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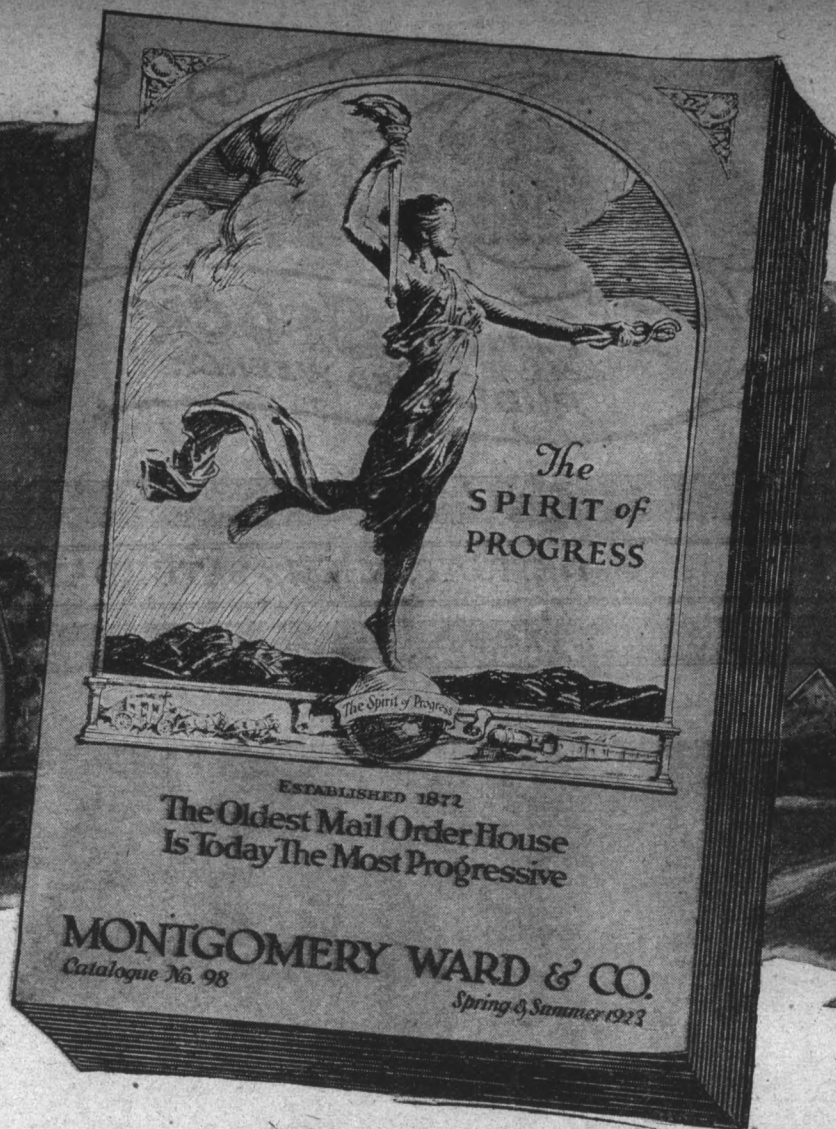
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MICHIGAN

VOLUME CLX.

# MICHIGAN FARMER

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A Practical Journal for the Rural Family

MICHIGAN SECTION THE CAPPER FARM PRESS

QUALITY  
RELIABILITY  
SERVICE

NUMBER ELEVEN

## They Learned About Certified Seed

*Farmers Try Good Seed Alongside Ordinary Seed on their Own Farms*

By Kris P. Bemis

SOMEWHERE on a Michigan farm tonight, a tired farmer is throwing aside the newspaper after scanning the farm page for news. "Certified seed potatoes," he exclaims. "Wonder what fancy process makes them any better than those of mine that went 200 bushels to the acre last fall? And table stock worth thirty-five cents a hundred, too—when you can get cars. They make me tired."

Something like that was in the minds of many farmers up in Mason county a year ago. And because they determined to give the thing a trial, and see whether there was a difference, this article is being written. For be it understood that certified potatoes are better, yield better and are worth the money.

Mason county grows quite a lot of spuds. Not that it is exclusively a potato county, for it ships as much live stock, as much grain, and as much fruit as its potato crop amounts to. Probably the value of these four commodities would total up in about four equal parts. But at that, the farmers of that section found time last year to grow and ship about 150 cars of potatoes from Ludington, Scottville, Custer, Fountain and Freesoil.

Early in the spring of 1922, the Mason County Farm Bureau began to collect orders for certified Russet Rural seed, and by planting time over 11,000 pounds had been secured and shipped in from three growers in Antrim county, who had a reputation for disease-free stock. Demonstrations of the treatment for black scurf followed, and the county agent was kept busy for two weeks showing how the corrosive sublimate process is applied to make 'em clean and bright. The certified seed went out to thirty-two different growers, and the season was started.

Six growers concluded to apply for inspection on their plots, and early in July, Mr. H. C. Moore, of the Potato Growers' Association, was on the job.

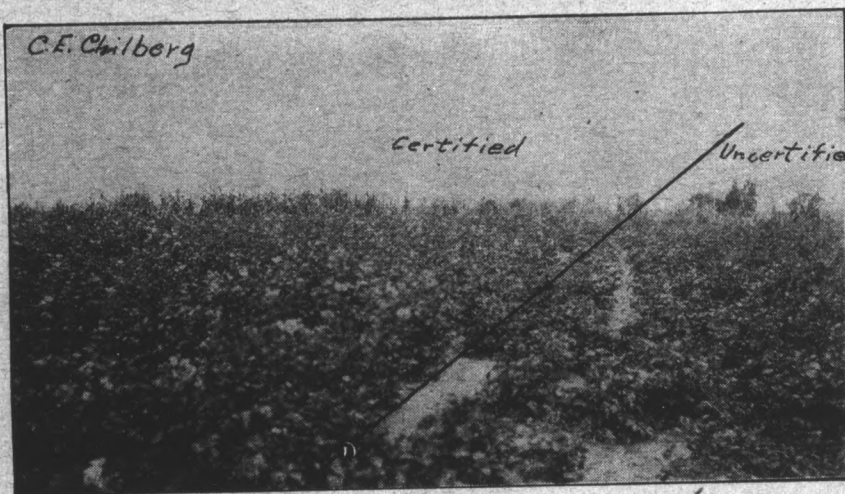


Louis Anderson and Some of His Certified Russets.

Followed later by the first and second official inspections, his visit was the opening wedge in a campaign of demonstrating what makes potato seed "run out." Mosaic and leaf roll were pointed out to the growers, in the only way that they can be recognized—by seeing the affected plants in the field. Hopperburn was pointed out. Growers made first-hand acquaintance with flea beetles and aphids, which had been present before, but were "traveling incognito." Spraying programs were carried on.

Early in September, J. W. Weston,

disease in these fields since they were from certified seed?" The answer, as Weston puts it, is that the mosaic disease cannot be completely eliminated till our seed is made absolutely free from it by strict roguing or culling, and kept free by perfect spraying. The recent discovery by Prof. Ray Nelson of the cause of mosaic, proves that sucking insects, like flea beetles and leafhoppers, inoculate healthy plants with the virus from diseased ones, till such insects are prevented from attacking the vines. And ordinary fields show three times as much dis-



Chilberg's Field of Certified Yielded 305 Bu. Per Acre; Uncertified 240 Bu.

state potato specialist, arrived in the county and the interested growers made a tour of the fields to make comparisons. The certified plots of Monroe Williams, Clint Lehman, Claus Chilberg and Chris Millwood were visited, as well as several fields of ordinary seed, and special features were pointed out. Some roadside stops were made at other points, and contrasts noted. By night every man in the crowd knew what made the leaves turn black at the tip, what "Giant hill" is, and what relation the mosaic disease and the leafhopper have to each other. And it began to be noticed that while unsprayed fields commenced to slacken growth, blacken and quit, the sprayed vines resisted the insidious attacks of the hopperburn and started filling out a generous number of salable tubers.

Roguing began in a week or two. Growers of inspected fields knew the mosaic and leaf roll diseases now, and knew the cure. They went into their fields and pulled out all the infected plants. On a sizeable seed plot at Louis Anderson's farm northeast of Ludington, Mr. Anderson and his sons headed a crew of five that did wholesale execution of the infected vines. One man went ahead and pulled out all suspicious characters. He was followed by two others who dug the tubers. Two more helpers removed the vines and the potatoes from the field, leaving a patch of seed one hundred per cent clean, ready for digging. Other growers were also busy.

You may ask, "Why should there be

ease as certified ones, because no effort has been made to control the trouble before digging time.

Final inspection of the certified plots resulted in certification for all, a tribute to the stick-to-it-and-learn spirit of Mason county. When it came to checking up the yields some surprises were in store.

Claus Chilberg, on his farm near Scottville, has grown a field of spuds: One-half this field was from seed certified in 1920. The other half was from his own seed, previously hill-selected. The plowing, dragging, seed treatment, cultivation, spraying and all operations of culture were in every respect identical, save in the seed.

By the middle of the summer, the field showed that something was going to happen. The certified seed showed up strong and vigorous, while the other began to show mosaic injury. By September, ninety per cent of the uncertified vines showed either mosaic or leaf roll. "I'm going to dig ten rows of each, side by side," said Chilberg, "and see how they come out." When digging time came, measurements were taken. The rows were short, only eight and one-third rods long. They were twenty-eight inches apart, thirty-six inches in the row. The certified seed rows averaged twenty-three and one-half bushels to the row, while the uncertified came limping in with eighteen and one-half bushels. "And when we come to grade 'em," said C. E., as he straightened his back after piling up the last crate, "the uncertified are going to lose an-

other five bushels to the row, of small, undersized ones." His father, standing by, nodded assent.

Ben Wilson, secretary of the County Farm Bureau, had a small plot of certified seed adjacent to some of his own. Pressure of work got too much for the organization at a critical time, and Ben couldn't keep the leaf hopper in check. He thought his comparison was done for, sure—till digging time. Then in spite of handicaps, the certified seed off a measured area showed its superiority by outyielding the patch right next, fifty-one bushels to the acre.

John Judge, on a small plot near Pentwater, secured a yield of 306 bushels per acre. D. W. Leedy, who represents Mason county folks in the legislature, and keeps a farm busy, too, produced a plot for his own use another season, and was complimented by Inspector Stanley Warner, of the Michigan State Farm Bureau, on the freedom from fork wounds of his crop. "I carried every punctured potato off the field in my pocket," answered Mr. Leedy.

Monroe Williams produced a fine crop of Russets on new ground and hung up the record for the largest yield of the certified plots, 310 bushels per acre. Chris Millwood's patch suffered from wet weather, but as he puts it, "They yielded 240 bushels to the acre, and my own were hardly worth harvesting." Wilson Miller, living near Custer, is all set to use his own certified seed next season.

There is a need for development work in early potatoes similar to what has been accomplished with Rurals. Early sorts do not go to market much from this section, but are used for home consumption. The yield per acre is all too small, due to the presence of mosaic, black scurf, and the ravages of leaf hoppers.

So when our friend says, "My potatoes are better," (Continued on page 393).



Fourteen U. S. No. 1's in this Hill of Certified Potatoes.





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## CURRENT COMMENT

## THE MICHIGAN FARMER SAYS:

Spring is the season of faith and hope. Good work based on faith and hope usually brings fulfillment.

Many people spend so much time getting ready to do something that they never get anything done.

The early bird gets the worm, but in poultry parlance, the early bird brings the profits. Moral: hatch early.

Farming is a triune affair for it is an industry, a business and a life. To make it successful attention to all three is necessary.

Cooperate with the sow in making the pig crop a success by taking care of the pigs after she has delivered them.

## The City and The County

TWO cousins not yet in their teens were seen enjoying each other's company to the full at a small Michigan railway station. One was from the big city, and the other lived upon a farm. Each contributed from his own observation and experiences to the general knowledge of the other.

What a boon it would be to all of us if dads and uncles, as well as little cousins, could break down all the barriers between the country and the city.

For a few years back the merchants of Battle Creek and the farm leaders in the surrounding territory have been working on this problem. Now, when you go into that city, you will often see farm folks addressing merchants in the familiar language, "Good-morning, John," and, "Howdy, Bill." The merchants are thinking of their farmer friends, and the farmers are making a special effort to serve their city cousins with the products they can provide.

Chicago's captains of industry—forty-six of them—have joined with farmer groups to inaugurate a gigantic movement to blend that city with a large rural territory which it should be serving. These farmers and merchants well know that misunderstandings are detrimental to the best interests of both. A real effort will be made to clear away these wrong conceptions, and to bring to each other information on matters of common interest.

This movement is worthy of emulation by municipalities of whatever size

and the territory contiguous to each. The progressive spirit of the city should be modified by the conservatism of the country, and the lethargy of rural communities should catch the inspiration born of urban activities.

Is not this a good time to place in our list of obsolete words the terms, "Country Rubes" and "City Slickers?"

## Reduce The Overhead

A DEALER in implements told us the other day that it took twenty-five cents of every dollar of his receipts to pay his overhead expenses, "and yet," says he, "lots of people think if we charge ten per cent over costs it is enough."

We suggested that this was a great time to put into practice methods that would tend to reduce that excessive overhead. Extravagant and wasteful practices in business have contributed in no slight degree to the high costs that are still agonizing the consumer. Perhaps some good may come from a condition that causes the retailer to take note seriously of his overhead.

And while thinking of overhead, I wonder if this subject might not well deserve some careful consideration by the farmer. Overhead, strictly speaking, is an expense not directly chargeable to any one product, but remains as an added expense to be spread over all before a true balance can be struck in any one department. Overhead often tells where the money went that you ought to have but have not. It has a subtle way of eating into the profits.

"Rust doth corrupt." It is estimated that the loss due to rusting of steel and iron implements on the American farm runs into hundreds of millions of dollars annually. Much of this can be avoided by a little effort in the use of shelter, oil, and paint. Carelessness in the use of tools, harnesses and implements out of repair, often causes accidents and breakage otherwise avoidable, resulting in a blow to profits. Paint as a preservative of exposed wood does not cost anything in the long run. The inefficient use of time and labor applied to our job, indirectly means increased overhead.

A liberal application of thought given to the details of our farming business may reasonably be expected to point the way to an appreciable reduction of our overhead expense.

## Your Favorite Breed

IT is a broad field the Michigan Farmer attempts to cover in her advocacy of improved live stock. When we say "improved live stock" we mean just what the word implies, live stock that is an improvement over the common run. Not all improved live stock need necessarily be pure-bred, neither can all pure-breds qualify as a guarantee of improvement.

For the purpose of reproduction, however, it is the pure-bred animal of quality that stands the test. He has a record of achievement behind him in a long line of known ancestry, and can be depended upon to reproduce his kind.

When it comes to breed, the Michigan Farmer is strictly non-partisan. There is no one best breed of cow, sheep, or hog for all conditions. There is a great variety of conditions in the good state of Michigan, and likewise the likes and dislikes of her people vary widely.

The dairyman may be ever so sure that his favorite breed is the very best and most profitable; the beef breeder can not understand why any man should deliberately chain himself to the milking stool when the calves do the milking so willingly and grow so fine; and there are others who will not recognize the beefless milk cow

or the milkless beef cow, but give welcome to the broad-backed, mellow, fleshed, big-shouldered double-decker.

