocks. Instructive catalog free. Prices right.

Ransom Farms, Box 6, Geneva, O.

Baby Chicks

Selected chicks from the heart of the baby-chick industry. Leading pure breeds from heavy egg producing strains. Live delivery guaranteed. Send for catalogue and prices. L. Van Hoven & Bro., Zeeland, Mich.

S.C.W. Leghorn Baby Chicks

From large can strain of heavy winter egg producers, type American produced by our own breeding pens. Price \$12 per 100. Cruse & Warner, Hudson, Mich.

BABY CHICKS

Healthy, range flocks. Culled and tested. 12 breeds. 100% delivery guaranteed. Free catalogue. SMITH BABY CHICK CO., Dept. M, Bryan, Ohio.

White Holland Turkeys

Tolouse geese A-1 stock. AL DEN WHITCOMB, Byron Center, Mich.

THE EGG-LAYING CONTEST.

THE Wyandottes are still maintaining the lead in the International Egg-laying Contest at M. A. C. The pen belonging to the Evergreen Poultry Farm, Greenville, Michigan, has crossed the seven-hundred mark by producing a total of 713 eggs. The Leghorns are coming into strong second with those belonging to E. E. Shaw, of South Haven, producing a total of 685. The next pen is that of Plymouth Rocks belonging to Brummer's Poultry Farm, Holland, Michigan, which produced 612 eggs. Fourth in line are the Rocks belonging to H. E. Dennison, of East Lansing.

The contest hens are responding to the coming of spring weather, as there has been an increase in production during the past week of 252 eggs. This increase has largely come from the White Leghorns, which have set a new record in production of fifty-eight per cent.

The White Wyandottes have a decreased production and it remains to be seen how they will stand the competition from the Leghorns during the spring and summer months. Undoubtedly they will show themselves the winners during the winter cycle, which ended the first of March, but there is likely to be some change in position in the contest during the coming months.

The leading Rhode Island Red pen produced a total of 480 eggs, belongs to L. O. Dunning, of Delton, and the highest producing Ancona pen belongs to A. R. Van Raalte, of Zeeland. It produced a total of 408 so far.

USING OIL IN INCUBATOR

THOSE using a hot water type incubator with galvanized tank which has rusted easily can easily avoid the trouble by using cylinder oil in place of water. Unless oil is about blood heat or little warmer, do not fill tank as full as you would with water as the oil expands more when heated than water. I could not see but what the incubator hatched just as good as when using water. I find a light body oil works best.—N. F.

HENS REFUSE MILK

I have lots of milk and lots of water before my chickens all the time but as long as there is water, they will not drink the milk. How would it do to give them milk one day and water the next in order to make them drink more milk.—D.—A. M.

When the birds will not drink the milk it will do no harm to give them only milk to drink for a week or more. When they become interested in the milk I think both milk and water can be supplied and they will usually prefer to drink milk. Some birds are a little slow about drinking milk when plenty of water is available. Some breeders have used only milk for a drink and found that it appeared to agree with the hens.

COLONY BROODER HOUSE.

Please tell me the most approved method of building a colony brooder house.—E. R. S.

The house we like best for a colony brooder house is of the shed-roof type. The dimensions are ten feet wide, eight feet deep, six feet high in front and four feet in the rear. Some poultrymen build this type of house ten by ten.

The house can be built on skids to make it easily removable to different parts of the farm. Each house can have a large window occupying most of the space between the door and the corner of the building and extending from a foot above the floor to a foot from the roof. Above the window a muslin covered opening can be used

for ventilation. The window is placed on hinges and can be removed as soon as good weather arrives. Then the open front is protected by one-quarter-inch mesh hardware cloth.

In a house of that type the brooder is placed near the back toward the side away from the window. Then the chicks can obtain cool air by coming toward the window.

POULTRY INDUSTRY OCCUPIES THIRD PLACE.

IN ITS comparisons of the branches of national production, the U. S. Bureau of Census has found that the poultry industry has advanced to third place within the last decade. Today only the corn crop and the dairy cow outrank the hen in their contribution to national wealth. Below the hen on the list are petroleum, wheat, cotton, anthracite coal, potatoes, oats, copper and gold in the order given.

Until recently the poultry industry has been a hobby or side line of farmers, and even yet there are a few who give the special attention to poultry that others do to corn or other crops. But, even so, the 1919 poultry products of this country were worth \$1,400,323,170, or more than twice as much as all the anthracite coal mined, three times as much as all the gold produced, and nearly half again as much as all the petroleum which came from the oil wells, or all the wheat grown on our farms.

GANDER WITH WEAK TONGUE.

What is the matter with my gander? The muscles of his tongue seem to have weakened to such an extent that the tongue lies down in a kind of pocket beneath his bill, giving him somewhat the appearance of a small pelican. This is the second case that I have had of this kind.—J. G. J.

I have had no experience with a gander in the condition you describe and cannot find any information about it in any of my books on geese. I think that it may result from inflammation due to a cold. Is the pocket beneath the tongue a swollen gland or possibly an abscess? If it is an abscess it might be lanced and the wound drained and washed with disinfectant. If the gland is swollen it might be rubbed with camphorated vaseline and the gander placed in some building where it could obtain the sunlight but be protected from wind and storms. If I can obtain any further information on this condition from geese breeders I know, I will inform you.

THIN-SHELLED EGGS.

What shall I feed hens to make the eggshells stronger. My hens lay a few eggs with the shells thin and brittle. I think they break and eat quite a few of them. I am feeding oats, barley and bran mash, with a patent poultry food. They have oyster shells by them all the time. They have a clean house and have lots of clean straw to scratch in.—C. B.

When hens are laying heavily an occasional egg will be produced with a thin shell even if the birds have a balanced ration and plenty of oyster shells. Sometimes it may be due to an overfat condition or internal condition in the egg organs which cannot be remedied. When your birds obtain more exercise on free range this spring, they will probably produce more normal eggs. In the meantime the ration can be improved by using green food, such as sprouted oats, mangels or cabbages to tone up the birds. Sour milk will also be beneficial.

A dry mash composed of equal parts of ground oats, ground corn, bran, middlings and beef scrap will improve the condition of the birds. The beef scrap can be reduced one-half if plenty of milk is available.



MORE
MILEAGE
SHOES

Exactly---that's true.

On the better farms you always find implements of the highest type--because they assure the modern agriculturist long and efficient service and the greatest crop return.

Then why not assure yourself of the greatest possible use of your feet by protecting them, your health and pocket-book by always demanding

Grief-Defying **ROUGE REX SHOE** for Wear and Comfort
FOR DAD AND SON

HIRTH-KRAUSE COMPANY

FROM HIDE TO YOU

SHOE MANUFACTURERS and TANNERS, Grand Rapids, Mich.
Write us direct if you cannot find our dealer.

BABY CHICKS Pure Bred for 1923



Bred to lay from carefully mated Flocks, of standard Quality and for Egg Production. We offer you exceptional values in the breeds, Leghorns, Rocks, Reds, W. Wyandottes, Orpingtons, Minorcas and Anconas. Our prices are right when Quality is in consideration. This should be the main point in view. For success, get our Big Catalog of Chicks and Brooders, we have a special offer for you, also how to care for your chicks after you have them. It is Free.

Wolf Hatching & Breeding Co. Dept. 10, Gibsonburg, Ohio

BUY HUBER'S RELIABLE CHICKS

Our 14th Year ---- 1,000,000 for 1923

By Parcel Post Prepaid—100% LIVE DELIVERY. Give us your order for some of our RELIABLE CHICKS and we will prove that we give you better chicks for the money than you can get elsewhere. COMBINATION OFFER and SPECIALS OFFERED. Order early. Write for prices and Free Illustrated Catalog.

Huber's Reliable Hatchery,

East High St., Fostoria, Ohio

Egg Bred **BABY CHICKS**

The Best Laying Strains on Earth

Barron English White Leghorns, Brown Leghorns, and Anconas. During 1923 we will sell 30,000 strong, healthy, super-hatched chicks weekly, bred from strains backed by 18 years of actual egg breeding on our Farms. The enormous output of these quality chicks enables us to sell these money-makers at a price unequalled. Our flocks are culled out annually by poultry experts and are mated to large, vigorous 260-288 egg Pedigreed Males from Funk Farm direct.

Hundreds of Customers Report Big Profits

E. I. Beebe, St. Charles, Mich. writes: My 100 hens laid 193 eggs each and I made over \$300.00 clear profit last year.

Wm. Vivant, Harbor Spring, Mich. writes: We got 3528 eggs in January from 180 pullets.

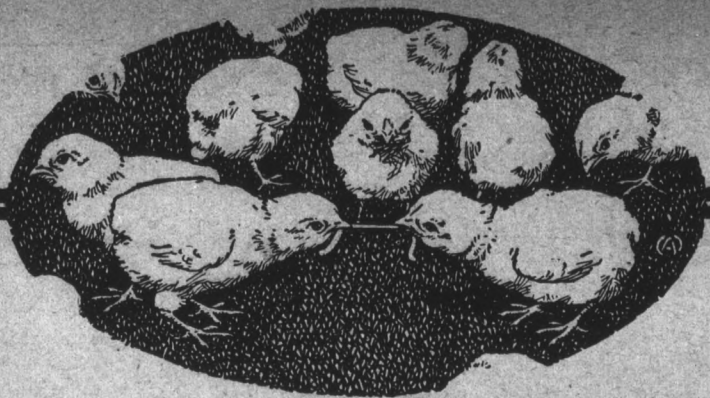
A. Dall, Port Huron, Mich. The pullets began to lay at 4½ months old and averaged 23½ eggs each for one month.

F. L. Hess, Chicago, Ill. writes: I averaged 112 eggs a day from 140 hens and sold \$158.00 of eggs in February.

Raise Good Stock and Reap a Golden Harvest

We don't boast on a few high record birds but our extraordinary flock's average has attained our present high standard. Intelligent chick buyers look for these qualities and we assure you we have them. Get our 1923 large catalog now, it's free.

Wingarden Hatchery, Box M, Zeeland, Michigan



Raise all the Chicks You Hatch

Raise them the PAN-A-CE-A way.

Start them right—keep them growing right along without any backset.

PAN-A-CE-A gives chicks good appetite and good digestion—helps them develop rapidly—gives them vigor to resist disease.

PAN-A-CE-A prevents fermentation of the food; fermentation is where most of the bowel troubles start.

PAN-A-CE-A is a gentle tonic to all the little-chick organs—keeps the system in order.

PAN-A-CE-A contains the Salts of Iron, so essential to early chick life, and during the rapid growth of feathers.

PAN-A-CE-A prevents and cures gapes, indigestion, diarrhea and leg weakness.

PAN-A-CE-A your chicks and then watch them feather! A Pan-a-ce-a chick will out-feather a non-Pan-a-ce-a chick every time.

Tell your dealer how many hens you have. There's a right-size package for every flock. 100 hens, the 12-lb. pkg. 200 hens, the 25-lb. pail. 60 hens, the 5-lb. pkg. 500 hens, the 100-lb. drum. For fewer hens, there is a smaller package.

GUARANTEED

DR. HESS & CLARK Ashland, O.