And the same situation holds true among the swine men, the sheep men and breeders of all classes of live stock. It is well that we do not all see alike. It is perfectly natural to wonder what on earth anyone is thinking about, who does not choose the same breed we do, yet if we all thought and acted alike we would all want the same farm, the same job, the same woman. We fear the competition would be too great for comfort.

No, there is no one best breed for all conditions and for all people. But among the many classes of improved live stock there may be found one that is best for each individual farmer and his environment. The choice is up to the man.

There is just one kind of live stock that we are against, and that is "scrubs." We want to help hasten the day when they will be replaced on the farms of Michigan, not by any one brand or breed of live stock, but by improved animals of the kind best suited to the individual and his environment.

## Builders, Not Wreckers

THERE are two things which every farmer should keep in mind, particularly if he plans on staying in the farming business. One of these is to make a living, and the other is to so handle his land that it will be more easy to supply his wants in years to come than it is now.

There are too many farmers who feel that the immediate present is the all-important time. They mortgage the future by taking fertility from their land to a point where the soil becomes exhausted. Farmers should definitely plan some sure and economic way of building soil instead of wrecking it. This plan should also pay its way as it goes.

Professor Abbott, of Massachusetts Agricultural College, makes, in this connection, the following suggestions:

1. Conserve rigidly all animal manures, solid and liquid.
2. Supplement them with phosphate fertilizers.
3. In short rotations use more clover, and in long rotations add nitrogenous fertilizers on the hay crop.
4. Use high analysis fertilizers on the cash crop.
5. Lime when and as much as necessary.

We believe that thousands of Michigan farmers could adopt Professor Abbott's program to their advantage.

## The Federal Land Bank

THE Federal Land Bank of St. Paul, Minnesota, is one of the twelve district land banks of the United States. The territory under its jurisdiction includes Michigan. It has been doing a great work during the past few years to relieve the financial stress of many of our good Michigan farmers. Its growth has been remarkable, and under the able management of President E. G. Quamme, it has made a phenomenal success. Its resources are very close to \$100,000,000. It has more than \$11,000,000 loaned on Michigan farms at the present time, and is increasing its total farm mortgage loans at the rate of \$300,000 per month. Its low interest rates have been instrumental in helping to keep the interest rates of many private concerns down where they belong.

It is not all easy sailing, however, even for so great and so good an institution. An organization known as the National Union of National Farm Loan Associations is presenting a program that is antagonistic to the work

of the Federal Farm Loan Board, and if it succeeds in carrying out its plans it will mean greatly lessened efficiency of the farm loan system. The worst feature of this movement is that it is being conducted under the guise of friendship and is sending out its propaganda under several different names.

The joint stock land banks, which are private corporations organized for private gain, are also said to be employing unethical methods of publicity aimed to discredit the federal farm loan bonds as a means of promoting the sale of their own.

National farm loan associations, which are the local organs of the federal land bank, are in existence because of the earnest, hard, conscientious work of the federal farm loan board, and it is well to get their viewpoint on questions of national importance, rather than take the word of unconstitutional authority. The National Farm Loan Association has been a life saver for hundreds of farmers and its continued efficiency should be maintained. The monied interests who hold federal farm loan bonds are even more interested in its welfare than the farmers, because they have put the bulk of the money into it. It is not always easy, but it is important to know who are our friends.

## Snakes

SNAKES is what Mr. St. Patrick chased outta Ireland. That is what put Ireland on the map and made Mr. St. so famous that most every man what comes from Ireland is named Patrick after him. And, likewise, we kin now wear green one day in the year without embarrassment.

Now, the book of learnin' says that snakes is reptiles what belong to the Order of Ophidia, which is something

I don't know nothin' about. It must be a real large secret organization, 'cause the book says there is 120 different kinds of snakes what belong to it. These snakes get along by wiggling



their body. Some of them is poisonous, others ain't.

I say this book of learnin' ain't right, 'cause there is lots of snakes what ain't classified in it. For inst., there's all those what belong to the Order of Alcoholic what ain't even mentioned. They's the kind what gets along by makin' men wiggle and wobble along the streets. All of this kind is poisonous.

Both kinda snakes is found in the low, moist or wet places. Where there ain't no sign o' moisture there ain't no snakes either. Those what belong to the Ophidia Order is found in the wild grasses and the other kind in the wild places where men is. The snakes of the Alcoholic Order has got a, what you call, faculty what the other kind ain't. It kin make monkeys outta men.

Now, Mr. Patrick maybe did a good job with his snake chasin', but there aint' nobody what has succeeded yet in gettin' rid of the Alcoholic snake, 'cause they can't get things dry enough to do so. But you know we are learnin' lots about drainage and under-drainage and some day we are going to dry up those places where the "still" waters run deep. Then the snakes can't live no more. The world do move and it is movin' in the right direction and that means sink holes, pests and wild places is gotta go. Some day Mr. Patrick is goin' to have a partner in his glory when Self Respect drives the snakes outta human lives. HY SYCKLE



# What Variety of Alfalfa for Michigan?

*The Right Variety Makes a Great Difference in Results*

By D. F. Rainey,

*Extension Specialist, M. A. C.*

SO many people are today talking about sowing alfalfa, the benefits of growing it, or their experience with the crop, that it is not unusual to receive an inquiry from someone who has been moved to sow some alfalfa on his own farm because "everybody is talking about it." This is, indeed, a good thing for everyone living in Michigan, whether in country or city. For it means more acres of good old alfalfa—the best of our legumes—which in turn, is going to mean better crops, more prosperous farmers, and consequently more prosperity for all.

The farmers are talking about the big yields of hay, and the big crops of corn and wheat which follow when planted on an alfalfa sod. One Washenaw county farmer told us that he would have lost his farm had he not bought some time and then sowed the field to alfalfa. He put up 125 loads of alfalfa hay this past summer and will have forty acres to cut this year.

One of the big questions in the mind of the beginner is what variety he shall sow. With such a good market for alfalfa seed in Michigan it is no wonder that seed from many sources finds its way into the state for sale. Alfalfa seed is produced in several of the southwestern states as well as in Idaho, Utah and Michigan. Large quantities of alfalfa seed are imported each year and then we have Grimm, Cossack, and Hardigan, all desirable varieties. It is seldom possible to tell the variety or where grown by the appearance of alfalfa seed. He can buy good northern-grown seed (meaning seed from the Dakotas, Montana, Idaho, Utah and Michigan), at thirty cents per pound, or Grimm at fifty cents per pound. The common alfalfa from the southwest winter-kills so severely that it is a waste of money to buy such seed; and the Grimm is the

cheapest of the three (Grimm, Cossack and Hardigan), and data is lacking to show at the present time that the other two are worth more as a hay crop. Consequently these (Grimm and northern-grown) are the only two which should generally be considered when ordering alfalfa seed. Usually he will figure sowing each at the same rate, fifteen pounds per acre, which makes him wonder if the Grimm is worth the extra \$3.00 per acre. However, ten pounds of Grimm alfalfa seeded on a clean and firm seed-bed will be sufficient. The Grimm then costs but fifty cents more per acre for seed than the common. Some men have had excellent results with the common, others have had only indifferent success, or failure, while the Grimm has given uniformly good results in so far as winter-killing is concerned, and is generally recommended

for Michigan farmers as they are practically insured against a loss due to winter-killing in so far as possible, for the Grimm is very winter-hardy.

It is not unusual to meet someone who will tell about sowing both the common and Grimm in a field under identical conditions, with the result that the common rapidly thinned out and the June grass took its place, while the Grimm continued to have an excellent stand, practically no June grass in it, and giving good big cuttings of hay. And this all happening in a couple or three years. No doubt many of these men got southern-grown or imported alfalfa for "Common."

In a previous issue of the Michigan Farmer, there was an article by Prof. J. F. Cox, head of the Farm Crops Department, M. A. C., telling about alfalfa seed being produced on a commercial basis by farmers in Monroe

county, it being estimated that there was 9,000 bushels of seed produced in that district this year. All this seed is apparently descended from a field of alfalfa sown about thirty-five years ago by a Mr. LeBeau, who introduced an adapted variety. This field produced seed which was sold to his neighbors and used for further increase.

In other counties of the state there are farmers who have been growing alfalfa successfully for many years and who are contributing directly to Michigan's rapidly increasing alfalfa acreage by producing seed from their fields which have survived many Michigan winters. Such seed is adapted to Michigan conditions and results secured from sowing such seed is seldom other than satisfactory.

For many years attempts had been made to introduce alfalfa into Minnesota but always the stands winter-killed. Then one day in 1900 some of the officials of the agricultural college heard that some of the farmers in Carver county had a variety of alfalfa which did not winter-kill. An investigation was made and they found there were many farmers growing alfalfa, cutting hay from the stand every year and sometimes getting a crop of seed to sell to neighboring farmers which further increased their acreage in the county. But the striking point is that all of these stands traced back to one man's farm; and had he not been so fortunate as to get a particularly winter-hardy variety, alfalfa growing might today still be in the experimental stage in Minnesota.

Variety tests are being conducted by the farm crops department at the experiment station, East Lansing, to determine the relative yielding ability of

(Continued on page 372).



Alfalfa Variety Test on D. D. Phillip's Farm, Kalkaska.

## The Community Drainage Problem

*A Practical Suggestion as to Its Solution*

By Walter Van Haitsma

MUCH of the drudgery connected with farm work has been eliminated by the introduction of tractors and other labor-saving machinery. On more than a third of the improved land in Michigan farms, however, the full advantage of this machinery is never realized because of poor drainage conditions. What will it avail a farmer to own a tractor, for instance, if his land is so wet during the seasons of preparing seed-beds that he cannot use it, except at the risk of puddling the soil? Tile-drainage not only makes the use of labor-saving machinery more practical, but is itself a labor-saving agency in that it reduces the need of dead-furrows and open ditches to a minimum; makes a better seed-bed possible at a considerable saving in labor; and greatly facilitates the cultivating and harvesting of crops.

Until the advent of the traction ditcher, tile-draining itself was drudgery of the worst sort. True, horse-drawn ditchers have done much to relieve it of its disagreeableness, but none of them will dig true to grade so that skilled labor is required to grade the trenches. The scarcity of ditch-diggers, and even of unskilled labor, makes ditching on a large scale by this method, impossible and altogether too costly if the cost of labor, the size of the ditching-crew the farmer will have to board and lodge, and the delay in returns on the investment due to

the length of time required to do the work, are considered.

Owing to the scarcity of reliable, experienced contractors who own traction ditchers, many farmers who would like to under-drain portions of their farms, have been obliged to postpone doing so until such a time as a ditcher should become available. Few farmers can afford to purchase a ditcher for use on their own farms exclusively because there is not sufficient ditching to be done on the average farm to warrant such an investment. It seems to us, therefore, that the only practical means by which this work can be done is through a community-owned

traction ditcher, provided soil conditions are favorable.

The advantage of a partnership will allow. Any profits that are made will revert to members who have had work done, which means that they will get their drains dug practically at cost. Since orders for tile can be bulked, a considerable reduction in the cost of tile can be effected. Profits from custom work done for non-members should make the venture a fairly profitable one if good judgment is used in the estimation of the cost of such work. If the ditcher can be kept busy during six or seven months of the year, and in such amounts, within cer-

tain limits, as their financial condition drainage work on their farms done at the most convenient season of the made up of five or six farmers is readily apparent. Members can have the year it will be possible to engage an experienced crew, or at least keep one that has become experienced, so that better work should result than that done by the average contractor. Then, too, a competent drainage engineer whose services will be indispensable in a venture of this sort, can be engaged to do the work of planning required drainage systems collectively at less cost than where this work is done piecemeal. Whether the above advantages are fully realized will depend largely upon the cooperation of the members, and the wisdom with which the crew and the consulting drainage engineer are selected.

### Capital Required.

Rebuilt or completely overhauled machines can be purchased for less than half the cost of a new one, and will prove to be just as serviceable. A ditcher of the type shown in the accompanying picture will prove the most practical for average farm conditions. It is not, however, recommended for stony soil or decidedly rolling land. It is equipped with a single-cylinder, fourteen-horsepower gasoline engine which operates the ditcher at varying speeds of from one to eleven feet a minute, depending upon soil conditions. It will dig a trench eleven

(Continued on page 377).



A Practical Ditcher for Community Drainage Work.



## Balanced Fertilizer

**F**ERTILIZERS are used to increase crops and profits. The right kinds and amounts of plant food make profits by reducing the cost of production of a unit of crop, by improving the quality, and by increasing the yield.

One-sided fertilizers may be unprofitable. Today Potash is the cheapest ingredient used in fertilizers, even cheaper than before the war.

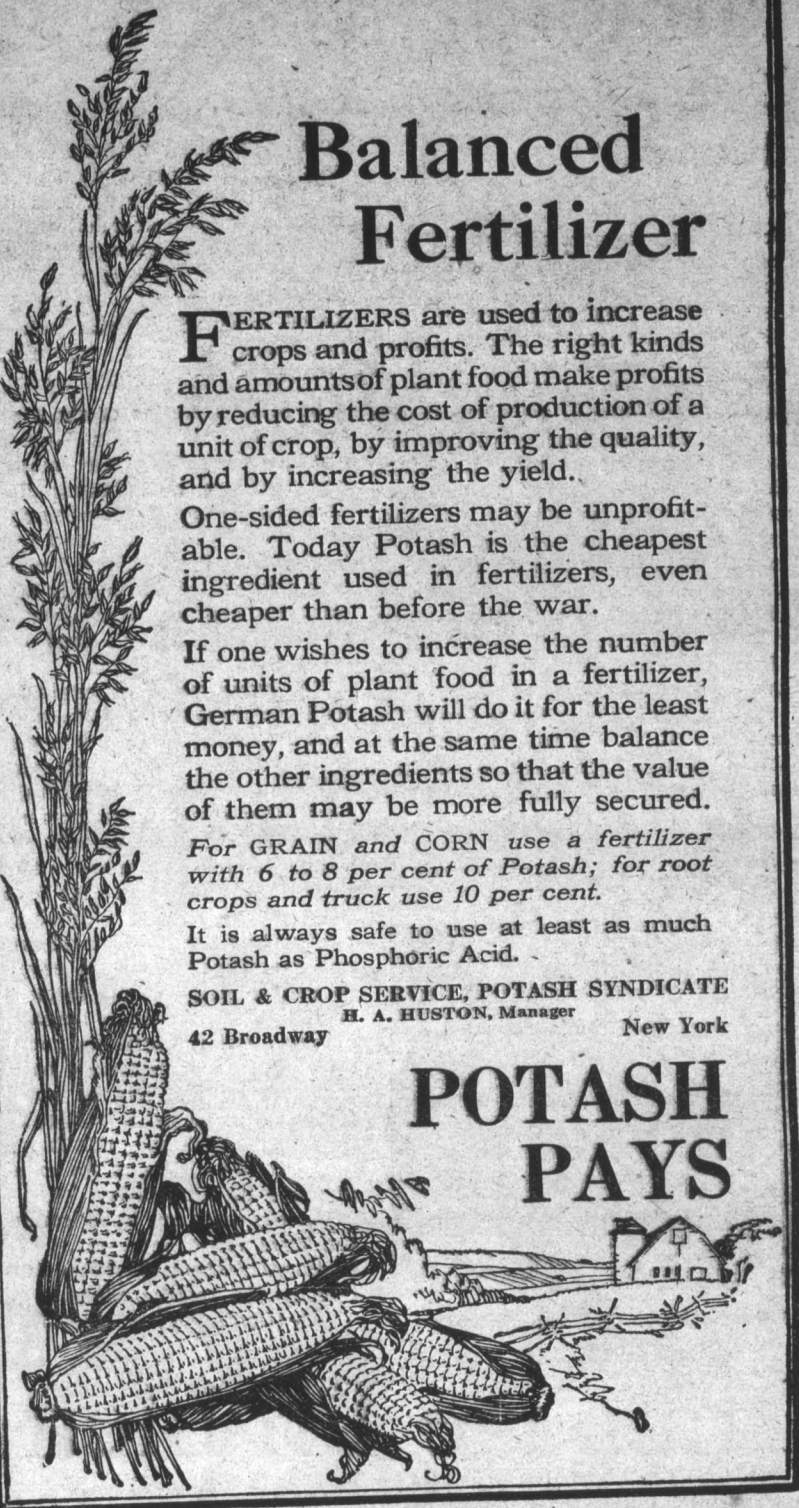
If one wishes to increase the number of units of plant food in a fertilizer, German Potash will do it for the least money, and at the same time balance the other ingredients so that the value of them may be more fully secured.