I spent 30 years in perfecting Pan-a-ce-a.
GILBERT HESS
M.D., D.V.S.

Dr. Hess Instant Louse Killer Kills Lice



BABY CHICKS—\$10 per 100 AND UP

From selected, heavy-laying, vigorous hens. White and Brown Leghorns, Anconas, 50, \$6.75; 100, \$13; 500, \$62.50. Barred Rocks, 50, \$8.50; 100, \$16; 500, \$75. Extra Select \$2 per 100 higher. Mixed Chicks 50, \$5.50; 100, \$10; 500, \$50. Well hatched in modern machines. Carefully and correctly packed and shipped. Postpaid. Full live arrival guaranteed. Bank reference and this guarantee makes you perfectly safe in ordering direct from this ad. NOW. Get them when you want them. All orders have our careful personal attention. WE WANT YOUR BUSINESS. Catalog Free.

WINSTROM FARM & HATCHERIES, Box H-6, ZEELAND, MICHIGAN



Raise them all — with

Buckeye Colony Brooders

Millions on millions of chicks are saved every year by Buckeye Colony Brooders. Don't gamble with an unknown brooder, when the Buckeye is guaranteed to give you certainty of results—"more chicks and better chicks, or your money back."

Raise every raisable chick, without crowding, chilling or any of the ordinary chick ailments. Practically no cripples or weaklings. Won't overheat—won't go out. Firesafe and foolproof, whether coal or oil burning.

THE BUCKEYE INCUBATOR CO., 814 Euclid Ave., Springfield, Ohio, U. S. A.
World's Largest Manufacturers of Incubators and Brooders

Buckeye—the World's Foremost Incubators—From 65-Egg to 10,368-Egg Capacity. Hatch every hatchable chick.

More than 600,000 Buckeye Incubators are in use throughout the United States. More than 54,000,000 chicks a year are Buckeye-hatched.

Which Catalog Shall We Send? Grow three chicks where one grew before. If interested in Blue Flame Brooders, send for catalog No. 24; in coal-burning Brooders, No. 36; Buckeye Incubator Catalog No. 48 tells how to grow more chicks and better chicks.

RECORDS SHOW VALUE OF EARLY HATCHING

THAT time of hatching and maturing of pullets is the limiting factor in early winter egg production is well shown by the production records turned in by the seven poultry demonstration farms in St. Joseph County for the months of November, December and January.

The record keeping started November first, and during the three following months' time the average production of eggs per hen for the seven flocks was 28.5, 27.6, 26.8, 19.3, 18.7, 13.6 and 2.3. These figures represent the total average production per hen for three months. This is not a high production for three months, and the figures are not being presented because of anything unusual in that regard but to illustrate the point made in the opening paragraph.

Attention is called to the figures from the three highest flocks, and also to the lowest. All four flocks are of the same breed, English White Leghorns. All are being fed practically according to the recommendations of the Poultry Department at Michigan Agricultural College. Housing conditions are a little better for the three high flocks than for the low one, but aside from that the only difference is in the time the pullets were hatched last spring. Those in the first three flocks were all hatched prior to April first, while those of the last flock were all hatched after May 15th and most of them after June first. Early hatching in the first three flocks showed the owners a nice profit during November, December and January, while the owner of the last flock was paying out money for feed and getting almost nothing in return. Such evidence is convincing St. Joseph County farmers that if they cannot hatch their own chickens and get them off early, they will do better to buy their chicks and thus make sure of some early pullets, as it is apparent there is no money in the late ones.

In those flocks producing 19.3, 18.7 and 13.6 eggs per hen, the pullets were hatched fairly early, but a larger proportion of old hens are being kept over for their value as breeders, these of course doing little laying during early winter. These flocks are all farm flocks, being kept under no better conditions than are possible on any farm, and any farmer can get as good results by paying proper attention to feeding and management.

—L. R. Binding, St. Joseph Co.

SICK TURKEYS.

Please advise me what to do for my turkeys. They have yellow diarrhea and are dying off very fast. The turkeys are running at large, but come home nights. I usually feed them a little sour milk cheese, and they eat corn and wheat screenings with the chickens. They have access to the new cornfields and to the apples in the orchard.—F. P.

The condition of the bowels is one symptom of blackhead. Other symptoms which do not mention are the condition of the liver and the color of the head. Perform a postmortem on any turkeys that die and note the condition of the internal organs. Turkeys which lack drinking water will sometimes gorge on tomatoes or apples and become sick from that cause.

Turkeys also have cholera. Sick birds must be isolated at once and the healthy birds fed in troughs that have been disinfected. A five per cent solution of carbolic acid is a good disinfectant for that purpose. Because turkeys use a wide range it is very difficult to keep them protected from disease by means of disinfectants. If you suspect the flock is in danger of blackhead, a teaspoonful of powdered ipecac for each 20 birds can be given in the mash twice a week.

Biggest Hatches

Strong Chicks

That's what you'll get with a Champion Belle City Hatching Outfit. My Free Book "Hatching Facts" tells how—gives newest ideas and quickest ways to make poultry pay big with my

\$13.95 140-Egg Champion Belle City Incubator

Double Walls Fibre Board—Hot-Water Copper Tank—Self-Regulated Safety Lamp—Thermometer & Holder—Egg Tester—Deep Nursery. \$6.95 buys 140-Chick Brooder only. Hot-Water Double-Walled Brooder \$18.95

\$21.95 Buys 230-Egg Belle City Incubator, \$9.95 Buys a 230-Chick Brooder. Both When Ordered Together — \$29.95

Express Prepaid

East of the Rockies and allowed to points beyond. With this Guaranteed Hatching Outfit and my Guide Book for setting up and operating you can make a big income. You can also easily share in my \$1000 in Gold

Without cost or obligation. Save time—Order Now—or write today for my Free Book, "Hatching Facts". It tells the whole story.—Jim Rohan, Pres.

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



Make More Money



Wherever Columbus Incubators are used the poultry business is highly profitable. A free book will be sent giving complete description of incubator construction, also illustrating other useful appliances—Brooders, Fountains, Feeders and many other necessary articles. All supplied through your local dealer. A postal will do. Write us.

THE BETTER PRODUCTS CO.
Sales Office — Box 343, Burlington, Wis.

\$13.25 Don't take any chances—find out what an incubator is made of before you buy. Wisconsin are made of Genuine California Redwood. We give 30 Days' Trial 10-year guarantee. This famous 140-Egg Incubator only \$13.25. With Hot Air Brooder both only **\$17.75**

WHY PAY MORE 30 DAYS TRIAL

180 Egg Size \$15.75, with Brooder \$22.00
250 Egg Size \$22.75, with Brooder \$31.00

Incubators have double walls, air space between, double glass doors, hot water, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc. Set up ready to run. Order direct or send for our new 1923 catalog, free—postpaid.

Wisconsin Incubator Co.
Box 116 Racine, Wis.

MONEY BACK IF NOT SATISFIED

THINK OF IT 140 EGG **Ironclad** THE IRON COVERED INCUBATOR THE BIGGEST Hatching Value We Ever Offered Incubator made of California Redwood, covered with galvanized iron, double walls, air space between, hot water heat, copper tank and boiler, self-regulating. Shipped complete with fixtures, set up, ready to use. The biggest bargain on the market. 30 days' trial. Money back if not satisfied. Absolutely no risk when you buy Ironclad. Or we will ship you this 140-Egg Incubator and 140 Chick Hot Water Brooder, both for only **\$19.75**—freight paid east of Rockies.

30 Days TRIAL MONEY BACK IF NOT SATISFIED

This big capacity hot water incubator and hot water brooder, built of materials that will last for years, at a price that is a real bargain. Both Incubator and Brooder have copper tanks and boilers. Guaranteed to please or your money back. If you prefer a larger outfit, order our 260 Egg Incubator \$23.50 260 Egg Incubator with Brooder \$32.90 Freight paid. This Incubator has two doors and two egg trays. Order direct from this ad and save time, or send for free catalog today.

IRONCLAD INCUBATOR CO. Box 91 Racine, Wis.

Sturdy Michigan Chicks

From the largest baby chicks center in the world. White Leghorns exclusively. Get our low prices. Safe arrival guaranteed. We put all our effort into one breed. Write today. Suburban Hatchery, Zeeland, Michigan.

Big Reading Bargains

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MICHIGAN FARMER
Capper's Weekly
Household
Total value\$2.25
All for \$1.30

OFFER No. 578.
MICHIGAN FARMER
Capper's Weekly
Breeder's Gazette
Total value\$3.00
All for \$1.75

OFFER No. 579.
MICHIGAN FARMER
Mother's Magazine
Household
Good Stories
Total value\$1.75
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OFFER No. 582.
MICHIGAN FARMER
Fruit Belt
Power Farming
Modern Poultry Breeder
Total value\$3.00
All for \$1.60

OFFER No. 570.
MICHIGAN FARMER
McCall's Magazine
Household
Total value\$2.25
All for \$1.55

OFFER No. 565.
MICHIGAN FARMER
Breeder's Gazette
Capper's Farmer
Total value\$2.50
All for \$1.60

OFFER No. 561.
MICHIGAN FARMER
Capper's Weekly
Household
Modern Poultry Breeder
Total value\$2.75
All for \$1.50

OFFER No. 563.
MICHIGAN FARMER
Household
Gentlewoman
Good Stories
Total value\$1.70
All for \$1.30

OFFER No. 564.
MICHIGAN FARMER
Pictorial Review
Household
Total value\$2.75
All for \$1.80

OFFER No. 572.
MICHIGAN FARMER
Fruit Belt
Power Farming
Total value\$2.50
All for \$1.35

MICHIGAN FARMER,
Detroit, Michigan:

Enclosed find \$..... for
which send me the papers named
in Club No.

Name

Postoffice

State R. F. D.

The Tax Problem

INCREASING taxes are a problem of the most visionary. Institutions of nation-wide menace to the agricultural interests. While tax totals soar and the burden becomes confiscatory to real estate owners, public debts are everywhere accumulating, due largely to the radical increase in the scope of government and the failure to adopt "the pay as you go" policy.

All Taxes Increase.

Official figures from the several states show that from 1912 to 1921, taking the United States as whole, state taxes increased 140%, county taxes about 100%, and local, township and district taxes from 100% to 300%.

During this nine year period not a single state in the Union decreased its expenditures and hardly a state showed an increase of less than 100%. These increases are all the more to be criticized because the census figures show that in the decade prior to 1912 there had been an increase of almost 100% in the expenses of most of the states so that in twenty years the taxpayers' burden for state government alone has been multiplied by four.

Michigan No Exception.

Michigan is no exception in regard to this matter of general taxation increase. Michigan taxpayers, back in 1901, paid a total tax levy including federal, state and all local taxes, of \$27,650,404, while in 1921 that total was \$359,824,058—an increase in twenty years of 1,300%. From 1911 to 1921 the increase in all taxes paid by the people of this state was 750%. Of course, a large proportion of this total increase was due to federal industrial and income taxes, but state and municipal levies were constantly increasing at an alarming rate.

Big Rise in Debts.

Despite these increasing taxes, our governments have during the past ten years been rapidly plunging more deeply in debt. In 1911 the State of Michigan did not have a dollar of bonded indebtedness. In 1921 that indebtedness totaled \$65,000,000.

In 1911 the counties of the state had a total bonded debt of \$3,306,417; in 1921 it reached \$26,746,994.

In 1911 city and village bonded indebtedness totaled \$28,945,533 while in 1921 it had increased to \$161,199,198, or 520%.

Summary.

Summing up these figures we see that the total state, county, city and village outstanding bonded indebtedness in 1911 was \$32,251,950, and in 1921 it was \$252,946,192, or an increase of approximately 800%. This increase in debt came despite the fact that there was an increase of 750% in the total taxation for the same ten year period.—S. P.

THE PUBLIC SCHOOL.

BY E. V. ROOT.

TWENTY-FIVE years ago the twenty-fifth of this month the United States battleship Maine was sunk in Havana harbor and many of us recall the enthusiasm with which American boys, as in every crisis before and since, volunteered in this, the first of America's foreign wars for humanity.

That event of February 15, 1898, was of peculiar significance for it marked the beginning of a new epoch in American history. Previous to that time we boasted of our splendid isolation and freedom from entangling foreign alliances; we were a nation unto ourselves, but since that fatal night a quarter of a century ago, whether we have liked it or not, we have been compelled to take our place and assume our responsibilities in the affairs of the world.

These twenty-five years have been a period in all material ways unapproached since the beginning of history. Advances in science and invention have surpassed the imagination

of the most visionary. Institutions supposedly founded upon bed-rock have been compelled to reorganize and readjust and the school today in its outlook and ambitions has, of course, changed. Twenty-five years ago the course of study in the common school was traditional and in the high school classical, while today the big question is, what is practical?

I am quoting below a paragraph from a man not usually thought of as an educator, which has a peculiar significance coming as it does from a great leader of organized labor.

"Education which fails to fit men and women to play an intelligent commanding part as sovereign citizens in a great industrial and political world, fails of what must in this day be its prime purpose. It is not enough to have understanding and good education among a few; what we require is good education and good understanding en masse. We must in the mass understand the problems with which we must deal as a democratic people. We can advance and develop democracy but little faster than we can advance and develop the average level of intelligence and knowledge within democracy. That is the problem that confronts democracy itself."—Samuel Gompers.

GROW MORE HEALTH.

I HAVE been watching the growth of sentiment in regard to the use of vegetable products in the human diet. It seems to me that we have had a most wonderful amount of testimonials from competent men and women the past few years to encourage us farmers to pay more attention to our farm gardens.

From the facts that have been given us by scientists we certainly can grow health in the garden. Not only can we make the garden valuable to us by furnishing foods which are rich in mineral elements and in vitamins, but if we have children the garden can be used to furnish the younger people some definite work to do and also to increase their knowledge of and interest in growing things. The farmers of Michigan should, in other words, see to it that the gardenless farm is relegated to the back ground with the eggless chicken and the milkless cow.—D. Prond.

SHIP US ALL YOUR FURS



We have not had a complaint from any shipper yet this season. 100 percent satisfactory service. Who gives more? Our outfit for spring furs is excellent on Rats and Skunk.

Don't expect some one else to pay our prices, as our sort is what enlarges your check. Write for our four grade list. OLIVER DIX, Salem, Mich.

BABY CHICKS

From heavy laying strains that grow rapidly into good flocks.

	100	500	1000
Barred Rocks	\$15.00	\$73.00	\$145.00
Rhode Island Reds	15.00	73.00	145.00
White Leghorns	12.00	62.50	125.00
Anconas	12.00	62.50	125.00

Order from this ad, or write for catalogue and prices.

PETERSBURG HATCHERY, Petersburg, Mich.

Barred Rocks Eggs and baby chicks from Silver cup winners. Eggs \$2.00 per 15 delivered by P. P. Circular free.

FRED ASTLING, Constantine, Mich.

POULTRY, PIGEONS and BABY CHICKS for PROFIT Foy's big book—an Encyclopedia of Poultry information. Many colored plates. Written by a man who knows. Low prices on incubators, Brooders, Baby Chicks, Fowls and Eggs for Hatching. Write. Sent for 5 cents.

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White Leghorn CHICKS

Write Quick. Free feed—Liberal Discount on early orders: World-Famous 255-270, and 280-326 egg strain trapped, pedigreed English-American S.C.W. Leghorns, Heavy Layers. Best Payers. Strong healthy chicks. 100% live delivery guaranteed. P. P. Circular free.

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White Leghorn CHICKS

Heavy Laying, pure bred, English strain. Flocks culled and tested for laying ability. Strong, healthy chicks. 100 per cent live delivery guaranteed. Postage paid. Catalog, low price list free. Write quick.

Catalpa Grove Hatchery, Box 1, R. 2, Holland, Mich.

Attractive Chick Investments

From Select Pure Bred Flocks

WHITE & BROWN LEGHORNS. ANCONAS, 50, \$7.50; 100, \$14.50; 500, \$65. BARRED ROCKS, REDS & MINORCAS, 50, \$8.50; 100, \$16.50; 500, \$75. Discount on orders of 1,000 or more. From extra select flocks \$2. per 100 higher. Post paid to your door. Full live count guaranteed. Bank reference. Free Catalog. We know it will be to your advantage to get our catalog and full price list before making a final decision regarding your investment in Chicks this season. Send for it TODAY.

COLONIAL POULTRY FARMS, Box C, Zeeland, Mich.

ORDER NOW

SAVE MONEY

Do not put off ordering your Silo until next spring or summer—but order to-day and get the Big Money-Saving Benefit of Our Low Winter Prices.



MICHIGAN CONCRETE STAVE SILO
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Fireproof—Windproof—Lasts forever

No painting. No guy wires. No tightening of hoops. Erected for you in a few days by expert constructors sent direct from our factories.

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PERMANENTLY tight and rigid. No wood to rot, no painting, no hoops to tighten. Fire and wind proof. Erected on your place by our crews. Write nearest plant for circular and Early Sales Discounts.

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The real money makers—the worth while kinds—including the two BEST EVER-BEARERS. A good assortment of other profitable varieties. Also raspberry plants. Vigorous heavy-rooted and true-to-name. 17 Years' experience in growing and packing plants. Reduced prices on large amounts. Our FREE CATALOG TELLS THE TRUTH—a valuable book for the grower. Write.

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DO YOUR OWN PIPE THREADING WITH Oster Bull-Dog Adjustable Die 1-1 1/2" Three Wheel "Barnes Type" Cutter 1-1 1/2". Standard self-locking hinged pipe vise 1-1 1/2". COMPLETE OUTFIT \$14.87 YOUR MONEY BACK IF NOT SATISFIED

THE OSTER MFG. CO.
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Strawberry, Asparagus Plants. No plants grown than we have to offer you. 1000 Senator Dunlap, \$2.75. \$1.00 in plants free with each \$5.00 order. Write for catalogue "Facts About Plants." C. D. THAYER, Three Rivers, Mich.

Holmes, Stuve Co., 2429 Riopelle St.

Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank. Bradstreet. Detroit, Mich. Cherry 7654

BABY CHICKS

BEST PAYING, HEAVY LAYING. PURE BRED Tom Barron English, White Leghorns, S. C. Rhode Island Reds, Park's Starred Rocks. STRONG HEALTHY CHICKS hatched from greatest and best incubator known. Chicks are given full twenty-one days and hatched under proper temperature.

Mr. Frank Fulkerson, Niles, Mich., writes as follows: "From the 66 pullets we raised from your stock last year along with the thirty which we had, we got 1610 eggs in December. Can you beat it?" We are the first and oldest importers of White Leghorns in this state. Watch our record in the Michigan Egg Laying Contest. It's Coming Strong! All flocks thoroughly culled and properly mated to pure bred cockerels. Try Some Real Chicks This Year. Order Now at New Low Prices.

Instructive Catalogue Free
Brumer-Fredrickson, Poultry Farm
Box 20 Holland, Mich.

OTTO SUPERB CHICKS

THAT GROW AND PAY Vigorous pure-bred flocks on free range. Send for price list on 10 popular breeds. The results of careful breeding and scientific hatching. Chicks 12c up.
OTTO CHICKERY, INC.
MAGNOLIA, N. J. Box MF62

White Leghorn CHICKS

Write Quick. Free feed—Liberal Discount on early orders: World-Famous 255-270, and 280-326 egg strain trapped, pedigreed English-American S.C.W. Leghorns, Heavy Layers. Best Payers. Strong healthy chicks. 100% live delivery guaranteed. P. P. Circular free.

KEHLIN'S GRAND VIEW POULTRY FARM, Box 47, Center Hall, Pa.

White Leghorn CHICKS

Heavy Laying, pure bred, English strain. Flocks culled and tested for laying ability. Strong, healthy chicks. 100 per cent live delivery guaranteed. Postage paid. Catalog, low price list free. Write quick.

Catalpa Grove Hatchery, Box 1, R. 2, Holland, Mich.

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

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LITCHFIELD, MICHIGAN
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DATES and TERMS on APPLICATION



Edgar
of
Dalmeny

George
Henry

5 Grand Champions

28 FIRSTS

and other prizes. Such was the remarkable performance of our animals at the 1922 Michigan State Fair. What could be better proof of the unvarying quality of our animals or more representative of the ideal for which we have striven? Our success is the natural culmination of our efforts and our reward for years of careful and costly breeding. Ours is symbolic of the best. Mediocrity is not tolerated.

Our success can also be yours. Our young animals are the finest examples of breeding and will do much to improve your herd. Get the blood of the King of Sires **EDGAR OF DALMENY** into your herd and you will have individuality, distinction and quality. The services of our Grand Champion Stallion, **GEORGE HENRY** are available.

Your correspondence and inspection are invited.
WILDWOOD FARMS
ORION, MICHIGAN
W. E. SCRIPPS, Prop. SIDNEY SMITH, Supt.

Public Sale of Aberdeen-Angus Cattle

at Bellevue Stock Farm, Merrill, Mich.
Wed. Mar. 21st, 1923
at 1 o'clock P. M.

22 head 15 females 7 bulls
8 cows with calves at foot 7 heifers

An opportunity to buy real quality cattle at your own price. These cattle are right in pedigree and individuality, Teeming in the blood of such fashionable families as, Blackbirds, Aricas and Prides. In this offering will be found real show prospects. This sale should appeal to beginners.

Nine months time will be given on bankable notes. Write for catalog. Farm easily reached by rail or auto.

Auc's. Col. J.P. Hutton, D.J. McInnes
RUSSELL BROS., Prop.
Merrill, (Sag. Co.,) Mich.

Registered Aberdeen-Angus 10 heifers, 6 bulls from eight to fourteen months. Best of breeding. The growthy kind that make good. Reasonable. Inquire of F. J. Wilber, Ohio, Mich.

Registered Guernseys

2 Choice Heifers about a yr. old for \$300. Bull old enough for light service, out of Ester Erwin who is making a fine record \$150. J. M. Williams, No. Adams, Mich.

GUERNSEYS - REGISTERED BULL Calves. Containing blood of world champions. A. R. cows. Federal inspected. **HICKS' GUERNSEY FARM**, Saginaw, W.S. Mich.