For GRAIN and CORN use a fertilizer with 6 to 8 per cent of Potash; for root crops and truck use 10 per cent.

It is always safe to use at least as much Potash as Phosphoric Acid.

SOIL & CROP SERVICE, POTASH SYNDICATE  
H. A. HUSTON, Manager  
42 Broadway New York

## POTASH PAYS



**TRY** a Michigan Farmer Classified Liner—They cost little and bring big results.

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Before you buy a single can of House or Barn Paint get our DIRECT FROM FACTORY—freight paid prices. Thousands of farmers have saved thousands of dollars by using FRANKLIN GUARANTEED House and Barn Paints. Why not you? We use the purest and best white lead, zinc oxide and linseed oil, assuring you of the very highest grade quality. Our FACTORY TO YOU selling plan assures you of a real saving. Send today for color card and prices and see for yourself.

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Forms a new roof right over the old one. Stops leaks, rust, rot and decay. You put it on and try it four months before you pay. Write for prices and complete information.

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I want to see how much money your prices will save me on House and Barn Paint. Send your free Color Card and low prices at once.

Name .....

P. O. ....

R. F. D. or St. Number ..... State .....

## Washington Letter

By Senator Capper

**T**HE congress that has just adjourned passed more legislation which aims to benefit agriculture than any other three congresses. I have never claimed that legislation will cure the troubles of the farmer, but the measures passed by this congress will at least help the farmer to help himself. In passing the "farm-bloc" measures congress served the interests not only of the farmers but of all the people.

Stated briefly as may be, the agricultural legislation tends measurably to promote a square deal for the American farmer. He is entitled to that. No one is entitled to deny it him.

Under the grain trading act the farmer is protected from wheat pit gamblers who manipulate markets and take huge profits.

With a "dirt farmer" on the federal reserve board, made possible by the activity of the "farm bloc" in the sixty-seventh congress, the American farmer should not again be discriminated against as he was during the "deflation period" of 1919 and 1920 when the arbitrary ruling of the reserve board restricted farm credit and forced the banks of the farming areas to pay extortionate "progressive discount rates."

### War Finance Corporation to Rescue.

By reviving the War Finance Corporation, the congress offered agriculture and live stock producers a reservoir of credit amounting to one billion dollars, without which the effects of the arbitrary "deflation policy" of the federal reserve bank would have had even more disastrous and ruinous results. The money advanced by the government saved the situation and, in some degree at least, eased the blow.

### The Packer Act.

With Secretary Wallace warning Armour and Morris that their proposed merger is in violation of the law of the land, we shall soon see the packer and stock yards control act passed by the sixty-seventh congress in function. This act is intended to protect the producer and consumer from monop-

olistic control of the nation's meat supply.

The cooperative marketing act assures legal status of associations of farmers and producers for the cooperative selling of their products. Sound cooperative marketing offers greater hope to the farmer than all other plans that can be devised. I believe the cooperative movement offers greater hope for the economic salvation of agriculture than all the legislative remedies combined.

### Better Facilities for Farm Credit.

The creation of two banking systems to serve the farmer's need of productive credit is the purpose of the farm credit act passed during the last hours of the congress. This act is a combination of the major features of the Capper bill and the Lenroot-Anderson bill, both of which passed the senate without opposition. The bills were in no sense in conflict. On the contrary, they complemented each other, working out a complete system of credit facilities, assuring the farmer and live stock producer as ample credit resources as the business man. The credit system, created by the act, provides both governmental and private banking facilities for productive credits and in my judgment is a great constructive measure that will be of immense value to farmers and stockmen.

### Ford's Offer Refused.

It is my opinion that in failing to accept Henry Ford's Muscle Shoals proposal, congress erred. Ford's offer, in my judgment, is fair, and should have been accepted. There was entirely too much politics in considering this question. Ford's proposition should have been decided strictly on its merits. I favor giving Ford a chance at Muscle Shoals, because no man in the United States is as well equipped to handle a project of such magnitude. This question must be decided by the next congress.

*Arthur Capper*

WASHINGTON, D. C.

## Capital Comment

By Our Lansing Correspondent

**N**OW that farmers are putting away their sleighs until another winter, the law-makers are waging the perennial battle as to what shall be the legal width of sleighs in Michigan.

In 1919, after years of agitation, a law was passed to require all sleighs manufactured and sold in the state to be the same width of track as autos and wagons. Now, after a rather warm debate, the house has passed by a fifty-two to thirty-four vote, Representative Hulett's bill repealing the 1919 law and legalizing narrow sleighs again.

Northern Michigan members mostly voted against the repeal, declaring that standardization of sleigh and auto track widths made winter highway travel better for all concerned.

### "Truth-in-Fabric" Bill Appears.

Failure of congress to pass Senator Capper's "Truth-in-Fabric" bill in their last minute rush has shifted the fight against shoddy to the state legislatures.

Representative William C. Sanson, of Caro, has proposed a rather conservative "truth-in-fabric" bill in the Representative Sanson declares that his measure is very carefully

drafted and limits its scope to wool similar villis are pending in some eight-ten or more state legislatures this session.

### More Pay for State Officials?

The legislature isn't taking kindly to any requests for salary increases for state officials and employees. Yet there is one bill along this line that seems to be fairly just and reasonable.

Representative Oscar Braman, of Kent county, proposes to pay members of the State Board of Agriculture, the managing body of the Michigan Agricultural College, \$10 per day, while actually engaged in their official duties. At present, all that the members receive is their expenses.

### Bee Law May be Tightened.

Quarantine regulations for the control of bee diseases are proposed by Representative Edward B. Manwaring, of Ann Arbor. Special precautions and regulations are prescribed for those breeding and distributing queen bees. No bees would be allowed to be brought into Michigan unless they were accompanied with an official certificate of health showing them to be free from contagious bee diseases.



# Productive Oat Varieties

*Some Kinds Which Do Well in Michigan*

*By H. C. Rather*

THE performance of Michigan's pedigree oat varieties during the past season is worthy of efficiency in production. Two outstanding varieties have won their way into the esteem of farmers in this state.

Wolverine oats, developed by Prof. F. A. Spragg, at M. A. C., and first released in 1917, has attained the widest popularity. It particularly leads in productivity on the loams and upland soils. Undoubtedly it fits into a wider range of conditions than any other Michigan variety. It is a white, open panicle oat with an erect straw and a very vigorous habit of growth. The kernels under favorable conditions will be bright, plump, and unusually thin hulled. Much of the Wolverine oats produced by members of the Michigan Crop Improvement Association in 1922 weighed from thirty-seven to forty pounds per bushel, with but one run over a fanning mill after threshing.

The variety is considered to be from three to five days earlier than the usual oat now used throughout the state. Frequently it matures ahead of summer droughts which cut seriously into the yields of the later varieties.

In producing ability, Wolverine oats is a winner. As grown by over seventy members of the Crop Improvement Association, under every conceivable Michigan condition, ranging from the borders of the jackpine belt to the best soils in the Saginaw Valley, the variety averaged a yield of forty-seven and one-half bushels per acre, fourteen and one-half bushels more than the state oat average for 1922. Possibly all of the increased yield cannot be attributed to good seed, yet accurate variety tests indicate equal advantage over the common run of Michigan seed oats with the Wolverine variety outyielding its nearest competitors among the more improved strains by five to ten bushels per acre.

Alfred Grueber, of Frankenmuth, reported the best yield of Wolverine oats on record for 1922, his four-acre field producing slightly more than 100 bushels per acre. Albert Laser, of Rodney, with sandy soil, had the remarkable yield for those conditions, of sixty-six and one-half bushels per acre. A thirteen-acre field produced seventy-three and one-half bushels per acre for H. E. Powell & Son, of Ionia; seven acres yielded seventy-seven bushels per acre for Walter Vasold, of Swan Creek; Crop Improvement Association's Ped-George Wheeler, of Mt. Pleasant, had a fifteen-acre field yielding seventy-one bushels per acre; at Clinton, C. D. Finkbeiner's Wolverines produced seventy bushels, and at Saginaw, C. M. Dietrich's field yielded eighty bushels. Others, of course, whose conditions were not so favorable experienced lower yields but the forty-seven and one-half bushel average speaks for itself.

The Wolverine oats mentioned pre-

viously which were grown by Wheeler, Powell and Grueber, and in addition that grown by P. P. Pope, of Mt. Pleasant, Ralph Arbogast, of Union City, and G. D. Dailey, of Kalamazoo, was of good enough quality to win honors at the recent International Grain and Hay Show in competition with the best oats in North America.

For the heavier lowland soils where lodging of oats is usually a problem, the Worthy variety has long been the leader. This variety has been grown very extensively in the vicinity of Fairgrove in Tuscola county. Davis Brothers, John A. Gordon and others of that locality grew it in comparison with old varieties and the Worthy oats proved to have the much stiffer straw and led in yield by ten bushels per acre. J. T. Davis had an eighty-four-bushels per acre yield on fourteen acres, while sixteen growers, all on the heavier types of soil characteristic of that neighborhood, raised an average of 64.5 bushels per acre on over 200 acres. Much of this total average must, of course, be attributed to the fertile land of that section. Still the increased yield of Certified Worthy over the common oats is deserving of the heavy land farmers' close attention.

Unfortunately much of the oats produced in the Fairgrove district was not real bright in color, due to bad weather at harvest time, but that seed certified by the Crop Improvement Association was all of good weight and high in purity and germination.

The College Wonder variety is another stiff-strawed and high-producing oat, which is being grown with excellent satisfaction by L. L. Lawrence, of Decatur; Jay Bradley, of Blissfield; F. L. Houghton, of Alto, and others.

Many farmers are interested in oats for the muck soils and for other lands exceptionally high in organic matter where lodging is the chief problem. For such conditions a sixty-day variety, such as Iowa 103, has been found best suited to Michigan needs. The Iowa 103 is a short season oat with the characteristic short, erect straw and it stands up well on soils where the use of a later variety would be out of the question. Alfred Vincent, of Durand, grew eleven acres on a muck soil bordering on peat. The oats matured in seventy days and produced sixty-seven bushels of good quality grain per acre. While none of the early oats are regularly listed on the pedigree seed list, some field inspections were made and the association secretary has information as to reliable seed sources.

The present policy of the Michigan Crop Improvement Association is to offer certified seed entirely upon its productive merit and at prices which make such seed a sound investment to every crop-growing farmer because of

(Continued on page 370).



## "The U. S. Mail must be delivered on time"

*Even a rural mail carrier can sometimes learn new points about his Ford*

FROM PENNSYLVANIA comes this Ford experience. A rural mail carrier near Reading uses a Ford to deliver his mail. The engine consumed a quart of oil about every 75 miles.

He was finally induced to try Gargoyle Mobiloil "E." After a fair test he discovered that he could average about 200 miles per quart. Today he says that he would not think of using another oil—not alone because of its economy, but because of better all-round results.

He sums up his partiality for "E" in a single sentence by saying "The U. S. Mail must be delivered on time."

\* \* \*

Every mechanical factor and operating requirement of your Ford engine calls for oil of the body, character and quality of Gargoyle Mobiloil "E." No heavier or lighter oil can give you such protection or such economy.

If you, too, appreciate increased freedom from tinkering and carbon, Gargoyle Mobiloil "E" will appeal to you just as it does to experienced Ford owners the world over.

When changing to Gargoyle Mobiloil "E" do not flush the engine with kerosene. A part of the kerosene will remain in the splash troughs and tend to impair the lubricating qualities of the new oil.

Drain off the old oil after the engine has been running and is hot.

In the differential of your Ford use Gargoyle Mobiloil "CC" or Mobilubricant as specified by the Chart of Recommendations.

### Tractor Lubrication

The correct engine lubricant for the FORDSON TRACTOR is Gargoyle Mobiloil "BB" in summer and Gargoyle Mobiloil "A" in winter. The correct oil for all other tractors is specified in our Chart. Ask for it at your dealer's.

ADDRESS OUR NEAREST BRANCH:

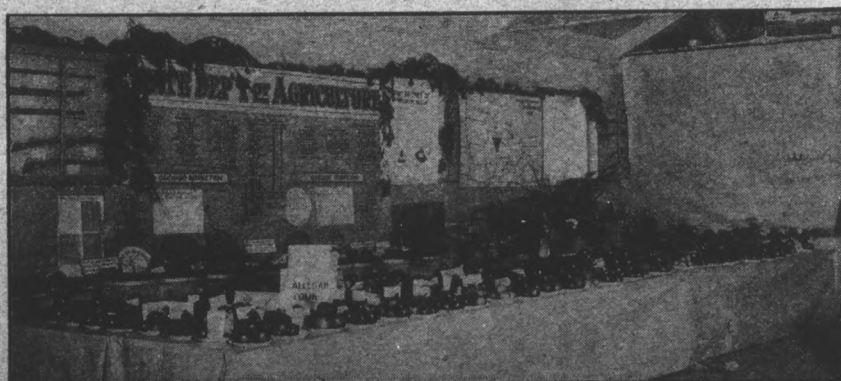
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## VACUUM OIL COMPANY



Allegan County's Winning Exhibit at Farmers' Week Fruit Show.



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AGRICULTURAL EXPERIMENT STATION  
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You Will Find Them All In



Why hitch three small horses to a walking plow?  
Two big horses will do the work better and they  
cost less to buy and less to keep.

A Ton of BIG CROP 2-12-4 FERTILIZER contains 360 pounds of actual plant food. A ton of 1-8-3 contains only 240 pounds; it takes a ton and a half to supply 360 pounds of plant food.