For sale Registered Guernsey cows, May Rose Breeding also bull calves \$50 each. Registered A. R. dams. **JOHN EBELS, R. 2 Holland, Mich.**

Wallinwood Guernseys
Young bulls from A. R. cows for sale.
F. W. WALLIN, Jenison, Mich.

Complete Dispersal Sale

40---Registered Holstein Cattle---40

On the H. F. Lewis Farm
Elsie, Mich., Tues. Mar. 13, 1923
Herd Fully Accredited

This is one of the best individual and heaviest producing herds in southern Mich. Every one bred on the farm. They have size, breeding, individuality and production stamped right on them. Fresh and Springer cows and heifers, yearlings and heifer calves. Herd headed by King Ona Korndyke Mandy 346141 who is also to be sold. He is the son of King Ona Champion and his two nearest dams average well over 1000 lb. of butter in one year and over 22,000 lb. milk. One of Mich. greatest show cows is in this sale, come and see her. There was never a reactor in this herd.

Sale held under cover. Cattle sold at One P. M. Elsie is located on Ann Arbor R.R. thirteen miles north of Owosso.

F. J. Fishbeck
Sales Manager

H. F. Lewis
Prop.
Write For Catalogue

Col. Mack
Auctioneer

Straight, Thrifty Bull Calf

dropped January 11, 1923—nearly all white, for sale.
Sire: By Artis Pontiac Winana 85823, with 15 A. R. O. daughters, 8 from 20 lbs. to 31 lbs.
Dam: Akinside Caroline Artis Pontiac 217946, 14 lbs. at two years; now making over 50 lbs. of 3.8% milk on two milkings.

He is a good buy, registered, transferred and crated, f.o.b. our station at \$75.

LARRO RESEARCH FARM,
Box A, North End
DETROIT, MICH.

WINNWOOD HERD

Registered Holsteins

?

Ask us about a Real Bull a
Maple Crest or an Ormsby.

JOHN H. WINN, Inc., Rochester, 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.

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.

FOR SALE KING SEGIS BREEDING

Born Sept. 26, 1922. His dam recently completed semi-official test giving 12,475.3 pounds of milk and 449.004 pounds of butter. Average figures recently given show 3800 pounds of milk in a year for Michigan cows. You will notice that this cow shows an increase of 400%. This milk production combined with show type is a decided asset as a future herd sire.

GRAND RIVER STOCK FARMS Jackson, Mich.
Corey J. Spencer, 111 E. Main St.

REGISTERED HOLSTEINS

A few of those large size, Straight Top cows for sale. Some with good official records, these would be excellent for a foundation herd. I. M. SHORMAN Fowlerville, Mich.

Holstein Friesian bulls all ages from A. R. O. dams with records up to 30 lbs. from one of best average record herds in state. Prices reasonable. I. A. Kidney, Brant, Mich.

Bull adv. Jan. 27 sold to Ex-Gov. Warner. Daughters of his bred to son of largest semi record heifer in Wayne Co. Terms \$50 a year. Federal tested. M. L. McLAULIN, Redford, Mich.

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

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

FOR SALE: Jersey bulls ready for service. All cows Register of Merit. Accredited herd. **SMITH AND PARKER, R. 4, Howell, Mich.**

Registered Holstein cows, heifers and heifer calves priced reasonable. Best of breeding and production. Bulls priced to sell quick. All tested and guaranteed. B. B. REAVEY, Akron, Mich.

Lillie Farmstead Jerseys For sale, 3 heifers bred to freshen this fall, 2 bull calves, 6 to 9 mo. old. **Colon O. Lillie,** Coopersville, Mich.

Registered Jersey cattle, young bulls, for sale. Tuberculin tested. **J. L. CARTER,** Lake Odessa, Mich.

For Sale Four good Jersey cows and two heifers all to be fresh soon. **ELMER P. JOHNSTON** R. 2, Tecumseh, Mich.

Breeders' Page

By P. P. Pope

FELDKAMP'S THIRD ANNUAL SALE.

It was on Washington's birthday that the third annual sale crowd gathered at the Feldkamp sale pavilion. In cooperation with two of his good neighbors, Amos Curtis and G. H. Smyth, who are breeding Feldkamp Poland Chinas, they put a very high class of hogs through the sale ring. The bulk of the offering went to new buyers and at a range of prices that must be called very conservative.

No. 1 in the sale, the first prize sow pig at the Michigan State Fair last fall, sold, bred to Foxy Clansman, the grand champion at the same fair, to J. A. LaRue, of Jackson, for \$75. The sale top was found in No. 21, a beautiful gilt of modern type, sired by a grand champion and bred to a reserve grand champion boar. She went to Francisco Farms at Mt. Pleasant at \$90. Every animal catalogued was sold and the average of the lot was \$44. The list follows:

1. J. A. LaRue, Jackson.....	\$75.00
4. J. A. LaRue	46.00
3. W. J. Hogan, Clinton	39.00
2. Clarence J. Arting, Azalia....	46.00
5. D. S. Myers, Manchester....	42.00
6. Geo. L. Scherger, Chicago....	41.00
20. Geo. L. Scherger	65.00
24. Geo. L. Scherger	60.00
7. E. H. Eisele, Manchester....	44.00
19. E. H. Eisele	35.00
33. E. H. Eisele	32.00
8. H. E. Kimball, Grass Lake....	37.00
34. H. E. Kimball	36.00
9. Doris Hover, Akron	37.00
10. Wm. F. Choate, Cement City	53.00
17. Wm. F. Choate	41.00
11. Lowell Walz, Grass Lake....	55.00
12. Edw. J. Pfau, Manchester....	50.00
31. Edw. J. Pfau	31.00
13. Benj. Feldkamp, Manchester	36.00
43. Benj. Feldkamp	35.00
14. W. H. Gadd, Clinton	35.00
26. W. H. Gadd	35.00
15. Guy Blake, Bancroft.....	50.00
39. Guy Blake	49.00
16. E. G. Mann, Ann Arbor	30.00
38. E. G. Mann	50.00
18. H. Kulenkamp, Manchester..	41.00
21. P. P. Pope, Mt. Pleasant....	90.00
22. G. Phillips & Sons, Bellevue	50.00
23. John Walz, Norvell	44.00
27. John Walz	52.00
41. John Walz	38.00
25. Fred Below, Grass Lake....	36.00
30. Fred Below	41.00
28. Rea Fransted, Grass Lake....	39.00
29. G. Horning, Manchester....	48.00
32. L. Wedmayer, Manchester....	41.00
35. Wm. N. Martin, Manchester	33.00
36. Forest Choate, Cement City..	40.00
37. R. P. Ullman, Manchester....	42.00
40. S. Wedmayer, Manchester....	36.00
42. S. Wedmayer	36.00

BORNER GETS \$50 AVERGAE.

ON February 21, midst the cold and the flu, Mr. Borner, of Parma, held a good sale. The offering was presented in very good condition, and was an exceptionally uniform lot. The bidding ran along very smoothly, and considering the size of the crowd and the times, the stock sold well. This was the second annual sale of Big Type Poland Chinas from the Borner herd. The prices were such as to insure profit to both the grower and the buyer.

Auctioneers Adams and Haynes did the selling with credit to themselves, the buyers and the seller. W. B. Ramsdell secured the top of the sale, as is his custom, at \$102.50. No. 1 in the sale, a grand tried sow, went to Chas. Wetzel & Son, at \$97.50. Earnest Jackson made a good start by landing several of the good ones. The average on the entire lot was \$50. The list of those selling for \$30 or over follows:

1. C. Wetzel & Son, Ithaca....	\$ 97.50
14. C. Wetzel & Son	56.00
3. A. A. Feldkamp, Manchester	50.00
4. Floyd Laird, Parma	47.50
9. Floyd Laird	39.00
5. Fred Bell, Akron	51.00
7. Wm. Brigham, Albion.....	42.00

FOR SALE entire herd Reg. Holstein Milch Cows (10). Young males. **RAY B. PARHAM,** Bronson, Mich.

Produce Your Own Feeders
under **EARLIRIPE**
HEREFORD BEEF
PLAN, which guarantees maximum prices. Investigate personally the success of other Michigan Farmers. For information write **T. F. B. Sotham & Sons,** (Herefords since 1839). St. Clair, Mich.

HEREFORDS

For Sale at Farmer's prices.
5 yearling bulls 8 yearling heifers
10 of the above sired by our \$5200 Repeater bull. We have others not related. This is an opportunity to start in good stock at a moderate price.

ALLEN BROS.
616 So. West St., Kalamazoo, Mich.

Richland Shorthorns

Special offer on several bulls at Farmers' prices. Suitable for grading up purposes where beef is required. Also several high class herd headers of the best of breeding.

C. H. Prescott & Sons,
Office at Tawas City, Mich. Herd at Prescott, Mich.

Shorthorns Bidwell Revolution Jr. heads herd. Sire, Revolution. Dam, Maxwailon Rosewood 3d, 2d Dam, Imp. Rosewood 8th. Now offering one good roan two year old bull out of a Marr Marigold dam, also a few cows and heifers safe in calf. Prompt attention to correspondence—visitors welcome. State Accredited herd. One hr. from Toledo, O. N. Y. C. Ry. **BIDWELL STOCK FARM,** Tecumseh, Mich., Box D

Maplewood Milking Shorthorns
For sale a few choice heifer and bull calves, from one to four months, sired by Maplewood Jeweler. **HARTER & EASTON,** Jenison, Mich.

Burr Oak Farms offer ready for service Shorthorn bulls, sired by Flash Hallwood, Saline, Mich. Also heifers, all reasonably priced, F. R. CLEMENTS, Saline, Mich.

Cedardale Milking Shorthorns
Bull calves from high producing dams at farmer's price. Write **STANLEY GARDNER,** Osgood, Mich.

Milking Shorthorns priced reasonably. An accredited herd selected for beef and milk. **Beland and Beland,** Tecumseh, Michigan

Clayton Unit Shorthorn Breeders' Assn. Scotch, Scotch Top and Milking Shorthorns for sale all ages. W. J. Hinkley, Sec'y, Flushing, Mich.

DOUBLE Standard Polled Shorthorns, milk strain. Bulls and heifers all ages at farmer's prices. **Paul Quack,** Sault Ste. Marie, Mich.

HOGS

BROOKWATER DUROC JERSEYS
SPRING GILTS BRED FOR MARCH AND APRIL LITTERS
ALSO A FEW GOOD BOARS
Herd sires: Panama Special 5th, Big Bone Giant Sensation, Brookwater Principal Col. and Brookwater Orion Sensation. All are exceptional individuals and have proven their ability to sire good ones. **BROOKWATER FARM,** Ann Arbor, Michigan. H. W. Mumford, Owner. J. B. Andrews, Lessor.

Whitney Farms Durocs

We offer an excellent line of bred sows and gilts as well as two boars that are real sires. Priced to sell. Write for pedigrees. **WHITNEY FARMS,** Whitney, Mich.

Woodlawn Farm Duroc Hogs meet present day requirements, length, size and quality. Young stock for sale at reasonable prices and fully guaranteed. Write your wants. **W. E. BARTLEY,** Alma, Mich.

I AM OFFERING BRED SOWS

fall yearling and spring gilts, bred for March and April farrow, that are tops. Mated to O. C. K. Col. 2nd and Orion Giant Col. Write for price list. **W. C. TAYLOR,** Milan, Mich.

Duroc—Jerseys A few Pathfinder Gilts Bred to a good son of Foust's Top Col. E. D. Heydenberk, Wayland, Mich.

Duroc fall boars sired by Master Col. Walt. Bred sows and gilts. Cholera immune. **JESSE BLISS & SON,** Henderson, Mich.

Is It Worth While?

A real boar pig sired by Woodford Sensation, Dams of Defender or Pathfinder breeding.

If so,
We have them of Sept. farrow, not only showing extreme quality, but greater size than you will expect to find. Follow M 29 to

Kope-Kon Farms, Coldwater, Mich.

Benjamin's BIG TYPE CHESTER WHITE'S
Early maturing, prolific, heavy weight, prize winner kind from bloodlines of Champions and Grand Champions, now making big money for thousands. I have started more breeders on road to success than any living man. Let me help you. Easy to start. Costs little. **G. S. Benjamin** R. F. D. 10. Portland, Mich.

Chester Whites, We are offering some choice fall pigs, also bred sows and gilts. Prices reasonable. **Weber Bros.** 10 Mile and Ridge Rds, Royal Oak, Mich.

CHESTER WHITES
Boars all sold. Bred sow sale March 8th. **FRED L. BODIMER,** Reese, Mich.

Chester White Bred sows, fall pigs and service boars. Big type with quality and the best of breeding. Also some young Shorthorn heifers. **JOHN C. WILK,** Alma, Michigan

Chester White Bred Sows for April Farrow. Pigs all ages. Best Bloodlines Shipped on approval. **OSCAR FATE,** Edison, Ohio.

O. I. C's and Chester Whites

Gilts sired by Mich. State Fair Gr. Champion 1921, and bred for March and April farrow to Mich. State Fair Jr. Champion 1922, the common sense type and price.

ANDY ADAMS, Litchfield, Mich.

22. Wm. Brigham	37.00
8. Chas. Hicks, Parma	32.00
20. Chas. Hicks	40.00
50. Chas. Hicks	38.00
10. Frank Graham, Parma	50.00
11. C. R. Alexander, Marshall	42.00
41. C. R. Alexander	39.00
12. Wm. Ford, Rives Junction	46.00
13. Wm. Choate, Liberty	82.50
15. Howard, Riley, Charlotte	50.00
16. Earnest Jackson, Parma	72.00
19. Earnest Jackson	73.00
30. Earnest Jackson	52.50
32. Earnest Jackson	41.00
42. Earnest Jackson	60.00
17. R. N. Hudson, Albion	49.00
18. F. J. Butler, Charlotte	49.00
21. L. L. Clark, Parma	40.00
23. Bruce Sanford, Parma	35.00
35. Bruce Sanford	30.00
24. Clyde Weaver, Ceresco	40.00
26. Doris Hoyer, Akron	47.50
28. Doris Hoyer	51.00
27. W. B. Ramsdell, Hanover	102.50
33. Guy Wilcox, Parma	31.00

COFFMAN'S BARGAIN SALE.

HERE is a part of G. S. Coffman's Spotted Poland China sale, Saturday, February 24, and it sure was bargain day. Mr. Coffman had saved the best of his offering for the auction. But at that they sold far less than sixty cents on the dollar, compared to those sold at private sale. The reason for this was postponed auction, drifted roads, hence a small crowd.

This offering was bred to Mountain Ranger and Michigan Ranger, two most worthy sons of Spotted Ranger, grand champion at the International in 1922.

Mr. Coffman said that there is one satisfaction in selling a good offering to a small crowd on a bad day. The offering at the price is absolutely bound to make the buyer money. The total amount of the sale was \$1,269.50. The following is the list of sales above \$30:

39. Robert Kerr, Coldwater	\$33.00
31. Myron Ulrich, Bronson	35.00
25. Elton Bertrom, Coldwater	31.00
32. C. O. Rathburn, Coldwater	31.00
37. H. D. Cox, Coldwater	71.00
36. E. J. Winfield, Coldwater	50.00
35. W. C. Kempster, Coldwater	33.00
38. A. Lucas, Coldwater	33.00
34. H. D. Cox	46.00
40. W. C. Kempster	37.00
33. Jacob Claar, Coldwater	44.00
2. Nash & Sanderson, Coldwater	39.00
10. J. Holmes, Coldwater	30.50
22. Harry Holbrook, Quincy	44.50
21. Marvin Spade, Angola, Ind.	38.00
41. W. C. Kempster	38.00

MEETING OF LIVE STOCK EXCHANGE.

THE board of directors of the Michigan Live Stock Exchange met in Lansing, Friday, February 23, and elected from their number the following officers: President, E. A. Beamer, Blissfield, Mich.; vice-president, W. E. Perry, Grand Blanc, Mich.; secretary, John O'Mealey, Pittsford, Mich.; treasurer, P. M. Granger, Charlotte.

The directors passed a resolution making it a policy that during the ensuing year no director can hold a salaried position with the exchange. Mr. E. E. Compson was employed as manager. The directors filled the vacancies on the board caused by the resignation of two members who were holding salaried positions, Mr. J. Dippey, of Perry, Michigan, and Mr. J. C. Lindsay, Sanilac county, being appointed.

The board is now composed of Vern Tracy, of Ithaca; W. E. Perry, Grand Blanc; L. E. Willet, Laingsburg; J. H. O'Mealey, Pittsford; P. M. Granger, Charlotte; E. H. Runciman, Lowell; J. Dippey, Perry; C. J. Lindsey, Sanilac county; E. A. Beamer, Blissfield.

The Michigan Live Stock Exchange has made an excellent showing at both Detroit and Buffalo, with their live stock commission houses. The Detroit house having been in operation only seven months and last week went over the top as to receipts, having the largest number of cars of any firm on the market, also showing a very substantial financial profit and rendering

the best of service. The Buffalo house has been at the top of the list as to receipts among seventeen firms every week since the opening, November 17, with the exception of three, when there were several large consignments of western hogs which went to old-line firms. Buffalo is also getting the high dollars for their consignments and rendering good service. The Buffalo house also shows a nice financial profit to date.

The directors of the Michigan Live Stock Exchange are looking forward to a good year and are urging the patronage and loyalty of all the local shipping associations.

WATCH THE BONE.

THE live stock feeder should imitate the hungry dog. He should watch the bone. Building good bone in animals is a fundamental practice of good breeders. Mineral elements are most essential for this. These elements may be provided by feeding generously of leguminous hays, such as alfalfa, and also in providing them in the form of salt and other mineral compounds.—T. S. C.

OUR VETERINARY COLUMN.

Stringy Milk.—Have cow that will freshen next June. She gives stringy, lumpy milk, can hardly squeeze the milk out; her udder is tender. What shall I do for her? D. T., LaSalle, Mich.—Dry her as soon as possible, apply camphorated oil to udder twice daily.

Scours—Colic.—I have a horse that usually scours whenever he is driven, and he is thin. Would also like to know how to treat a case of colic. A. M. K., Shepherd, Mich.—His grinder teeth may require floating; change his feed, limit his supply of water before and while you drive him. Give a teaspoon of powdered sulphate of iron in ground feed three times a day. For the treatment of colic, give one-ounce doses of aromatic spirits of ammonia in one pint of cold water every hour. If bowels are costive, give one quart of raw linseed oil. Flush the rectum with tepid water, and apply mustard and water to abdomen.

Heifers Lack Appetite.—I have two three-year-old heifers which seem to have pretty much lost their appetite. What shall I do for them? C. D. S., Cannister, Mich.—Give each heifer thirty drops of fluid extract of nuxvomica and three drams of Fowler's solution in feed or in drinking water three times a day.

Calf Chews Wood.—I have a calf seven months old that is inclined to chew wood, but he is thriving. What shall I give him? C. B. L., Vanderbilt, Mich.—Give him a teaspoon of baking soda and a tablespoon of powdered wood charcoal in ground feed three times a day.

Dispersal Sale

34 head of Registered Polled Shorthorn Cattle of Scotch Breeding at DECATUR, MICHIGAN Tuesday, March 13, 1923

34 HEAD cows—cows with calves at foot, heifers, and bulls. Herd headed by Crimson Marshal. Cattle are T. B. tested. Plan to attend sale—Free Transportation from Decatur and Marcellus.

17 HEAD—of Poland China bred sows. Bred by Big Bob, Col. Jack Jr., C's Clansman, and C's Big Orange Bred to Daddy Orphan, Dady Orphan 2d, and The Outlaw

10 HEAD of Horses—Horses and Hogs sold in forenoon at 10 O'clock. Cattle at 1 O'clock

F. G. Pollock & L. L. Chamberlin, Props. AUCTIONEERS.

Col. Carey M. Jones, Guy C. Rutherford and E. H. Black

CATALOGUES ARE READY

DUROCS—Special Sale on big fall yearlings and spring farrow. Also fall pigs now weighing 200 lbs. All sired by or bred to State Fair winners. MICHIGANA FARM, Pavilion, Mich.

Auction Sale

Percherons, O. I. C's., Holsteins

At City Livery & Feed Stables, Zeeland, Mich. Friday, March 16 at 12:30 P. M.

Four Pure-Bred Percheron Mares Five High Grade Holstein Cows

and one heifer. My herd has been tubercular tested without a reactor.

Twenty Nine Registered O. I. C. Hogs

Offering consists of 1 herd boar, 3 tried sows, 10 yearling bred sows with papers and fifteen shoats. Cash or six months bankable notes.

HENRY RIGTERINK, Prop. Hamilton Mich., R. 1.

Harm C. Ver Beek, Auctioneer

HOGS

Duroc - Jerseys

TOPMAST SENSATION

The largest pig of his age in Michigan—stands 40 inches high at one year old. A boar whose sire was world's Junior Champion, whose grandsire was twice world's Grand Champion. Would it mean anything to you to have some of his offspring in your herd? Think it over.

LOEB FARMS

Charlevoix, Michigan

'The Home of Grand Champions'

DUROC JERSEYS Plum Creek Stock Farm has a choice lot of fall boars for spring service. Large heavy boned type. Satisfaction guaranteed. F. J. DRODT, Prop. R. 1, Monroe Mich

Duroc Jerseys 12 bred gilts, also 50 registered black top ewes. CAREY U. EDMOND, Hastings, Mich.

DUROCS, ready for service and individuality, breeding, large litters, satisfaction or money back, write, B. E. KEIS, Hillsdale, Mich.

Chester Whites boars all sold, bred gilts \$3 to \$50 C. D. ALBERT DORR, Clinton, Mich.

O. I. C. 20 large growthy gilts farrow in Mar also fall boar pigs. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C's. 20 last spring gilts bred to farrow in Mar. and April, big growthy stock, recorded free. 1/4 mile west of Depot, Clitz's phone. OTTO B. SCHULZE, Nashville, Mich.