The Big Horses Have  
The Big Crop 2-12-4 Has **50%** More Pulling Power  
More Growing Power

Better yet, your savings on bags, factory costs, freight, hauling home, and labor in the field will total about \$10.00 per ton.

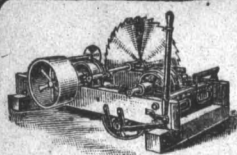
All BIG CROP Brands meet with the recommendations of the Agricultural Experiment Stations.

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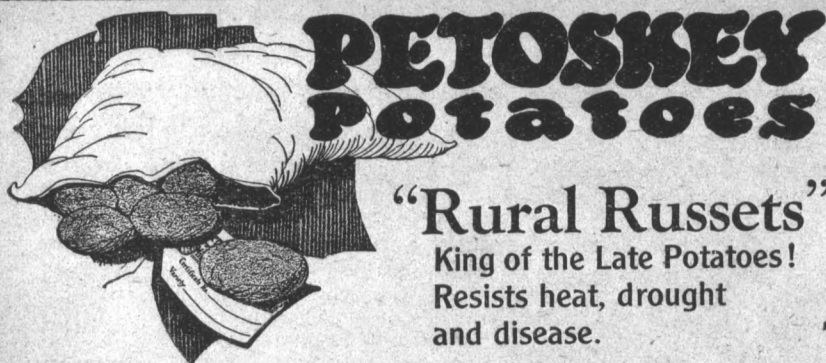
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with a Howell Portable Saw Mill. Turn your standing timber into high price building lumber at the mere cost of sawing. Big demand for lumber, lath and shingles. Keep your engine busy the year round making

**Big Money In Custom Sawing** for your neighbors. Howell saw mills are made in several sizes suitable for tractors of any size. Also Edgers, Planers, Lath and Shingle machines. Write for free Catalog, B-8.

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Our Michigan grown, carefully inspected Certified Seed Potatoes are the best for yield and flavor. Ohio, Indiana and Pennsylvania demand 78% of them every year.

They are Northern grown under climatic and soil conditions adapted to Potato production.

Michigan Certified Petoskeys and proper spraying increased Pennsylvania's average yield from 78 to 120 bushels per acre.

If your Local Cooperative Association or County Agent cannot take your order write to

Michigan Potato Growers' Exchange

Cadillac, Michigan or

**Michigan State Farm Bureau**

SEED DEPARTMENT  
Lansing, Michigan

## OUR SERVICE DEPARTMENT

Always Give Name and Address When Sending Inquiries as Satisfactory Service Cannot be Given to Unnamed Letters

### EXEMPTION OF EX-SERVICE MEN.

Are ex-service men who are taxpayers exempt from paying taxes?—J. F.

Compiled Laws of 1915 as amended by Act 331 of Sessions Laws of 1919 exempt from taxation the homesteads of veterans of the Civil War, Mexican War, or Spanish American War to the amount of \$1,000, if such soldier served three months or more.—Rood.

### CONSTITUTIONAL AMENDMENT.

My road taxes for 1922 were: Road repair tax, \$3.08; highway improvement, \$3.08; county road tax, \$4.51; total, \$10.67. My valuation for preceding year was \$850. I note you state as the constitutional limit: "The tax for road purposes in any one year shall not exceed \$3.00 per \$1,000 of the assessed value of the preceding year." Will you please inform me under what provision of law the authorities here are taxing me in excess of that amount?—H. L.

In my former answer the amendment to Sec. 26 of Art. VIII of the state constitution adopted in 1916, escaped my attention. This amendment permits a levy of \$5 per thousand assessed valuation for road purposes.—Rood.

### TAXES AS INCUMBRANCE.

A sells his farm to B on the tenth day of September. In the absence of agreement as to December taxes, who is liable for them, A. or B?—V. E.

Taxes become a lien on the land from the first day that they may be paid. On sale before December 1 the buyer pays the taxes in the absence of agreement.—Rood.

### MILK DEALER'S LICENSE.

We live in the country and send milk to seven families. Our cows are tubercular tested. The city of Crosswell passed an ordinance that anyone selling milk must have a license costing \$2.50, or \$1.00 if sold at the house. Doesn't Michigan have a law that a producer can sell his own products without license?—J. B.

C. L. (1915) Sec. 6376, declares that any person who sells milk or cream from any conveyance or depot, or delivers milk to any public place, is a dealer and must first obtain a license from the dairy and food commissioner. C. L. (1915) Sec. 3021, Sub. 11, empowers cities to regulate by ordinance and license the selling of goods, wares, or merchandise of any kind in the streets or from house to house.—Rood.

### SEEDING ALFALFA WITH OATS.

I have three acres of black loam soil which I want to seed to alfalfa with oats this spring. I cut hay from this field, the next season it was used for hog pasture. Then it was well manured twice and drilled to corn with fertilizer, 250 pounds per acre of sixteen per cent phosphoric acid. Have again manured it this winter. Will I gain by sowing fertilizer with the lime, and is the common lime the best to use?—H. M.

I would advise that you use 250 pounds of acid phosphate per acre and at least one ton of ground limestone when you seed alfalfa and oats on this black loamy soil. There is very little soil in Michigan that does not respond perfectly to an application of acid phosphate and I would expect to improve the oat crop and the stand of alfalfa very much by its use.

Black loam soil is apt to be deficient in lime. Some of it is not. You could determine by making a careful litmus paper test whether your soil needed

lime or not. But even if the test did not show a deficiency I am positive that it would be better to use one ton of ground limestone where you seed to alfalfa, because alfalfa is a great consumer of lime, and as you will undoubtedly leave this field seeded to alfalfa for several years, the lime will prove beneficial during this whole period. I would apply the lime while preparing the field. Work it well into the soil, then you can apply the fertilizer when you drill the oats and alfalfa. By all means inoculate the alfalfa seed before you sow it.

You could use common commercial lime or builders' lime, or in other words, hydrated lime, but it will cost you more. Of course, it is of a little more value pound for pound. About 1,350 pounds of this lime would be equal to a ton of ground limestone, but the limestone would be the cheaper, and so far as the results are concerned, one would equal the other. Hydrated lime is also much worse to sow.

If the season should prove dry it would be much better for your alfalfa if you would cut the oats for hay before they ripen and give the alfalfa full control of the soil and moisture. If, however, there is plenty of rain then the oats may be left till they are ripe and threshed for grain and still get a good stand of alfalfa.

### WHEN TO SOW SWEET CLOVER.

I would like to get some information on sweet clover. When is the best time to sow it and how much to put to the acre? I have a field that is sandy and sowed it to sweet clover last July. Some of it came up but not very thick on the ground. I sowed five quarts to the acre. Will it winter-kill very much? Do you think it will come on better this spring as I sowed it when awful dry?—S. C. S.

Sandy land is almost invariably deficient in lime for good results with sweet clover. Sweet clover, like alfalfa, must have lime, also phosphorus and potash. It may be you have sufficient phosphate and potash in the soil, but not likely.

Five or six quarts (or ten to twelve pounds) is sufficient seed if it is prime seed. If the land is well limed and fertilized you should get a good stand, provided you inoculated the seed. This must be done on land where sweet clover has not been grown before.

Sweet clover is a very hardy plant and stands winter weather very well. There is not much danger from winter-killing if the land is well limed and fertilized with the mineral elements of plant food.

Probably the best time to sow is early in the spring. But that doesn't make so much difference if the land has been properly prepared.

### POTATOES FOR BREEDING EWES.

I have a flock of twenty-five breeding ewes that will begin lambing about March 1. Would you tell me whether it would be all right to feed them raw potatoes; if so, how much to feed daily?—W. H. B.

Raw potatoes would make a very satisfactory succulent feed for breeding ewes. Previous to lambing, it would not be desirable to feed more than two to two and one-half pounds per head daily.

After the ewes are through lambing and the lambs growing well, over three pounds of potatoes could well be fed per ewe per day.

It would be advisable to chop these potatoes up to avoid the danger of the sheep choking.—G. A. Brown.





## Have these farm home comforts which make life more worth living

Why is it that, in every county, there are certain farmers who are more successful than their neighbors—farmers who enjoy fine homes and all the comforts of the better city homes?

Not always, either, do these farmers own the largest farms. In every county there are men who farm 40, 80, or 160 acres and always seem to make money. Why is it?

Isn't it because they keep abreast of modern farming practices—diversification, rotation, fertilization—as developed and proved by their State Experiment Stations, their County Agents, their neighbors, and others?

### How to increase yields

Learn from these farmers the secrets of their success. Learn from them how the right fertilizers, for instance, will produce enough extra cotton or corn or other crops to pay for an automobile, or piano, or other luxury which you would like to provide for your family.

There is a man in your town—the Authorized Swift Agent, the man or firm or store selected by Swift & Company, after investigation, to supply the Swift's Red Steer Fertilizers required by the farming community—who will help you to obtain these comforts.

He will do this by helping you to make your farming operations more resultful. He will help you to grow more and better crops on less land, to increase your acre yields, and to improve the quality of your crops.

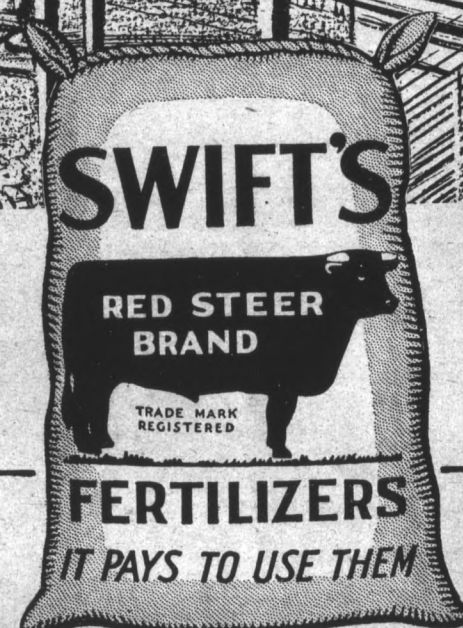
### Get the right fertilizers

Backed by the resources and reputation of Swift & Company, he is qualified to advise with you regarding the Swift's Red Steer Fertilizers which will give you the best results, or to get this information for you from your state experiment station or from the Agricultural Research bureau maintained by Swift & Company.

He recommends Swift's Red Steer Fertilizers because he knows that "it pays to use them"—and because he knows that they are high in available plant food, that they are accurately and uniformly mixed, and that when properly applied they will return the farmer's investment many times over.

Get acquainted with the Authorized Swift Agent in your town. Get acquainted with him now—it will pay you. If you cannot locate him readily, write our nearest sales division.

Swift & Company  
FERTILIZER WORKS, DEPT. 43  
Hammond, Ind.



### A. S. A. says:

Your acre yields and the quality of your crops are more important to you than prices.

No matter what the price is, you are better off if you have a thousand bushels to sell than if you have five hundred. You will get just twice as much money.

The most successful farmers in this county are the ones who are growing the biggest acre yields of high quality crops. And likewise, you can be more successful if you increase your acre yields and improve the quality of crops you grow.

Perhaps I can show you a way to do this. Come in and talk it over.

*asa*  
Authorized Swift Agent

"IT PAYS TO USE THEM"





## Sweet Clover

The greatest pasture and soil building crop of Michigan. Also a good hay crop on lighter soils and a valuable crop to pave the way for alfalfa.

Good sweet clover is still cheap so if you must save money on seed use Farm Bureau Brand Sweet Clover, we have both white blossom and yellow blossom varieties.

Demand scarified Farm Bureau Brand Sweet Clover and all other Farm Bureau Brand Seeds. Their vitality, description and purity are guaranteed to be as represented to the full amount of the purchase price. If your Local Co-operative Association cannot supply you write direct to

Success with alfalfa requires adapted seed. Remember we are headquarters for hardy Michigan grown and Grimm alfalfa.

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Complete Beginner's Outfits with or without bees. Full line of Beehives, Sections, Comb, Foundation, Smokers, etc. General Agents in Michigan for the A. I. Root Co. Send for 1923 catalog. Beeswax Wanted.

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Of all factory made articles bought by farmers, did you know that wire fencing is the cheapest? Difference between cost of raw material and finished product is almost negligible. Dealers sell more for customer's convenience than for personal profit. Compare it, pound for pound, with any other farm implements made largely of metal—note the difference! All in favor of fencing! Use it. Get the most fencing for your money—Empire Fence Book. Write now for Empire Fence Book.

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GET IT FROM THE FACTORY DIRECT  
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Cut your own fence costs to the bone by buying direct from us at Lowest Factory Prices. We Pay the Freight.  
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Here is the greatest money saving sale you ever heard of. Prices cut to the bone on Fences, Gates, Steel Posts, Roofing and Paint.  
**GET BROWN'S FACTORY PRICES**  
Don't spend a cent until you get my prices. You'll be surprised when you compare with others. Remember I pay freight and sell only direct from my factories to you.  
**FREE 96-PAGE BOOK OF BIG BARGAINS**  
The greatest bargain book ever printed. Every page is like finding money. Buy now during this sale. Prices dropped to the bottom. Get your name on a postal and mail NOW. Jim Brown, Pres. Brown Fence & Wire Co., Dept. 2807, Cleveland, Ohio

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## QUAIL FAVORED IN BILL.

The house of representatives has passed Representative Howe's game bill which, among other provisions, places quail on the song bird list. Farmers have urged such action knowing that quail are their valuable friends. This feature of the bill has the endorsement of the State Grange and the Michigan State Farm Bureau.

## APPLE AND GRAPE STANDARDS.

Two bills dealing with horticultural standards were dropped into the legislative hopper by Representative Oscar Braman, of Kent county. The first to be called "Michigan Standard Off Color."

Three official grades of grapes are established by his other bill drawn up in accordance with the desires of the leading grape growers and dealers.

## COVERT LAW CHANGE PROPOSED.

While abuses of the Covert highway law have become so prevalent and flagrant that a strong movement is on foot to repeal the law in its entirety. Senator William L. Connelly, of Spring Lake, thinks that it can be amended so as to prevent abuses and conserve its good features.

Under Senator Connelly's bill county supervisors would have the right to suspend the exercise of powers now possessed by county road commissioner by a two-thirds vote of the board. They would also be empowered to limit the amount of tax that the road commissioners might assess against the county at large for a road.

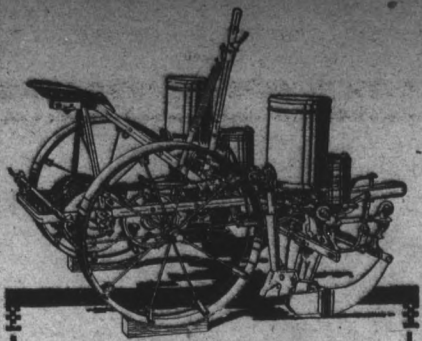
Each supervisor would be authorized to "sit in" with the road commissioners and have a voice in laying out the assessment districts in his township.

## PRODUCTIVE OAT VARIETIES.

(Continued from page 367).  
the seed's productivity. In keeping with this program, the crop grown from certified seed is not eligible for further inspection except on the farm which produced it. Growers desiring to start the production of pedigreed seed under inspection must use, as parent stock, seed from a registered grade. The registered seed is chosen in limited quantity from the regularly inspected seed lots, as being particularly suitable for seed foundation stock. For regular crop production it is no more desirable than the certified seed which is the real commercial product of the association with which the agricultural college and the Michigan Crop Improvement Association hope to increase the efficiency of the Michigan oat production.