O. I. C. GILTS bred for March and April farrow. H. W. MANN, Dansville, Mich.

O. I. C's. Bred Sows all sold. Some young sows for sale. Fall breeding. All sold on approval, reg. Free. One Extra Good 11 month old Boar. Fred W. Kennedy, Plymouth, Mich.

O. I. C's March boars, bred gilts, July and Aug gilts. Young Brown Swiss Bulls, Milo H. Peterson, Elmhurst Farm, R-2 Ionia, Mich.

O. I. C's. Am offering a few fall boars and 3 gilts bred for May farrow. G. J. THOMPSON, Rockford, Mich.

Large Type Poland China BRED SOW SALE FEBRUARY 22, 1923

Write for Catalogue A. A. FELDKAMP, Manchester, Mich

RADIO GIANT Represents the worlds largest strain of Poland China Hogs, Boars, Sows, Pigs at bargain prices from Mich. pioneer herd. We have bred them big for 30 years. We can furnish what you want. JNO. C. BUTLER, Portland, Mich.

Leonard's Big Type P. C. gilts sired by Leonard's Liberator and Orange Clansman and fall pigs at bargain prices. E. R. LEONARD, St. Louis, Mich

Saginaw Valley Herd of O. I. C. & Chester White Swine. C. O. Mich. Boy and Selection 1st, bred to Jumbo's Giant 1st, son of Grand Champion Boar at Mich. State Fair. Photos on request. John Gibson, Posters, Mich R. 2.

Big Type P. C. some very choice boars double im mane, out 190 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich

Public Auction FRIDAY, MARCH 16

Sale of implements at 9:00 o'clock. Cattle at 1:00 o'clock

Not a Dispersal Sale. Moving Off Farm. Everything to be Sold.

25 high quality Registered Holsteins. Type and production combined. Herd fully accred. ited, including following A. R. O. cows:

Cass River Peter Mary, H. B. No. 593065. Record at 2 yrs. 9 mos. of 29.82 lbs. Due to freshen April 8th. Bred to grandson of Maple Crest Korndyke Hengerveld.

A 9 mos. old bull of splendid type from above cow. XL Pride Colantha Elzevere, H. B. No. 405061. Record at 5 yrs. old, of 31.17 lbs. Fresh in November.

Tuscola Gerusia DeKol 3d, H. B. No. 392803. Record at 5 yrs. old of 28.69 lbs. This cow started on semi-official May 10th. To March 1st she has over 800 lbs. butter and 20,000 lbs. milk. Bred to Flint Korndyke Butter Boy, two of whose daughters hold state championship for milk and butterfat production.

A 10 mos. typey, growthy bull from above cow. Queen Pontiac Wayne Johanna 2d, H. B. No. 392804. Record made at 3 yrs. 2 mo. of 22.79 lbs. Paternal sister to Tuscola Gerusia DeKol 3d. Bred to Black and White Pontiac Aaggie, H. B. No. 237922.

Duke Butter Boy Wayne, H. B. No. 323226, 3 year old herd sire. A son of above cow, and sired by Flint Korndyke Butter Boy. Remainder of herd from or related to above stock. Farm located 5 1/2 miles north and east of Vassar, Mich. Time given on good endorsed bankable paper at 7% interest.

WILLIAM H. HIGGINS, Proprietor

L. T. P. C.

Choice Gilts \$25 to \$40. Boars \$30. Fall Pigs \$15. HART AND CLINE, Address F. T. HART, St. Louis, Mich.

Large Type P. C. Largest in Mich. A few fall pigs for sale. Sired by "The Wolverine" a grandson of "The Rainbow and Big Bob" the greatest yearling boar I ever owned has size combined with quality. Come and see the real kind. W. E. LIVINGSTON, Parma, Mich

Francisco Farm Poland Chinas Spring gilts sired by a grandson of National Grand Champion Sow and bred to a grandson of National Grand Champion Boar. Now ready to ship. P. F. POPE, Mt. Pleasant, Mich

L. T. P. C. Gilts and boars all sold. Thanks to my customers for the patronage of the past. M. M. PATRICK, Gd. Ledge, Mich

BIG TYPE POLANDS spring boars all sold, fall pigs either sex at farmers' prices. Tuscola Clansman is our young herd sire, first prize pig at Mich. State Fair. Litter from him will improve your herd. Public sale Feb. 1. Write today for catalog. DORUS HOVER, Akron, Mich

Walnut Alley Big Type P. C. gilts now ready to ship they are bred to the best boar I have seen this fall. A. D. GREGORY, R. 3, Ionia, Mich.

L. T. Poland Chinas spring boars and sonable prices, also fall pigs either sex of popular blood lines. Aberdeen-Angus bulls, Heifers and Cows that are show winners. Write or come. E. A. CLARK, R. 3, St. Louis Mich.

Big Type Poland Chinas G. A. BAUMGARDNER, R. 2, Middleville, Mich

Maplehill Poland Chinas. Attractive spring gilts bred to a grandson of Liberator. Now ready for sale. George R. Wheeler Mt. Pleasant, Michigan.

Large Type P. C. The Real Kind. A few of those big, smooth, stretchy, bred gilts for sale. Bred for March, April and May farrow. Priced right. N. F. BORNOR, Parma, Mich.

Large Type Poland China Gilts sired by Mich Liberator, & Big Checkers. Bred to model Giant and Mich. Liberator 2d. for March & April farrow. George F. Aldrich, R. 6 Ionia, Mich.

SPOTTED POLAND CHINAS Bred sows and gilts sired by King Wonder 30035 bred to Perfection Builder also fall boars and gilts. If interested write for prices and photo of what you want. W. T. JEAN, Worthington, Indiana

Lone Maple Farm Big Type Poland Chinas. Nothing for sale at present. F. R. DAVIS & SON, Belding, Mich.

Large Strain P. C. a few choice gilts left. Bred for April farrow. You can't beat the breed ing nor price. H. O. SWARTZ, Schoolcraft, Mich.

P. C. Choice gilts sired by a son World Champion Big Bob and 1075 Peter Pan Bred to Model Clansman, also fall pigs. C. E. Garnant, Eaton Rapids, Mich.

Big Type Poland China Hogs from prize winning stock, fall pigs, either sex, eligible to Reg. ister. W. E. LECKY, Holmesville, Ohio.

Hampshires spring boars and bred gilts from 25 sows to select from. Place your order now or you may be too late. 10th year. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Registered Hampshires, Bred sows and gilts, fall pigs, best blood lines. In- spection invited. Clarence L. Campbell, Parma, Mich

SHEEP

800 BRED EWES FOR SALE in lots of 50 or more, black faced, from 1 to 4 yrs old; no broken mouths, in good condition, bred to Shropshire and Oxford rams to lamb May first. Located 22 miles S.W. of Detroit on Detroit and Toledo electric and Dixie Highway. Telegraph address, Rockwood. Almond B. Chapman, So. Rockwood, Mich.

Twenty-Eight Registered Rambouillet Ewes bred to 2650 ram. Also seven yearling ewe lambs and seven yearling ram lambs, in fine condition. \$750 buys the lot. John T. Clark, Clinton, Mich.

HORSES

For Sale First Class Percheron Stallions also a car of Grade Draft colts. Chas Bray, Okemos, Mich.

FOR SALE First class registered Belgian Stallion wt 2250, 9yr. \$250. ARRY MARSH, Au Gres, Mich.

WANTED Registered Percheron Stallion. Send description to Box T10, Michigan Farmer, Detroit, Mich

FOR SALE Choice Registered Stallions and Mares. Prices reasonable. LEMAN O. BISHOP, St. Johns, Mich.

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Tuesday, March 6.

Wheat.

Detroit.—No. 2 red at \$1.33; No. 2 mixed \$1.33; No. 2 white \$1.33.

Chicago.—No. 3 red at \$1.26; May \$1.18½.

Toledo.—Cash \$1.36@1.37.

Corn.

Detroit.—Cash No. 2 80c; No. 3 yellow 78c.

Chicago.—No. 2 yellow 73½@74½c; No. 2 mixed 73½c.

Oats.

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

Chicago.—No. 2 white at 46@46½c; No. 3 white 44½@45c.

Beans.

Detroit.—Immediate and prompt shipment \$7.90.

Chicago.—Choice hand-picked Michigan beans \$8.25; red kidneys at \$8.50.

Rye.

Detroit.—Cash No. 2, 84½c.

Chicago.—80½c.

Seeds.

Detroit.—Prime red clover cash at \$12.90; April \$12.20; alsike at \$10.25; timothy \$3.30.

Toledo.—Prime red clover cash at \$13.10; alsike at \$10.50; timothy cash at \$3.30.

Hay.

Detroit.—No. 1 timothy \$16@16.50; standard \$15.50@16; light mixed at \$15.50@16; No. 2 timothy at \$14@15; No. 1 clover \$13@14; rye straw \$11.50@12; wheat and oat straw \$11@11.50 per ton in carlots.

Feeds.

Bran \$38; standard middlings at \$37.50; fine do \$39; cracked corn \$36; coarse cornmeal \$34; chop \$30 per ton in 100-pound sacks.

Fruit.

Apples.—Jonathans \$6.50 a bbl.; Kings \$6; Northern Spies \$5@6; Greenings \$5.50@5.75; Wageners at \$4@4.50.

WHEAT

Wheat prices continue to fluctuate over an unusually narrow range. Since the middle of October the extreme range has been only twelve to thirteen cents a bushel, showing the greatest degree of stability known since the beginning of the war, with the exception of the early period of government guarantee. For weeks the outlook has been depressing. Europeans are taking less than their theoretical needs. The United States and Canada probably have enough to clear over 50,000,000 bushels monthly for the next four months. World shipments have been about 56,000,000 bushels monthly and Argentina and Australia are now furnishing over half of this amount at lower than United States prices. Nevertheless, prices have not declined as much as such conditions might indicate. Domestic disappearance has been rapid and speculative buying seems to have been a supporting influence rather than the opposite.

CORN

Based on the ten-year average percentage of the corn crop remaining on farms on March 1, reserves this year would be about 1,058,000,000 bushels. Less than that amount is expected, however, with one private estimate, supposedly based on a comprehensive survey, running as low as 855,000,000 bushels. Corn prices are holding much better than wheat and are now close to the best of the season. Cash demand is fairly good and arrivals at terminals are not causing indigestion. A good deal of corn sold to the east has not arrived and this situation hampers new sales to eastern distributors. Exports from the United States are holding up, although world exports have declined in the last two weeks. Argentina has but little old corn left and her new crop surplus is estimated at 100,000,000 bushels.

OATS

Distribution of oats is expanding and a good deal of the stock at terminals has been sold for deferred shipment to the east and south. Prices are holding two or three cents below the season's high point.

SEEDS

Although planting time is fast approaching, demand for clover seed has

not become as active as expected. As the time becomes shorter, the market is more sensitive to changes in the demand. Prices are holding within a narrow range on both timothy and clover seed. Small amounts of red clover are being exported but they are not large enough to affect the market materially.

FEEDS

The scarcity of spot offerings of wheat feeds have kept the market firm. The demand for shipment later in the month, however, is limited. The linseed meal market is dull and corn feeds have weakened slightly. Exporters buy cottonseed meal on all set-backs so that it is holding well.