The prices established on certified seed by the association board of directors are in definite relation to the commercial oat market. An increase in yield of but five bushels per acre returns the grower's additional seed investment with interest at over 140 per cent. If the grower of a ten-acre field of oats experiences an added yield of ten bushels per acre, through the use of certified seed; this, in the light of 1922 farm experience, being a fairly average condition, his extra seed investment of about \$9.00 will increase the income from that field by from \$40 to \$45, based on the present oat market.

The dissemination of certified seed of these productive varieties is furthered by lists of growers published and distributed by the Michigan Crop Improvement Association secretary at East Lansing, and through the marketing service of the Seed Department of the Michigan State Farm Bureau, with whom many of the association growers consign their surplus seed for distribution.



## The Accurate Drop Corn Planter With Fertilizer Attachment

Besides planting corn accurately, you can distribute successfully any standard fertilizer without firing the seed, by using the

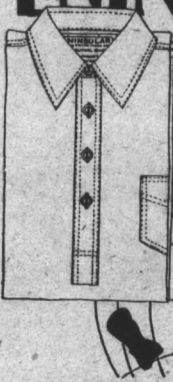
### John Deere No. 999 Corn Planter

Most accurate—sloping hopper bottom and special-shaped seed cells—each cell takes one kernel and the desired number is accumulated and dropped into each hill. Instant change, to either 2, 3 or 4 kernels per hill. Quick change to drilling or back to hill dropping. Convenient underhanging reel; automatic marker. Fertilizer attachment extra—can be used at same time corn is being planted and fertilizer distributed. Sold by John Deere dealers.

**FREE BOOK.** Write today for booklet describing the No. 999 with fertilizer attachment. Tell us what other implements you are interested in and we will send you "Bookkeeping on the Farm"—just the book in which to keep your records. Address John Deere, Moline, Ill., and ask for Package XP-6 22

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

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Work Shirts and Kindred Lines

All the Room In the World! That's the Peninsular work shirt. Gives free chest and arm movement and won't pull out at the belt. 36 inches long! Double stitching! Pointed neck-yoke! You've discovered a real shirt when you buy a Peninsular. Ask your dealer!

**GEO. F. MINTO & CO. Inc.**  
DETROIT MICH.

## ISBELL'S Colossal

**The Finest Tomato Grown**  
In size—often from 2½ to 3½ lbs.; in flavor—sweet, mild, unsurpassed; in quality—solid meat, almost free from seeds; in yield—only produces larger fruit but more per plant. For table use, canning or marketing, Isbell's Colossal surpasses all others. It's a money maker. Order now—find out for yourself how fine and productive a tomato can be.

### ORDER DIRECT

Packet 20c; plants 50c per dozen—true strain—either red or golden. Complete catalog of garden and field seeds free on request.

**S. M. Isbell & Company**  
845 Mechanic St. (50) Jackson, Mich.

## Marathon Cord Tires

**Big Standard Brand Tires**  
which give complete satisfaction and long mileage, yet are sold at wholesale prices. Prepaid to you. Write for prices and circulars to

**KALAMAZOO RUBBER & SUPPLY COMPANY**  
Michigan Distributors  
349 Portage St., Kalamazoo, Mich.



### TO SELL POTATOES UNDER BRAND NAME.

IT is the plan of the Michigan Potato Growers' Exchange to sell all of its U. S. No. 1, or U. S. No. 1 fancy grades of potatoes in sacks which will bear the brand and name of the organization. The purpose of the association in doing this is to let the public know that it can get real high-class well-graded Michigan potatoes. It will also stimulate the growers to closer grading and greater pride in their product because of its going out under a brand name.

### MUCH HOMESTEAD LAND CAN'T BE FARMED.

THE Michigan State Department of Agriculture has issued a warning to ex-soldiers who contemplate taking up homestead land for agricultural purposes. It says that little of the 6,732 acres recently opened for homestead entry in Otsego, Cheboygan, Roscommon, Crawford, Montgomery, Ogemaw, Presque Isle, Oscoda, Iosco, Alcona and Alpena counties is fit for agricultural purposes.

The department urges ex-soldiers contemplating homestead entry to see the land before making application, and offers to give them all the information available relative to these lands.

### START SHIPPING BABY CHICKS.

THE Holland, Michigan, post office has arranged to handle sixty thousand chicks per week as compared with a maximum of fifty thousand per week last year. The first shipment was made on March 1.

It is expected that over a million chicks will be shipped from the Holland post office during the hatching season. These will be the product of forty-one hatcheries in the Holland section.

These hatcheries and those around Zeeland, which bring the total up to about a hundred, have made Ottawa county nationally famous as a chick-hatching center.

### FARM BUREAU WINS MEMBERSHIP SUIT.

AT the circuit court in Centerville, Michigan, the Michigan State Farm Bureau was granted judgment against John Davis, a Constantine farmer, for twenty dollars for back farm bureau membership fees. The defendant had previously lost his case in the justice court and appealed it to the circuit court, where the outcome was similar.

The Centerville case is the first one that was taken to the circuit court and the quick verdict in favor of the farm bureau is regarded as important in any future contest. The defendant claimed he received no benefits from the farm bureau. But the farm bureau proved that it had developed marketing and other valuable services and proved the validity of its contract.

### MUSKRAT FARM SUCCESSFUL.

IN Newaygo county, F. S. Matthews has started a muskrat farm which is proving quite successful. A short time ago he fenced in about twenty-two acres of marsh land, with about six pairs of muskrats enclosed. Now he has over a hundred muskrats and is offering double fur prices for females trapped alive. As yet there are only a few muskrat farmers in Michigan, only fourteen licenses having been issued for this purpose. Mr. Matthews says this business can be made a success if one has a natural muskrat habitat.

# Dependable DELCO-LIGHT



## Now Within Your Easy Reach

Never before has it been made so easy for you to get Delco-Light.

It is now possible for you to obtain a Delco-Light plant to meet your requirements at the old 1917 prices.

You can buy it on easy terms.

You can get with it a set of high grade fixtures complete for five rooms and the porch for the astonishingly low price of \$12 f. o. b. Dayton.

And you can now secure the complete installation of a Delco-Light plant for much less than you imagine.

Your home, your farm needs Delco-Light. Your family want it—you have probably wanted it for some time.

Now you have an easy chance to get it. See your Delco-Light dealer today.



Special Delco-Light Set of High Quality Fixtures Complete

\$12

f. o. b. Dayton  
Sold only with Delco-Light

These fixtures are made of heavy-gauge metal, brush and Flemish brass finish, wired and completely assembled ready for installation. It would be difficult for you to buy a set of equal quality at double this price.

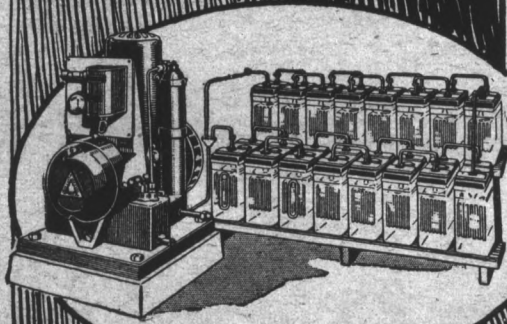
### DELCO-LIGHT COMPANY, DAYTON, O.

Subsidiary of General Motors Corporation

Also makers of Delco-Light Water System, Delco-Light Washing Machine and Frigidaire, the Electric Refrigerator

These products made for 32 and 110 volt Direct or Alternating Current Service

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25 styles and sizes from \$260 up~  
This is one of the most popular models

at **\$335**

cash price  
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Delco-Light Company, Dayton, O.  
Please send me without obligation, the Delco-Light catalog, new prices and details of easy payment plan.

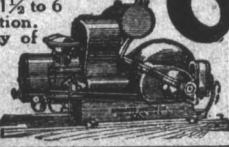
Name.....  
Street (or R. F. D.).....  
Town.....  
County..... State.....

## My Engine Will Do the Work of 6

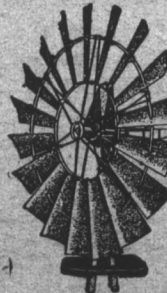
Write now for facts about this wonder engine. Same engine gives 1½ to 6 H. P. Gasoline or kerosene, portable, light and free from vibration. No cranking. Pumps, saws, grinds and does all chores. Plenty of power for every purpose. Easy to operate.

### Low Factory Price—Special Offer

Price now lower than before war. Tremendous value. Write at once for catalog and special offer on this amazing engine. The Edwards Motor Co., 174 Main St., Springfield, O.



## 4 TIMES Around the World with ONE OILING 100,000 Miles Without Stopping for Oil



An inventor who could develop an automobile, a railroad car or any other conveyance on wheels which would perform such a feat would be considered a wonder. But such is the record of regular accomplishment by the Auto-oiled Aermotor during the past eight years in pumping water.

Did you ever stop to think how many revolutions the wheel of a windmill makes? If the wheel of an Aermotor should roll along the surface of the ground at the same speed that it makes when pumping water it would encircle the world in 90 days, or would go four times around in a year. It would travel on an average 275 miles per day or about 30 miles per hour for 9 hours each day. An automobile which keeps up that pace day after day needs a thorough oiling at least once a week. Isn't it marvelous, then, that a windmill has been made which will go 50 times as long as the best automobile with one oiling?

The Auto-oiled Aermotor after 8 full years of service in every part of the world has proven its ability to run and give the most reliable service with one oiling a year. The double gears, and all moving parts, are entirely enclosed and flooded with oil all the time. It gives more service with less attention than any other piece of machinery on the farm. To get everlasting wind-mill satisfaction buy the Auto-oiled Aermotor, the most efficient windmill that has ever been made.

For full information write **AERMOTOR CO.** Chicago Kansas City Dallas Minneapolis Des Moines Oakland

## AGRICULTURAL LIME

The strongest in Ohio.  
Free Booklet and Sample upon request.  
THE SCIOTO LIME & STONE CO.  
DELAWARE, OHIO.

### A New Labor Saving Implement

## LE ROY "TWIN P" PACKERS

Write Le Roy Plow Co., Le Roy, N. Y.

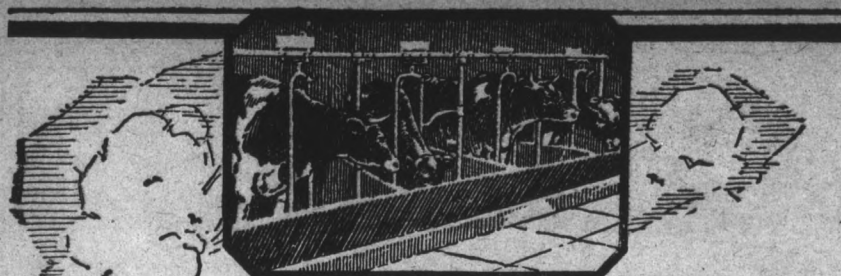


Why Not PUT THIS NEW MILL ON YOUR OLD TOWER

Albion steel and wood mills are quiet and powerful. One-third the working parts of any other mill. Only main Pinion bearing subject to wear. This is oilless, and easily replaceable. Gears by dependable weight without springs. Fits any 4-post steel tower. Why not shorten your churning now with a good Windmill? This is your chance—F. O. B. Albion. Erect it yourself. Ask your dealer, or write direct to

Union Steel Products Co. Ltd.  
No. 528 N. Berrien Street,  
ALBION, MICHIGAN, U. S. A.





## One Week each Month and note the difference

You CAN get more milk from your cows—now, and all through the winter and spring. Read how—and why—then act.

Late fall, winter and spring months are a severe strain on the milk cow's system. Winter feeds are harder to assimilate and turn into milk than green pasturage. The digestive and milk-making organs become run down. Less milk and lowered vitality results.

BUT—you can easily maintain vitality at summer level and decidedly increase the milk flow by a one-week-a-month use of Kow-Kare. This famous medicine for cows tones up the genital and digestive organs—enables them to throw off disease and make milk faster.

Thousands of dairymen follow this plan and find the very slight cost of the treatment repaid a hundred fold. Only a tablespoonful of Kow-Kare morning and night is required—and only one week out of the month.

If disease does creep into the herd, Kow-Kare goes to this origin of the trouble and acts promptly. For Barrenness, Retained Afterbirth, Abortion, Scours, Milk Fever, Bunches, Loss of Appetite, etc., Kow-Kare has been the standard remedy the country over for twenty-five years.

Make a test of this more-milk plan—try it on part of your herd and convince yourself. Your feed dealer, general store or druggist will supply you—large size Kow-Kare \$1.25; medium size 65c. If your dealer is not supplied, we will mail, postpaid, on receipt of price.

Write for valuable free book,  
"The Home Cow Doctor."

DAIRY ASSOCIATION CO., Inc.  
Lyndenville, Vt.



**CONE-SHAPE GRINDERS**

**IT PAYS TO GRIND ALL GRAINS**

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

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

10 sizes; 2 to 25 H. P. Write for free catalogue.

D. N. P. BOWSHER CO., SOUTH BEND, IND.

**GALLOWAY'S**

**Big Bargain Catalog**

Cuts prices to the core on engines, separators, spreaders, fence, paint, roofing, harness, seeds, farm machinery and household necessities. Get Galloway low prices giving direct from factory reductions before buying. Save one-fourth to one-half. Half a million pleased customers testify to Galloway perfection in manufacturing and cut-the-melon merchandising. Satisfaction guaranteed. Cash or time. 30 days trial. Send for big free catalog with its thousands of bargains today.

Box 187 W. M. GALLOWAY CO. Waterloo, Iowa

**SELDOM SEE**

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

**ABSORBINE**

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

will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2.50 per bottle delivered. Describe your case for special instructions, and Book 9-R free. ABSORBINE, JR., the anti-septic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; allays Pain and Inflammation. Price \$1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c.

W. F. YOUNG, INC., 258 Temple St., Springfield, Mass.

Please Mention The Michigan Farmer  
When Writing to Advertisers

**FREE BOOK Tells All**

**Only \$5 Down**

**Low Factory Prices**

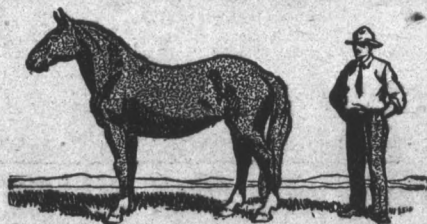
**TEN Months to Pay**

Think of it! Only \$5.00 down brings you this standard built, New Improved SATTLEY Cream Separator. Made and guaranteed by the Oldest Mail Order House in the World and sold direct to you at new Low Factory Prices with terms so easy you won't feel the cost. We give you

**30 Days Free Trial**

You can test it—prove it—compare it with any other separator on the market. Then if not satisfied, send it back at our expense and your money will be refunded. Send for our FREE Catalogue, low prices and easy terms. See how the Extra cream you get soon pays for the machine. Write today. Be sure to ask for Cream Separator Catalog No. 37 A.

**MONTGOMERY WARD & CO.**  
Chicago, Kansas City, St. Paul, Ft. Worth, Portland, Ore.



**Cured! Money Saved**

OVER 250,000 satisfied users and 23 years of success testify to the positive dependability of Save-The-Horse. You are safe from loss because it cures while working, old, so-called "incurable" cases of SPRAIN, EMBROUSURE, Throat, or—Shoulder, Knee, Ankle, Hock and Tendon Disease. We take all risk by giving a signed MONEY-BACK GUARANTEE. In the first emergency, Save-The-Horse saves many times its cost.

Our FREE 96-page Save-The-Horse BOOK tells how to locate, understand and treat 28 different kinds of lameness. This BOOK, expert veterinary advice and sample of Guarantee all FREE. No obligation. WRITE TODAY.

**TROY CHEMICAL CO., 220 State St., Binghamton, N. Y.**  
At Druggists and Dealers with Signed Guarantee, or sent prepaid.

**Ear Tags**

**FOR STOCK**

Tag your stock—best and cheapest means of identification for Hogs, Sheep and Cattle. Name, address and number stamped on tags. Catalog mailed free on request.

**F. S. BURCH & Co., 145 W. Huron St., Chicago**

## Buying the Brood Sow

By J. Carl Jewett

IN the entire corn belt, farmers are getting a better focus on the business of farming. One thing that stands out pre-eminently, is that hogs have shown profits. United States is the greatest swine-producing nation in the world, and our production nearly equals that of all the other nations combined.

The foundation and mother of this vast industry, is none other than the brood sow that you, Mr. Farmer, are keeping on your individual farm here in Michigan. You will find her on nearly every farm in this country.

Many farmers will be increasing their number of brood sows this spring, and to those will come the problem of selecting breeding individuals that will show results, with profits at the end of the year. Like all other phases of farming, the hog feeder should give his best thought to this business of pork production.

You must have an ideal type of hog in mind, one that fulfills all requirements, and that has withstood the experience of former years. More depends upon this ideal type than upon the breed. The interest of the feeder in his home market, should above all things, guide him in his selections.

In the purchase of a brood sow or a bred gilt for future breeding, you should carry in your mind the firm belief that you are buying a producer, one that will farrow a good-sized litter. There is a chance to be taken in this respect but you can insure yourself somewhat if the sire and dam were from large, healthy litters. It is of importance that your purchase should carry such a record.

The next important characteristic in the buying of a brood sow is the problem of feeding her new-born family. Consequently a real milking machine is of vast importance and a real necessity. Great care and attention must absolutely be given the sow and her new family to start the baby porkers on the right road to profits. You cannot use slipshod methods, nor neglect the duty that is yours for the success of the litter. So when you purchase that brood sow examine her closely, see that she possesses a good udder, with places for twelve or more little fellows to partake of nourishment. This is an important foundation for the future development of a strong, robust and healthy litter.

As you have your ideal type in mind, do not neglect to adhere to it, for there lies your future success. I recently received a sale catalogue of a very prominent breeder. It was very pleasing to note that he was advertising individuality. Little does the average hog-raiser bother with individuality, and I dare say a majority are entirely at a loss to connect any such characteristic with brood sows or the hogs that are in his feed lots.

The feeder should endeavor to keep his brood sows uniform, all as near the ideal type as possible, so that their offspring will show individuality and quality that will command the highest market price on sale day. It is one sure way to more profits.

Where and when shall I purchase my brood sow or bred gilt? Public auctions and private sales should not be overlooked and if the individuals merit your approval, buy the number you need, being very careful in your selections. See that each one has the necessary vigor, thrift and vitality for the perfect mothering of the coming litter. See that she is big and roomy, with plenty of stretch, standing up well on all four feet and with good sized bone. See that she is active and in good healthy every-day condi-

tion. Avoid the undersized and real fat sows. To these requirements add a little common sense and what OLD MAN EXPERIENCE has taught you.

### ALFALFA FOR MICHIGAN.

(Continued from page 365).

the different varieties of alfalfa and alfalfa seed secured from different states.

Some farmers and county agents in different parts of the state have been particularly interested in this kind of work so they are cooperating with the farm crops department in conducting variety tests of alfalfa on their farms. Arrangements have been made for the department to furnish seed from different sections and of different varieties. A man from the college is on hand to assist in planting, cleaning out the drill after sowing, making a record of the plot, etc. Great care is taken to see that planting is uniform for each variety and in so far as possible experiment station methods are followed. One drill width of each variety is sown with a strip about twelve inches wide between each.

During the next few years in several of these tests samples will be secured from each variety at each cutting and the yield will be computed. Then we will have more accurate information as to relative hardiness and desirability of such varieties and strains as the Grimm, Cossack, Hardigan, Kansas Seed, Michigan, Montana, Utah, and Turkestan will be available from several sections of Michigan.

There are now variety tests in the following counties: Emmet, Benzie, Kalkaska, Mason, Montcalm, VanBuren, Gratiot, Calhoun, Jackson, Branch, Hillsdale, Wayne and Sault Ste. Marie. And these are located on all kinds of soils from the very light to the very heavy ones. Similar tests using these varieties will be sown this year, hoping ultimately to have them located in all sections of the state.

The illustration shows the alfalfa variety test on the farm of D. D. Phillips, east of Kalkaska. It was planted on May 25 and the picture was taken August 23 of the same year, after it had been clipped. This picture shows the drill width strips of some of the varieties in this test and how they are separated by a narrow strip. The soil is a sandy loam.

It is of prime importance that Michigan farmers secure adapted alfalfa seed and it is also important to them to know whether Grimm, or Montana alfalfa seed, or that from Utah or Michigan grown, will be the cheapest according to their system of farming or rotations they may be following.

### THE TON LITTER CLUB.

MEDALS of gold, silver or bronze will be awarded to farmers whose litters of pigs attain certain weights when 180 days old, according to the rules of the "Michigan Ton Litter Club" now organized by the animal husbandry department of M. A. C. in cooperation with the Michigan Swine Breeders' Association. For litters that weigh 2,000 pounds or more at that time, gold medals will be given. For those between 1,800 and 2,000 pounds, silver medals are offered, and for those between 1,600 and 1,800 pounds, bronze medals will be the prize.

Pigs farrowed any time between March 1 and May 15 will be eligible. For purposes of identification the pigs must be ear-marked within seven days after birth and report must be sent to the state leader of the club. All herds

(Continued on page 399.)



## TREATING LAME HORSES.

I AM a subscriber and am interested in our farmers. I see some have lame horses. I wish to say I have worked at horse shoeing and blacksmithing for thirty-two years and have made it a study. Have treated a great many horses for contraction and my best results came from treating the foot thus:

First, pare foot on the toe till the blood runs freely. This is to make the sole thin so the foot will spread. In paring the heel leave brace in, that runs from the back part of heel to front of frog. Then concave the shoe from back nail to the end of shoe and set it flush with the outside of the hoof on both sides, which will tend to spread the hoof. If you study the anatomy of a horse's foot, you will find a small bone laying crossways in the heel just over the frog and in case of contraction it passes against the horn of the foot near the heel, which is the cause of lameness.

I have tried this treatment many times, and it never failed to cure. I have spread a horse's foot one inch in six months. As soon as the hoof spreads over shoe, remove shoe and widen the reset.

If anyone wishes further talk on horses' feet, just put the question in the Michigan Farmer and I will try to answer it.—J. W. Smith.

## O. I. C.'S WIN.

THE United States Court of Appeals at Cincinnati has recently granted a victory to the L. B. Silver Company, which originated the Ohio Improved Chester and O. I. C. breed of hogs. After years of litigation during which judges and juries had very little in the way of precedent to guide them, the court decided that the twenty thousand breeders of O. I. C.'s can lawfully continue to advertise and sell their O. I. C.'s as a separate and distinct breed of swine, as distinguished from the Chester White breeds.

The advertising of the Silver Company maintained that the O. I. C. breed was less susceptible to disease than the "common or garden variety" of hog, and that there has been no cholera, foot-and-mouth or other contagious disease in the locality where the O. I. C. was produced for over fifty years.

As part of the evidence it was shown that the O. I. C. herd book contains more registries than all three of the herd books of the Chester White breed. This indicates that the O. I. C.'s are rapidly gaining in popularity.

## HOG MARKETING COSTS.

A HOG marketing study by the United States Department of Agriculture in the corn belt shows that one-third of the total cost of marketing hogs consists of terminal charges, such as commission, yardage and feed. The commission comprises about fifty per cent of the total terminal charges, yardage about twenty-six and feed about twenty-four per cent. On the average, the terminal costs range from \$1.60 to \$2.23 per thousand pounds. By individual cooperative associations, the lowest cost is \$1.55 and the highest \$2.63.

Losses from crippling were found heavier in the months from November to March. Losses from hogs killed in transit were greater in the spring months, especially May and June. Both crippled and dead hogs were more numerous in mixed shipments than in straight ones.

The study involves the collection of data from 237 cooperative live stock shipping associations in ten middle-west states, which shipped more than 600,000 hogs in 1921.

Dry feet will make a stranger of the doctor.



UNITED STATES TIRE COMPANY  
TRADE MARK

Buy one Royal Cord—  
try it on the right hind  
wheel

## To the new users of Royal Cords —probably a million in 1923

**MOST** rules are all the better for being broken once in a while.

There's an advertising rule, for instance—never to ask anyone to buy a thing and try it.

When the makers ask you to try a Royal Cord on your right hind wheel they may be breaking the rule, but you will benefit thereby.

The makers of Royal Cords, for their part, can't see why making friends should ever go out of fashion.

The more quality a tire has—and the more leadership—the greater its obligation to be simple and direct. Royal Cords earned their position of high regard by simple things.

You can easily see that people's confidence in Royal Cords could never have been won by quoting a lot of big mileages, talking big discounts, or going through all those other kinds of gestures with the idea of registering big.

The makers of Royal Cords devote themselves to guarding quality and have no desire to dazzle customers.

Their ideas seem to be right, because U. S. Royal Cords are the measure of all tire values today.

## United States Tires are Good Tires

© 1923, U. S. Tire Co., N. Y.

## STRAWBERRY PLANTS

**\$3.50 Per Thousand.** Our strong, healthy plants guarantee big crops of luscious berries. Best varieties for all kinds of soils. Many new varieties such as Eaton, Sun Special, Premier, Marvel, and Cooper. The world's greatest new Everbearing Strawberry CHAMPION. Full line of Raspberries, Blackberries and Asparagus. Greatly Reduced Prices. Our customers are making up to \$1200.00 per acre from small fruits. Large stock of good Grape Plants at \$35.00 per thousand. Beautiful new color catalog free. Write Today BRIDGMAN NURSERY CO., Box 25, Bridgman, Michigan

**WHITTEN Strawberries BRINGS MORE PER CRATE**  
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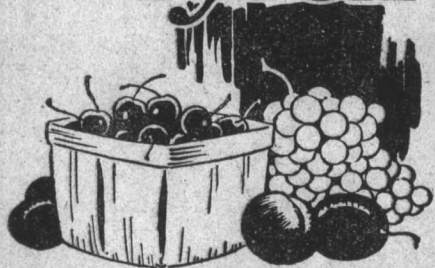
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## Opinions & Comments

From  
Michigan Farmer Readers

### LUCK AND PROGRESS.

THE gentleman who penned the lines under the caption, "Hard Luck and Progress," certainly is an optimist. Now, optimism, unquestionably and undeniably, is a valuable asset to anyone, and a characteristic well worth cultivating, but if R. D. B. will kindly tell us how, during these hard times, to provide the necessities of life, pay the doctor bill and meet other similar obligations, send the children to school and to college, and then rake up enough cash to pay the interest and taxes, we will all be so full of optimism that we will willingly bust and still look pleasant.—W. H. Collar.

### WHAT'S THE MATTER WITH MICHIGAN POTATOES?

FROM time to time there have been reports in the daily press stating that Michigan potatoes were being discriminated against on the markets of some of our midwest cities and that favor was being shown to the white potato from the New York and Pennsylvania growers.

This report has been investigated very thoroughly by potato and market specialists from the Michigan Department of Agriculture and the college. Their report shows very clearly that the Russet potato which is favored by our growers is quite as acceptable as the potatoes from other states on the same market and that Michigan Russets are commanding a better price than Wisconsin Whites. In fact, a goodly share of the potatoes from Pennsylvania are grown from Rural Russet seed originating in northern Michigan, which shows that the trouble is not in the color of our potato.

However, there is a very wide difference in the price of some of the eastern stock over that of Michigan. Their growers are netting about forty to forty-seven and one-half cents per hundred over the prices received by Michigan growers.

Investigation disclosed that this difference is due entirely to the grading at shipping point.

At one Pennsylvania Cooperative Association it was learned that they not only sort very closely when the potatoes are taken into the storage, but the potatoes are given a much closer inspection while being sacked for loading. The potato, when leaving storage, is again run over the sorter and is hand-picked over by two men. These potatoes are put up in branded sacks and sell very readily because they not only look good but they are good, and the storekeeper that gets them can sell practically every potato to satisfied customers.

Quite a lot of the Michigan potatoes that have been going on the market this winter have not been sorted as closely as they should have been and often arrive at destination in poor condition.

This was explained by "Jim Weston," M. A. C. potato specialist.

Under Michigan methods a certain per cent of potatoes going into each sack are mechanically injured (fork punctured, etc.), and almost every one of these injured potatoes will show mold when leaving storage. They are loaded into a refrigerator car and to keep the potatoes from freezing the car is heated to about ninety degrees and sealed.

Being in transit for about ten days at this high temperature gives this

mold a wonderful chance to develop and usually more or less wet rot shows up when the car is opened for inspection. Naturally the car will not sell as well as one that was well sorted and arrives in good condition.

Storekeepers told our investigators that they found twenty to thirty pounds to the sack of some Michigan cars which were too poor to sell without injuring trade and that these had to be "dumped."

It would have been much better if these poor and ill-shaped potatoes could have been "dumped" by the shipper and that much freight saved, which together with the better price that the good potatoes would have sold for would have made quite a difference in the grower's receipts.

Not all Michigan potatoes were in this bad condition, but enough were to make the buyers generally afraid to take any Michigan stock, while they could get other potatoes that they were sure were good.

This matter is being taken up by the Michigan Potato Growers' Exchange at Cadillac, and a meeting of about forty managers of local cooperative associations, together with some of their directors and county agents, was held at Cadillac, Wednesday, February 28. At this meeting a committee of three of the managers was appointed to confer with the board of directors and manager of the exchange at Cadillac. They will endeavor to establish grades of potatoes to be put in branded sacks and shipped in competition with the eastern growers. In fact, it is planned to take at least one step in the lead.

Meetings of the growers are scheduled to be held at the local marketing associations and the advantages of better grading and keeping of the poor potatoes on the farm for feeding purposes will be illustrated.—J. A. Brown.

### CONSOLIDATED SCHOOLS.

IN the February and March Michigan Farmer, I read about the consolidated school.

Some say that the consolidated school is much better than the public school, because of the high school right at home, the better home training, better teachers, smaller salaries for the teachers, etc. But, my friends, you have not stopped to think about how much it is going to cost for the running of this school.