HAY

Milder weather has permitted increased shipments of hay from surplus markets in the west, as well as lessened the demand, and markets are weakening although prices as yet show little change. Clover and alfalfa hay have been affected more than timothy.

POULTRY AND EGGS

Egg prices have been fluctuating very violently in the last ten days owing to sharp variations in receipts at the leading markets. At present receipts are about equal to immediate consumptive demands. Cold weather which tends to check production results in sharp upturns as consumptive demand is broad. Aside from temporary advances, the trend of prices is downward as country collections are increasing especially in the southwest. Receipts of dressed poultry are still running far in excess of normal for this season of the year, but along with the supply of live poultry they are insufficient to supply current consumption and withdrawals from cold storage are gradually increasing.

Chicago.—Eggs miscellaneous 30½@31c; dirties at 27@30c; checks 27@28c; fresh firsts 31½c; ordinary firsts 30@30½c. Live poultry, hens 21½c; springers 22c; roosters 16c; ducks at 23c; geese 13c; turkeys 20c.

Detroit.—Eggs fresh candied and graded 34@34½c. Live poultry, heavy springers 26@27c; light springers 22@24c; heavy hens 25@26c; light hens 24c; roosters 17c; geese 20c; ducks 28c per pound.

BUTTER

Butter prices declined three to six cents at the leading markets last week. The squeeze in butter for February delivery at Chicago was a supporting influence up to the end of the month but declines came fast thereafter. In addition, receipts of butter at all markets showed a sharp increase, probably as a result of the arrival of delayed shipments. Creamery reports indicated a marked increase in the make, suggesting further expansion in the supply before long. With prices working lower, buyers were disposed to wait until the market gave evidence of having reached bottom. The tone was a little more confident at the close of the week, but a further decline will not be surprising before the market rights itself.

Prices for 92-score fresh butter were as follows: Chicago 47½c; New York 48½c. In Detroit fresh creamery in tubs sells for 46@47c.

POTATOES

Shipments of potatoes from producing sections have increased in the last two weeks and are now running about sixty per cent above normal for this season of the year. Nevertheless,

prices showed an upward trend last week with northern sacked round whites quoted mostly at \$1@1.25 per 100 pounds in mid-western markets, and 70@80c f. o. b. shipping points.

APPLES

Apple prices have advanced in the past week, especially on barreled stock which is 50c higher. New York and Michigan A-2½ Baldwins are now quoted at \$5@5.75 per barrel in consuming markets and \$4.75@5 f. o. b. shipping points. Shipments from producing sections increased last week to about double the normal volume for this season of the year.

BEANS

The bean trade is lifeless with the market leaning toward the buyer's favor. But regardless of the dullness the sellers are not showing any anxiety to shade prices on quality goods. Rumanian beans are again a factor in the New York market. They are not up to the Michigan quality but do quite well as canners. Red kidneys are dragging and limas are slow. In general canners and wholesalers are not inclined to buy except for their immediate needs.

DETROIT CITY MARKET

The variety of supplies at the farmers' market is getting smaller because of the tag end of the season and the condition of the roads. Apples, cabbage and parsnips are in greatest demand. Onions, potatoes, hogs, poultry and veal are slow. Apples sell for \$1@2.50; celery 15@20c per dozen; cabbage \$1@2; red cabbage \$1.50@2; carrots 60c@1.25; eggs 40@45c; dry onions \$1.25@1.75; potatoes at 50@60c; poultry 26@32c; veal 17@20c; hogs at 12½@13c.

GRAND RAPIDS

Milder weather late last week caused a heavier production of hothouse leaf lettuce and prices sagged here to sixteen and seventeen cents a pound. The spring-like weather has also started the sap flow and the first maple sugar of the season was brought to market late last week by L. A. Hooper, of Gaines. He sold seventy pounds for forty cents a pound. The bean market continues unsettled with bids to farmers holding around \$7.25@7.50 per cwt. The lighter supply of poultry has strengthened the market, and bids on heavy fowls moved up to 20@23c per pound, live weight. Egg receipts are slightly heavier and prices lower in line with other markets. Bids early this week were around 33c per dozen. Hatcheries are draining heavily on the production and receipts indicate that many of the best eggs have been removed.

COMING LIVE STOCK SALES.

Aberdeen-Angus.

March 21.—Russell Bros., Merrill.

Ayrshires.

March 22.—Fred S. Smith, Somerset, Mich., Farm Auction.

Holsteins.

March 10.—Musolf Bros., South Lyon.

March 13.—H. F. Lewis, Elsie.

March 16.—Wm. H. Higgins, Vassar, Mich., Farm Auction.

March 16.—Henry Rigterink, Hamilton, Mich., sale at Zeeland.

Shorthorns.

March 13.—F. G. Pollock, Decatur.

March 13.—F. G. Pollock and L. L. Chamberlin, Decatur, Mich.

O. I. C.'s.

March 16.—Henry Rigterink, Hamilton, Mich., sale at Zeeland.

Poland Chinas.

March 13.—F. G. Pollock and L. L. Chamberlin, Decatur, Mich.

March 22.—Sonley Bros., St. Louis.

March 22.—Fred S. Smith, Somerset, Mich., Farm Auction.

Belgian Horses.

March 12.—Wm. Mankey, St. Johns, Mich., Farm Auction.

Critics say that "Beyond Rope and Fence" is the best animal story since Jack London's masterpiece, "The Call of the Wild." It starts in this issue on Page 20.

Live Stock Market Service

Wednesday, March 7.

DETROIT

Receipts 465. Market is steady on good, 25c lower on cow stuff, common butchers and bulls.

Best steers	8.00@8.25
Handyweight butchers	7.50@8.00
Mixed steers and heifers	6.75@7.25
Handy light butchers	6.00@6.50
Light butchers	5.00@5.50
Best cows	5.00@5.50
Butcher cows	4.00@4.50
Common cows	3.00@3.50
Canners	2.50@3.00
Choice bulls	5.50@6.00
Bologna bulls	4.75@5.25
Stock bulls	3.75@4.25
Feeders	6.00@6.50
Stockers	4.75@6.00
Milkers and springers	40.00@75.00

Veal Calves.

Receipts 755. Market is 50c lower. Best \$14.00@14.50. Others 6.00@12.50.

Sheep and Lambs.

Receipts 1,003. Market slow.

Best lambs	14.50@15.00
Fair lambs	12.50@13.50
Light to common	9.00@12.00
Fair to good sheep	6.50@8.25
Culls and common	2.00@4.00
Clipped lambs	12.25

Hogs.

Receipts 2,430. Market is 10@15c lower.

Mixed hogs and yorkers	8.75
Heavies	8.00
Stags	4.00@5.00
Pigs	8.25
Roughs	6.85

CHICAGO

Hogs.

Estimated receipts today are 26,000; holdover 13,796. Market is 10c lower. Bulk of sales \$7.85@8.30; tops \$8.40; heavy 250 lbs up \$7.95@8.15; medium 200 to 250 lbs \$8.10@8.30; light 150 to 200 lbs \$8.15@8.40; light lights 130 to 150 lbs \$8@8.30; heavy packing sows 250 lbs up \$7.25@7.50; packing sows 200 lbs up \$7@7.30; pigs 130 lbs down \$6.75@8.15.

Cattle.

Estimated receipts today are 10,000. She stock 10@15c higher; other classes generally steady; calves strong to higher. Beef steers medium and heavy

weight 1100 lbs up \$9.85@10.75; do medium and good \$8@9.85; do common \$6.50@8; light weight 1100 lbs down \$9.25@10.50; do common and medium at \$6.25@9.25; butcher cattle heifers \$5.15@9.65; cows \$4.15@7.50; bulls bologna and beef at \$4.65@6.75; canners and cutters cows and heifers \$3@4.15; do canner steers \$3.75@5; veal calves light and handyweight at \$8@10.75; feeder steers at \$6@8.15; stocker steers \$4.50@8; stocker cows and heifers \$3.25@5.50.

Sheep and Lambs.

Estimated receipts today are 14,000. Market slow; few early sales of clipped stock steady; little doing on wool lambs. Lambs 84 lbs down \$13@15.25; do culls and common at \$10@14.50; spring lambs \$9.75@13.50; ewes \$6.50@8.75; ewes cull and common \$3.75@6.75; yearling wethers \$13.50@15.30.

BUFFALO

Cattle.

Receipts five cars. Market steady. Choice to prime shipping steers, 1400 lbs and up \$9.25@9.50; good to choice shipping steers \$8.75@9; heavy fat medium quality \$8@8.50; medium to good \$7.50@8; light native yearlings fancy quality at \$9.50@10; medium to good \$8@8.25; best handy steers at \$7.50@8; plain \$7@7.25; handy steers and heifers \$7.25@7.50; western heifers \$7.25@7.50; light Michigan butchering heifers \$6.75@7.25; best fat cows \$6.25@6.50; medium to good \$4.50@5; cutters \$3.25@4.25; canners of good weight \$2.25@2.50; common and old rims \$1@1.50; light fat bulls \$6.50@7; best heavy bulls \$5.25@5.50; heavy bologna bulls \$4.50@5; common bulls at \$3.50@4; best feeders 700 to 800 lbs \$6.25@7; medium feeders at \$6@6.25; stockers good \$5.50@6; light common \$4@5; best milkers and springers \$60@80; common and medium \$35@45. Calves, market strong with tops at \$15.

Hogs.

Receipts 20 cars. Market is higher. Medium and heavy \$8.75@9; yorkers \$9.15@9.25; pigs and lights \$8.50@9.

Sheep and Lambs.

Receipts five cars. Market is strong. Top lambs \$15.85; yearlings \$12@14; wethers \$9@9.50; ewes \$7@8.50.

FARMERS MARKET THEIR OWN.

RATHER remarkable progress was made by farmer organizations during the year 1922 in the marketing of live stock. A national office was established at Chicago. Six terminal marketing houses were put into operation. During the year these farmers marketed 18,524 cars of live stock. Also 575 cars of stock were purchased for members. The aggregate value of the animals handled was, in round numbers, \$26,000,000. \$11,600 in membership fees were returned to members. One office reports earnings amounting to \$40,407. In round numbers, the six terminal offices will show a total of \$100,000, only one of these offices being in operation the full year. In practically all of the markets where farmers commission houses are operating these houses are handling more live stock than any other private firm. In one market the producers organization handle 25 per cent of the total business; in two others approximately 20 per cent; in two others 15 per cent, and in one 5 per cent.

MUCK FARMERS ORGANIZE

THE leading muck crop farmers in the vicinity of Byron Center have organized the Golden Yellow Celery Company, which is capitalized at \$10,000. The purpose of this company is to pool the products of the muck farmers in that section of the state, prepare them for sale and then sell them under an experienced salesman.

It is planned to erect a modern warehouse, where the celery will be received in the rough and prepared for market. If the organization is successful, it will handle close to four hundred cars, which was the production of this section last year.

The officers of the association are: President, Wm. Kooinga; Vice-president, A. G. Vanslokema; Secretary-treasurer, A. Berkampas. These men with Peter Aukema and H. J. Feyen are directors.