The day is coming when we will have to give up all the old things and take up new. We may have to build up-to-date high schools, buy busses, hire horses, cabs and drivers; and make way-houses to keep the children so they will not get cold while waiting for the bus during the winter.

But, supposing the children are not at the way-houses and the cab driver does not happen to know whether or not they are going to school; he would not know whether to go on or not.

The school will have to be built up to specifications and will cost taxpayers more than they can stand. It will cost more than they can pay.

As the schools are now, when a scholar does not want to go to school, a taxi is not waiting for him to see whether or not he is sick; he simply does not go.

I think it is best that we keep our regular schools. They will be just as up-to-date as the consolidated schools.—Merrill Ryeakle.

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## UNDER VALUE FARM PROFITS.

**E**VEN the highbrow accountants are likely to make errors in figuring profits on the farm. Down in Ohio just recently rural economists went over some of the estimates handed out by farm accountants. According to these students the average American farmer's profit should be increased by what the family takes from the farm in the way of living. A careful study of actual farm records has led these men to figure \$750 as the annual average value contributed to the farm family directly from the farm. If this is added to the \$420 labor profit, we would have \$1170 as the average annual profit of our farms.

## MUCK FARMERS ORGANIZE.

**T**HE 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.

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. Koozinga; Vice-President, A. G. Van Stokema; Secretary-Treasurer, A. Berkampas. These men with Peter Aukema and H. J. Feyen, are directors.

## GOOD SEED NECESSARY IN POTATO PRODUCTION.

**M**R. H. C. MOORE, secretary of the Michigan Potato Producers' Association, says that millions of dollars are lost annually to potato producers from the results of planting poor seed. The use of good seed is the keynote of success, as good yields of high quality tubers must be secured if growers are to make a success.

Certified seed has proven its value in securing better production in both Michigan and other states. As the demand is good Michigan growers could make arrangements for their certified seed to assure themselves a supply.

In 1922 only twenty-two per cent of the certified seed offered for sale in the state went to Michigan farmers. The other seventy-eight per cent went to outside states, Pennsylvania alone, taking 40,000 bushels of Michigan certified stock. These potatoes outyielded other strains with which they were compared by fifty per cent, and as a result, Pennsylvania growers have already ordered 80,000 bushels of Michigan certified seed for 1923.

## FIVE O'CLOCK MILK POPULAR IN CHINA.

**T**HE regular and ancient custom of five o'clock tea is being threatened in China. Its rival is the five o'clock milk. The Chinese people find that condensed milk is a very pleasant beverage to drink, and although they can get fresh high-testing milk from water buffaloes and other cattle, they do not use it on their tables for cooking. Their coming national drink will probably be the sweetened condensed milk diluted with hot water. This means an increasing market for American dairy products.

## TREAT SEED OATS.

**T**HE treating of seed oats requires comparatively little time and equipment, yet it brings big results. The formaldehyde treatment is most popular. Your county agent can help you out. If he is not available the experiment station at East Lansing will send you detailed information.

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## Fertilizer Results in Michigan

By Roy E. Marshall,  
Horticultural Dept., M. A. C.

THE several fertilizer tests with apples in Michigan show that where nitrogen has been applied in a quickly available form, one may reasonably expect increases in the yields of average orchards of from seventy-five to two hundred per cent.

In the orchard in which the first fertilizer experiment in the state was laid out, phosphorus has evidently played an important part in increasing the set of apples, but unless the phosphorus was combined with nitrogen the fruit was too small for market purposes and the twig growth was not better than that in non-fertilized plots. Tree vigor depreciated rather than improved where phosphorus was used alone and consequently the trees produced fewer blossoms and fruits after the first fertilized crop than the non-fertilized trees.

Nitrogen alone gave an average yield more than three times as great as that from the non-fertilized plots, but when it was combined with phosphorus the yield was twenty-five to fifty per cent better than where nitrogen was used alone. Potash has failed to establish its value as an essential application in these tests. Nitrogen and phosphorus should evidently be combined to produce the greatest and most economical gains in production.

In the above experiment nitrogen also operated to increase the size of fruits. More than seventy per cent of the fruits from plots receiving nitrogen, alone or in combination with some other element, were more than two and one-half inches in diameter, while only fifty per cent of unfertilized fruits attained this size.

Furthermore, nitrogen was responsible for increasing twig growth to two to three times that of the check plot. The gain in yield over the unfertilized plots by the fertilized ones was produced in 1921 at a cost of about twenty

cents per 100 pounds of fruit. In another experiment, nitrogen proved to be the essential element in bringing a fifteen-year-old Duchess orchard, which had never produced a crop, into profitable production. The average yield for several fertilized plots, each of which received nitrogen alone or in combination with some other element, was 199 pounds per tree in 1922 while the average of the unfertilized trees was sixty-seven pounds of apples. It required 296 apples from the unfertilized trees to fill a bushel, while 180 of the fertilized fruits made a bushel.

The Michigan Experiment Station has found that it pays to apply nitrogenous fertilizers to other tree fruits, such as plums, pears and cherries. The results are a little slower in showing up in the cases of pears and cherries, that is, they may not be conspicuous the same season that the fertilizer is applied, but they frequently show increases of twenty-five to 150 per cent in yield the second season after fertilization. Cherry yields are frequently low because of the short annual growth produced by the trees, and while both pruning and fertilization are means of increasing this twig growth, the latter method more readily forces the desired change.

Michigan pomologists have estimated that fully seventy-five per cent of the orchards in that state will respond to nitrogenous fertilizers and they have played an important part in increasing the use of quickly available nitrogenous fertilizers in orchards from a few tons in 1920 to fully 1,500 tons in 1922. They advocate the use of acid phosphate in conjunction with the nitrogen because phosphorus and nitrogen usually give better yields than nitrogen alone and phosphorus increases the growth of cover crops in cultivated orchards and of grass in sod orchards.

## The Scale Situation

By R. H. Pettit  
Entomologist M. A. C.

THE fact that lime-sulphur, which served in the past to control scale, seems inadequate to the task at present has led some of our growers to believe that a resistant race of scale has been developed—a race capable of enduring the lime-sulphur wash without being killed. The situation seems to the writer to be due to an entirely different reason.

First.—Lime-sulphur kills by depriving the insect under the scale of its oxygen and it is hard to conceive of any insect acquiring the ability to get along without oxygen, any more than one could conclude that a rabbit could become immune to a charge of shot.

Furthermore, we know through rearing experiments conducted by the department of entomology at the college that a number of native parasites have started to work on the scale. Now, the battle waged between any insect and its parasites is apt to go first one way and then the other.

Once more, if we look back a few years we will remember that owing to the reduction in the activity of the scale, and to the increased cost of spraying due to cost of materials and of labor, the winter spray of lime-sulphur was put on more dilute than formerly. Everything worked satisfactorily until the parasites "knocked off" for some reason or other, and the scale commenced to multiply—then it became apparent that dilute sprays would not kill enough of the scales to

keep them in subjection. It is not unlikely that careless spraying resulted as well, since most anything seemed to keep the trees clean enough to get by in good condition.

The scale is coming back, therefore, come back at it with the old-time strong application of six and one-quarter gallons of thirty-three degree Baume' lime-sulphur in fifty gallons of water and hit every part of the tree, using no spreader. Furthermore, test your lime-sulphur before diluting it. Get a Baume' tester and make sure. Put in some hydrated lime for a marker and to give the spray a little "body" and the writer feels sure that the scale will respond just as it did in the beginning.

If you prefer to use one of the oil sprays, do so. They are just as effective as they ever were and many growers prefer them largely because they spread better, and for other reasons. The "red oil" emulsions that one hears about so often are home-made emulsions of lubricating oils. If one wants to try them out and cares to use home-made sprays it is easy enough to do so, the main difficulty being in getting the potash fish-oil soap which is the one to use.

One final word—put the spray on just as late as is safe before growth starts in the spring. Since insects that have passed out of the dormant stage are much more easily killed than those which are completely dormant.

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Small Fruits, Garden Seeds, Bulbs and MONEY Plants. Our catalog tells you how to CROPS, grow them. It's free. Write today. **RANSOM SEED COMPANY**, Geneva, Ohio.



### MICHIGAN POTATOES DISCRIMINATED AGAINST BECAUSE OF COLOR.

A GREAT many potato specialists believe that poor grading has caused a discrimination against Michigan potatoes on the consuming markets and much effort is being made to encourage the growers to grade better. But R. H. Shoemaker, Michigan representative of the United States Bureau of Agricultural Economics, says that while poor grading undoubtedly has some effect on the price received for Michigan potatoes, he believes the russet color is one of the chief causes. To support his contention he has reports from federal inspectors and several of the large markets of the country.

He says that the russet color helps to sell Michigan potatoes in the fall, but after they have been in storage this color gets darker and tends to become undesirable.

Some of the Michigan potato specialists say that they do not believe the color matters, but expressed the thought that the russet potato is not receiving a square deal in the classification. It is sometimes classed as a round white potato and might be disqualified in that class. They recommend the classification of round Russet and believe that the Petoskey Golden Russet, the Michigan standard variety, would gain fame.

### THE COMMUNITY DRAINAGE PROBLEM.

(Continued from page 365).

and one-half inches wide and four and one-half feet deep at one cut, and true to grade. The digging wheel can be widened to nearly fourteen inches so that a trench wide enough to receive a twelve-inch tile can be dug. Shields attached to the rear of the digging-wheel frame keep the trench clean until the tile are laid. These shields are indispensable when tile have to be laid in quicksand or caving ground. Tile up to ten inches in size can be laid between these shields.

Apron, or caterpillar wheels, form a part of the regular equipment and are particularly valuable on soft, wet land and land that is more or less uneven. It is next to impossible to cut a true grade with a ditcher, the rear wheels of which are round, on land whose surface is uneven.

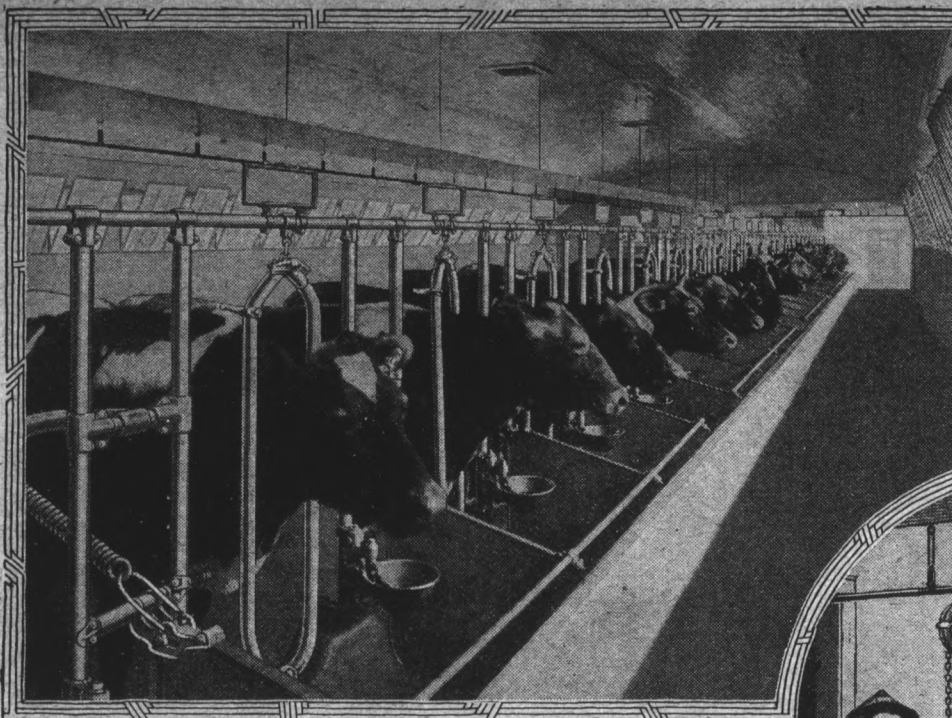
The digging-wheel can be raised or lowered by the operator as required, by means of levers. A horizontal rod at the top of a grading device attached to the digging-wheel frame is thus kept in line with the tops of targets set at intervals of not to exceed seventy-five feet and at the same height above the bottom of the proposed trench as the sight-rod.

A used ditcher in good running order, with a full set of tools, a small dumpy level, have a dozen targets, and a liberal supply of repairs, should not cost more than \$1,500, as against \$3,300, the price of a new ditcher.

Accessories such as a small delivery truck for hauling repairs and fuel containers from one farm to another, gasoline and oil drums, a small forge for making minor repairs, and a Martin Ditcher for back-filling the trenches after the tile drains have been inspected and primed, will bring the total capital required to nearly \$2,000.

An article covering the method of financing a community ditcher company and organizing it, the mode of operation, and the qualifications that members of the crew should have to insure its success, will appear in an early issue of the Michigan Farmer.

It's still not too late to take an inventory. No amount of cost accounting will tell you where you stand at the end of a year unless you have an inventory as well.



## Are Your Cows CONTENTED Cows?

Your cows' comfort is your profit. Give them the same comfort in the barn that they get in the pasture and they'll give you more milk in the pail. Thousands of dairymen know from experience that this is not theory but a proven fact. Smooth, comfortable, sanitary, Louden Steel Stalls and Stanchions actually pay for themselves. Increased milk and cream checks are earned by greater production of a higher grade product. More money is saved through less time and labor spent in taking care of the cows.

### Correct Design—Dependable Service

Louden Steel Stalls and Stanchions are the best value that money can buy. Quality first, quality last, quality all the time. This has typified Louden equipment since 1867. Pioneer builders of labor-saving barn equipment, with basic patents protecting many features of superior construction and design, Louden Equipment offers dairymen the greatest degree of economy and dependably satisfactory service it is possible to obtain.

Louden Steel Stalls and Stanchions are made only of high quality Open-Hearth steel tubing. Loudon patented Interlocking Dust-proof Couplings not only make the neatest looking installation, but they are outstandingly sanitary and strong—simple and easy to install. Loudon Swinging Stanchions allow cows pasture comfort in the stall. Lower end swings in a circle of 8 or 10 inches—allows cow perfect freedom to turn her head and card her side; prevents neck cramp when lying down; no bruising of shoulders from pitching forward in getting up. Smooth, V-shaped bottom end prevents catching of foot under stanchion. It is the only stanchion that can successfully be used with the economical high-built-up feed-saving manger curb.

### Cut Chores—Save Time—In Your Barn

If you are planning on building or remodeling a barn, you will find the Loudon Barn Plan Book extremely interesting and helpful. It is full of valuable information on how to get the best built and most conveniently arranged barn for the least money. And remember that now-a-days a barn is not complete without a Loudon Manure Carrier. Takes out as much as 5 wheelbarrow loads of manure at a trip—enables a 12-year-old boy to do this chore quickly and easily. Does away with drudgery and saves its cost in a few months during rush seasons. Easily installed in any barn—old or new. Send today for the complete Loudon Catalog and copy of the Barn Plan Book. No charge—no obligation. Mail the Coupon NOW.

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Louden 224-page Catalog. The most complete catalog of its kind ever published. Devoted exclusively to barn equipment that saves time, lightens labor, and increases farm profits. Illustrates and describes in detail the finest barn equipment made—Stalls and Stanchions, Feed and Manure Carriers, Hay Tools, Animal Pens, Barn and Garage Door Hangers, Cupolas, Bull Stalls, Milking Stools, Water Bowls—"Everything for the Barn."