USE SCARIFIED SEEDS SAME SEASON.

THE practice of scarifying field seeds is growing. Every piece of evidence shows that a better germination is secured where the seeds have been run through the scarifier. This process merely cuts little openings through the seed coats and permits moisture to pass through more readily to start germination.

Those purchasing scarified seeds should, according to reports from the New York Experiment Station, use the seeds the same year they are scarified. They should not be held over from one season to the next. After the coats have been punctured the vigor of the seed slowly declines.

MONTCALM TO HAVE SPUD GRADING MEETS.

BECAUSE of the poor grading, color and quality of Michigan potatoes, Montcalm County growers will lose during the present shipping season, about \$300,000, according to the estimate of county agent, B. E. Shafer.

In order that the growers may get a better idea of quality in potatoes, Mr. Shafer is arranging twenty potato grading schools, to be held in various parts of the county. At these schools, J. W. Weston, potato specialist, will be the principal speaker.

Mr. Weston recently made an investigation and found that Michigan potatoes were being discriminated against on account of their poor quality. It is, therefore, essential that the Michigan growers get better conceptions of what good potatoes are. Otherwise, the growing of potatoes will not be a profitable business in this state.

Don't forget to read "Beyond Rope and Fence," which starts on Page 20 of this issue. It is a dandy story for young folks, and the old ones, too.

CLASSIFIED ADVERTISING

This classified advertising department is established for the convenience of Michigan farmers. Small advertisements bring best results under classified headings. Try it for want ads and for advertising miscellaneous articles for sale or exchange. Poultry advertising will be run in this department at classified rates, or in display columns at commercial rates. Rates 8 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 6 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order. Real estate and live stock advertising have separate departments and are not accepted as classified. Minimum charge, 10 words.

Rates in Effect October 7, 1922

Words	One time	Four times	Words	One time	Four times
10.....	\$0.80	\$2.40	26.....	\$2.08	\$6.24
11.....	.88	2.64	27.....	2.16	6.48
12.....	.96	2.88	28.....	2.24	6.72
13.....	1.04	3.12	29.....	2.32	6.96
14.....	1.12	3.36	30.....	2.40	7.20
15.....	1.20	3.60	31.....	2.48	7.44
16.....	1.28	3.84	32.....	2.56	7.68
17.....	1.36	4.08	33.....	2.64	7.92
18.....	1.44	4.32	34.....	2.72	8.16
19.....	1.52	4.56	35.....	2.80	8.40
20.....	1.60	4.80	36.....	2.88	8.64
21.....	1.68	5.04	37.....	2.96	8.88
22.....	1.76	5.28	38.....	3.04	9.12
23.....	1.84	5.52	39.....	3.12	9.36
24.....	1.92	5.76	40.....	3.20	9.60
25.....	2.00	6.00	41.....	3.28	9.84

Special Notice

All advertising copy discontinuance orders or change of copy intended for the Classified Department must reach this office ten days in advance of publication date.

MISCELLANEOUS

BOYS, GIRLS—15 big packages cucumber seed post-paid \$1.00; value, \$1.50. Recommend them to your friends. Very heavy bearer, excellent pickling, tender slicing. Michigan grown. Absolutely 1922 crop. This means dependable, quick germination—the seed your neighbors want. Guarantee; money refunded if seed returned. Order now, pay when received. Sweet Home Seed Farm, Pentwater, Mich.

KENTUCKY NATURAL LEAF TOBACCO. Chewing: 5 Pounds, \$1.75; 10 pounds, \$3; 20 pounds, \$5.25. Smoking: 5 pounds, \$1.25; 10 pounds, \$2. Send no money. Pay when received. Farmers Co-Operative Tobacco Union, Paducah, Ky.

SWEET CLOVER SEED—White or yellow biennial. Inoculator for alfalfa, sweet clover, soy beans. Best pure culture bacteria in soil base. Guaranteed. Bushel-size can postpaid, 75c. E. E. Basil, Sweet Clover Grower, Latty, Ohio.

NATURAL LEAF TOBACCO, select quality. Chewing: 5 lbs. \$1.75; 10 lbs. \$3.00; 20 lbs. \$5.00. Smoking: 5 lbs. \$1.25; 10 lbs. \$2.00; 20 lbs. \$3.50. Try it at our risk; money refunded if tobacco returned. COOPERATIVE TOBACCO GROWERS, Sedalia, Ky.

HOMESPUN TOBACCO—Chewing, 5 lbs., \$1.75; 10 lbs., \$3.00. Smoking, 5 lbs., \$1.25; 10 lbs., \$2.00. Pipe and recipe free. Send no money, pay when received. UNITED TOBACCO GROWERS, Mayfield, Ky.

SILVER FOXES—Very special prices on best quality, registered, nineteen-month-old pups bargained for now. Buy now, pay later, save one-third. Volmar & Hughes, Muskegon, Michigan.

TOBACCO—Extra smoking, 5 lbs., \$1.00; 10 lbs., \$1.50; 20 lbs., \$2.75. Chewing, 5 lbs., \$1.50; 10 lbs., \$2.75. Quality guaranteed. O'CONNOR SMOKEHOUSE, S. 133, Mayfield, Ky.

FOR SALE—Strawberry Plants \$3.75 per 1,000 and up. Raspberry Plants \$11.00 per 1,000 and up. These plants are all state inspected. Write for price list. Fred Downing & Son, Holly, Mich.

BAILED HAY FOR SALE—No. 1 light mixed, \$10.00 per ton F. O. B. Hillman in car lots. Ernest E. Rea, Hillman, Mich.

EARN \$100 MONTHLY, spare time writing for publications. Experience unnecessary. Particulars free. Publicity Service Dept. C., 312, St. Louis, Mo.

FOR SALE in ear or shelled Tom Thumb Pop Corn, every grain pops, will send a free sample. Lewis Eisenman, Samaria, Mich.

CALICO SEED CORN, also Early Golden Surprise. C. L. Freed, Lancaster O.

TREES, Plants, Vines, Shrubs. J. Landis, St. Joseph, Mich., R. 2-B, 239.

SEED POTATOES—Certified Potatoes. Northern grown. Butternut Farm, Lupton, Mich.

DOGS

GERMAN Shepherd, Alredales, Collies; Old English Shepherd dogs; Puppies; 10c illustrated instructive list. W. R. Watson, Box 35, Macon, Mo.

REGISTERED COLLIE PUPPIES, \$10 and up. Silvercrest Kennels, Gladwin, Mich.

POULTRY

WE SPECIALIZE in printing for Poultrymen, Hatcheries and Farmers. Sample Stamp please. Mendell's Printing Company, Grand Rapids, Michigan.

RHODE ISLAND REDS—Rose Comb Cockerels, hen-hatched, farm raised. Big, thrifty dark colored birds from prize winning strains, \$4 to \$7.50. Two specials at \$10 each. Careful attention to mail orders. Bidwell Stock Farm, Tecumseh, Michigan.

BARRED PLYMOUTH ROCKS for sale, stock and eggs at reasonable prices. Fair View Poultry Farm, R. No. 3, Box B, Hastings, Mich.

GEESSE—Toulouse, African, Emden. DUCKS—Pekin, Rouen, Runner, Muscovy. Price reasonable. John Haas, Bettendorf, Iowa.

HATCHING EGGS, Red! Both Combs. Six Blue Ribbons, Grand Rapids Coliseum Show 1923. Laying Strain. H. Liddicoat, Breckenridge, Michigan.

S. C. BLACK MINORCA COCKERELS, Northrup strain, \$3 and \$4. Eggs for hatching and Baby Chicks. C. J. Deedrick, Vassar, Mich.

ROSE COMB Rhode Island Red Cockerels, \$3.00 to \$5.00. First prize Cock \$10.00. Mating list free. Ira J. Hiller, Bay City, Mich.

WHITE LEGHORNS—Tanored males \$30-\$500. Pedigrees, Orpingtons, Guineas, Fenner Bally, Montgomery, Mich.

RHODE ISLAND REDS, R. C. Large, fancy cockerels at \$3 to \$5 each. Burt Slisson, Imlay City, Mich.

68. VARIETIES Fine purebred poultry, stock, eggs, chicks. Large catalog 5c. A. A. Ziemer, Austin, Minn.

CAPONS BY NEW SYSTEM—Success assured; book 5c. Simplex Products Co., 8-F So. Dearborn St., Chicago, Ill.

ROSE COMB Anconas. Beautiful birds, winter layers. Eggs guaranteed. C. Kelsey, Imlay City, Mich.

50 Giant Black Minorca Cockerels \$2.25. Eggs \$8.00 per 100. Mike Schaefer, Essexville, Michigan.

MARTIN W. Wyandotte eggs, \$1.00 per 15. C. H. Spooner, Rosebush, Mich.

GOLDEN CAMPINE Cockerels. Eggs for setting. Grace Mott, Glenwood, Mich.

PEAFOWL, Pheasants, Bantams, Pigeons, Free circular. JOHN HASS, Bettendorf, Iowa.

BABY CHICKS

WHITE WYANDOTTES and Rocks \$13 per 100; \$3.50 for 50 and \$4.75 for 25. Barred rocks and R. I. Reds \$17 per 100; \$3.75 for 50 and \$4.50 for 25. White Leghorns \$14 per 100; \$7.50 for 50 and \$4.00 for 25. Terms cash with order of at least \$5 for each 100 chicks ordered, balance one or two weeks before chicks are to be shipped. Meadow Brook Hatchery, Mt. Morris, Mich.

CHICKS GUARANTEED—Healthy, sturdy thriving chicks. Flocks that are mated with Michigan Agricultural College cockerels, Barred Rocks, S. C. Anconas, White and Brown Leghorns, pullets and breeding cockerels. Safe arrival, postage paid, catalog free. Fairview Hatchery and Poultry Farms, Route 2, Zeeland, Mich.

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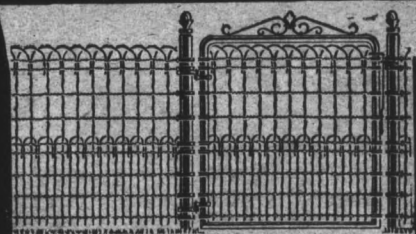
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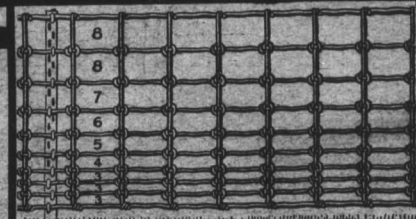
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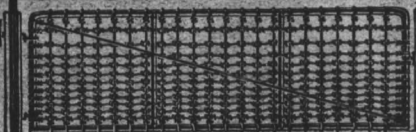
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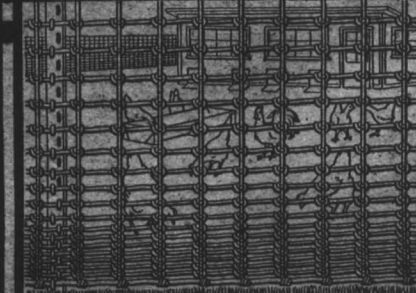
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