Louden 112-page Barn Plan Book. An encyclopedia on modern barn-building. Pictures half a hundred up-to-date barns. Contains suggestions for the best arrangement and most economical construction. Shows various types of roofs and large capacity hay mows. Has chapters on foundation work, cement, ventilation and drainage, etc.

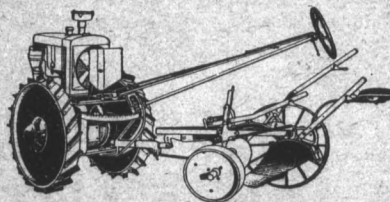
Get these two FREE books before you build or remodel your barn.

1934  
Please send post-paid, without charge or obligation, the book checked below:  
☐ Loudon Barn Plans  
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I expect to build (remodel) a barn about (date).....  
for.....cows.....horses.  
Name.....  
P. O.....  
R. F. D. No.....State.....  
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### Does the Work of a Team



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

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at present selling prices will yield a substantial profit from a spring top-dressing of 100 pounds of

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Experiment Station reports confirm my own demonstration results that an increase of 6 to 10 bushels may be expected from the use of each 100 pounds of Nitrate of Soda. The residual results on the following crops will be good.

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Chilean Nitrate Committee  
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TRY a Michigan Farmer Classified Liner—They cost little and bring big results.



# REVISION OF SEED LAW IS SOUGHT.

A BILL to provide a new Michigan seed law has been introduced in the state senate by Senator George Leland, of Fennville, chairman of the senate committee on agriculture. The senator declares that this is not his own pet bill, but was drafted by a council of leading seed experts of the state, convened by L. Whitney Watkins, the new commissioner of agriculture.

In explaining the need for a new agricultural seed law, it was stated 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. Those responsible for the bill feel that the business of producing quality seeds on a commercial basis in Michigan had developed in spite of existing state laws rather than because of them.

State officials who are urging passage of this bill declare the present law is bunglesome and wholly inadequate. There are no teeth in it, they say, to allow for expeditious handling of cases of bad seed when discovered.

In the opinion of those who prepared the bill, one of the first requisites of a workable statute is to get a "seizure clause" such as provided in the pure food law so that seed which is much below standard could be seized and held pending settlement of the case and not distributed and planted as at present. Under the operation of the present statute, cases have been drawn out for over six months before settlement.

In drafting the proposed bill, a sincere effort was made to consider the practical operation and administration of the law and to reconcile theory and practice. The bill is aimed to control those who are dumping impure and dead seed on the Michigan market and would set up standard specifications and require labeling to show degree of purity, per cent of germination, and source of origin of seed.

Members of the committee which drew up the proposed seed law were: reau of Foods and Standards, State Department of Agriculture; M. J. W. P. Hartman, director of the Bu-Smith, Chief Clerk, State Department of Agriculture; Prof. J. F. Cox, Farm Crops Department, M. A. C.; Prof. E. A. Bessey, Botany Department, M. A. C.; C. B. Ballard, Extension Department, M. A. C.; J. W. Nicolson, Manager Seed Department, State Farm Bureau; F. G. Mock, Seed Department, State Farm Bureau; H. M. Renwick, Seed Department, State Farm Bureau, and S. M. Powell, Legislative Department, State Farm Bureau.

## SUMMER HORTICULTURAL TOUR ANNOUNCED.

AT its recent Paw Paw meeting, the Michigan State Horticultural Society decided to hold its annual tour in the vicinity of Grand Rapids and Ionia.

In the selection of this tour, the committee had in consideration the many interesting things which fruit growers could see. There will be the air-cooled storage plants on Henry Craft's farm, near Sparta, the ice-cooled plant on Charles Wile's farm, and the well-known Thome Brothers' Brayman and Howe orchards. The first day of the tour will be held at the Brayman Experiment Station and other places around Grand Rapids. The second and third days will be held in the Ionia, Muir and Belding districts.

The executive committee elected George Friday, of Colosa, as vice-president for the society.



## Safety in this extra-strong Rope

You can trust H. & A. "Blue Heart" Manila Rope because it has guaranteed excess strength

In jobs like this, don't put your faith in unknown rope. Injury—even death—may result.

Get a rope that is safe—that can stand the heavy strains *with strength to spare*. H. & A. "Blue Heart" Manila Rope is made from the toughest rope fibre grown. It is guaranteed to exceed the strength standard fixed by the U. S. Government. (See guarantee below.)

And yet H. & A. "Blue Heart" Manila costs no more than many inferior ropes.

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Be sure you get this safe, extra-strength rope when you buy. You can tell the genuine, guaranteed H. & A. "Blue Heart" Manila Rope by grasping it in your hands and untwisting the strands. Running through the center of every foot of H. & A. "Blue Heart" Manila Rope is a small, blue thread—the "Blue Heart"—our trade mark. Before you buy rope, untwist the strands. If the blue thread is there, you will have in your hands a genuine, guaranteed H. & A. "Blue Heart" Manila Rope—the strongest rope made.

For other tasks, where a high grade sisal rope is wanted, use the best—H. & A. "Red Heart" Sisal Rope, carefully spun from selected sisal fibre by the same skilled rope makers.

### Special Offer

The coupon below with 40c will entitle you to our new style combination halter and tie rope made from H. & A. "Blue Heart" Manila Rope—weather resisting and much stronger than ordinary halter rope or leather. It is 1/2-inch in diameter, and fitted with two snaps and two adjusters that cannot slip when in use. It is worth a great deal more than the low price charged for it, and is offered at cost to introduce to you the great strength and wonderful wearing qualities of H. & A. "Blue Heart" Manila Rope.

If your dealer does not yet carry H. & A. "Blue Heart" Manila Rope and cannot supply you with this special halter, fill out the coupon below, and mail it to us with 40c in stamps and your dealer's name, and one of these special halters will be sent you prepaid.

MF

Gentlemen: Enclosed is 40c in 2c stamps for which please send me one H. & A. "Blue Heart" Manila Rope special offer halter.

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Evenly spun from the best fibres of full yardage, great strength, and used from coast to coast by farmers who claim it is never cut by insects.

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## H&A "Blue Heart" Manila Rope

THE MICHIGAN FARMER Classified Columns are being used by an increasingly number of farmers who have things to sell or who want to buy, because these little ads. have given those who use them more service than they were looking for.



# WORLD EVENTS IN PICTURES



Great Britain paid its tribute at the tomb of Washington on his recent birthday.



H. Snow, of California, is looking into the jaws of death and incidentally aiming to kill a ferocious African male lion which he captured and which measured twelve feet from tip to tip.



To keep in practice on board ship, Frank L. Kramer, bicycle champion, used stationary "bike."



As a follow up to the Spinal Contest of last year, the National League for the Prevention of Spinal Curvature has offered \$1,000 for the most perfect set of ribs in America.



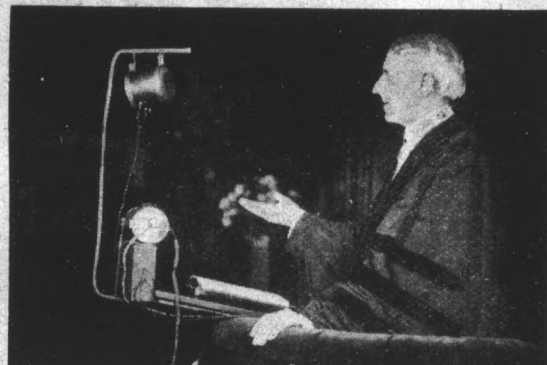
Smoky Gaston won the American dog derby at Ashton, Idaho, by running over a snowy mountainous trail for twenty-five miles in two hours, nine minutes and thirty-eight seconds.



The Chicago & Alton Railroad is arranging to install a movie machine on each of its trains to entertain its patrons.



Next month "Young Doug" Fairbanks will launch into the study of his father's profession.



Rev. A. Edwin Keigwin, of New York, believes the radiophone sermon will cause a re-awakening of interest in religion.



The main doorway of the Manhattan State Hospital for the Insane on Ward's Island, New York where 25 maniacs were burned to death and one hundred more injured in panic caused by fire.



Mr. Rummel is making ready for a spin in his "ice-flivver" on Lake Ronkonkoma, Long Island, where he can make ninety miles per hour with this unique scooter.



# BEYOND ROPE and FENCE

By DAVID GREW

Copyright, 1922, By BONI and LIVERIGHT, INC.

**T**HIS sweet, unofficial christening might have resulted in a beautiful, enduring friendship, but a sudden, terrific patter of feet in the next corral came through the air accompanied by a nauseating cloud of smoke, and all was confusion again. Round and round their section of the corral they swept again till they realized that the men were not yet molesting them. When they stopped to investigate, little Queen saw a man in the other section of the corral rush toward a mare with a long hideous stick. She saw him strike the colt that tried to follow her and saw the colt run back into the corral while the mother had run out. She could not quite understand what he was doing; but she experienced an overwhelming fear of losing her mother, and clung to her beloved sides with more tenacity than ever.

The other section of the corral was finally cleared of all the mares who, standing on the outside, would not go away; but in concert rent the air with their cries of protest. Queen was so curious that, despite her beating heart, she moved to where she could see what was going on. She saw ropes flash through the air and immediately after, a little colt fell to the dusty ground. The cry from the little one's mother was answered by a stifled cry from the ground and as Queen, unable to stand still for fear, listened to that cry, there suddenly began coming to her the odor of blood and burning flesh. Madness seized upon them once more and the dizzying whirl round the choking corral gave them some relief. They finally stopped to rest a while, only to have another colt thrown and his cries and the smell of burning flesh set them through the frenzied motion round the corral, all over again.

**M**OST of the afternoon it took before colts in the first section had been branded and mutilated. It was a noisy, dusty, cruel process; and the men, perspiring heavily, their faces wet and black with the dust that settled on them, looked like tormenting imps of hell; but they were no more to be blamed for the cruelty that was theirs to do than were their helpless victims.

All that clamour of pain and struggle could not disturb the mist-like loneliness that brooded over the far-reaching distance. On the other side of the river, visible beyond less rugged banks, stretched a lifeless country of hills and plains, so desolate and so motionless that the very tones that dotted them seemed with their feeble reflections to be futilely protesting against their destitution.

A pause came to the torturous struggle. The gate of the first corral was opened and the sickened little colts

shambled out into the open where their frantic mothers caressed them, then led them away to the east. The men walked off and disappeared in the house. Taking advantage of the silence and the respite, the still captive colts, one after another, took to sucking. It was not very long, however, before they were interrupted by the reappearance of the men. The skin on every captive began to tremble and the eight mothers with their eight colts packed into one corner.

One man, carrying a long stick, entered the section and advanced to the middle while the other stationed him-

leaving her, brought her to her senses.

Rebelliously, she reared and fell with full force upon the gate. It swung violently backward, striking the man who held it so severely that it knocked him off his feet and sent him rolling to the wall. The second man who was trying to prevent Queen from following her mother was away over at the other end of the corral. The gate-man's cry and the image of him on the dusty ground, so confused the other that for a few moments he stood still, unable to move a muscle. When he saw his partner pick himself up, he realised that he should have hurried to

their sickened colts would not go.

The buckskin mare gave them hardly a glance. She struck up the steep incline with risky speed, bent upon getting out of the men's reach, as soon as was possible. The men, on the other hand, were at a disadvantage. Before they could saddle their ponies, the mares, they knew, would be off somewhere at the other end of the range. They realised, too, that the mares were now so excited that they would have very great difficulty in rounding them up. They were angry at the rebellious mare, but these animals were their property and they did not want to hurt them. Another struggle at that time, they felt, might even endanger their own lives. The man who had been knocked over was not only as tired as the other fellow was, but he was aching from head to foot. Besides, the afternoon was rapidly giving way to early evening. They decided to finish the branding on the following day.

**T**O the buckskin mare the spaces behind her seemed peopled with pursuers, and she struggled up the slippery incline as if her very life depended upon getting to the top and away. The rest of the mares that fled with her and their little ones seemed to find greater difficulty in getting to the top, but they followed as eagerly. Rocks and sand rolled thunderously down behind them and the dust rose from the mouth of the canyon like volcanic smoke.

When they finally reached the level plains above, the old mare was white with foam. They had that afternoon been rounded up in a hollow toward the northeast of where they now were and fear of being rounded up again sent the buckskin mare to the west. Her usual fear of man, many times intensified by the feeling that now she would be severely punished for breaking loose, aroused in her old head the instinctive desire of the animal that is pursued, to get under cover. Though there was neither sight nor sound of any one behind her, she ran with might and main for the coulee that she knew was a mile and a half to the west, and until she had turned over the lip of the coulee and had reached the very end of its slope, she did not slacken her pace, several times almost breaking a leg in badger holes that she only avoided by a hair's breadth. Down in the gulch there was a path, made by the water of the melted snow in spring as it had wound its way to the river. Along this path, which led

(Continued on page 385).

## When Our Cow Comes In

By C. E. Gerberich

Hard times has surely struck us an'  
I'm feelin' mighty poor;  
An' I have to work and slave to keep  
The wolf outside the door,  
But a better time is comin', of  
That I'm very sure,  
As soon as our ol' cow comes in.

My wife has been complainin' that  
She hasn't decent shoes,  
I don't blame her—it's enough  
To give 'most anyone the blues,  
But won't she be delighted when  
I break the joyful news  
An' tell her that the cow's come in?

An' Johnny's pants are gittin' to be  
Much the worse for wear,  
It seems there don't a day go by but  
What they git a tear—

But never mind—he's going to  
Have another bran' new pair  
Jest as soon as our ol' cow comes in.

An' the baby—bless her little heart  
She wants a doll so bad,  
She's clean wore out Jenny—  
The only one she ever had,  
But we've promised her another—  
Won't the little one be glad?  
As soon as our ol' cow comes in.

Oh, won't the children clap their  
Hands an' caper 'round an' laugh  
When I take 'em to the stable to  
See the little calf?

An' we will all be happy an'  
Our cares be lessened half  
When our good ol' bossy cow comes in.

self at the gate. First the man with the stick forced the group to move into the opposite corner, then, after a long struggle, he singled out the buckskin mare. He had driven her toward the gate but a few feet, when little Queen, bending so low that she passed under the stick, rushed out of reach of it and gained her mother's side. Had it not been for the vigilance of the man at the gate they would have both escaped. It was getting to be late in the afternoon and the man was tired and impatient. As with most impatient people, his common sense gave way to his impatience. He was not only determined to get the buckskin mare out first, but he was even more anxious to punish her. He singled her out again and reaching her, struck her with his stick. In pain and fright, the mare rushed for the gate. It was partially opened and she was half way out when a cry from little Queen, who saw her

the gate and closed it; but by that time the whole group had escaped and were racing for the hills, the buckskin mare in the lead and her precious Queen eagerly behind her.

With a majestic toss of her head, conscious of having scored a victory, and determined to keep it, the buckskin mare fled across the flats. It was now not only the overwhelming desire to get away. Vaguely she realised that she had crossed the man's will and that that was a punishable offence.

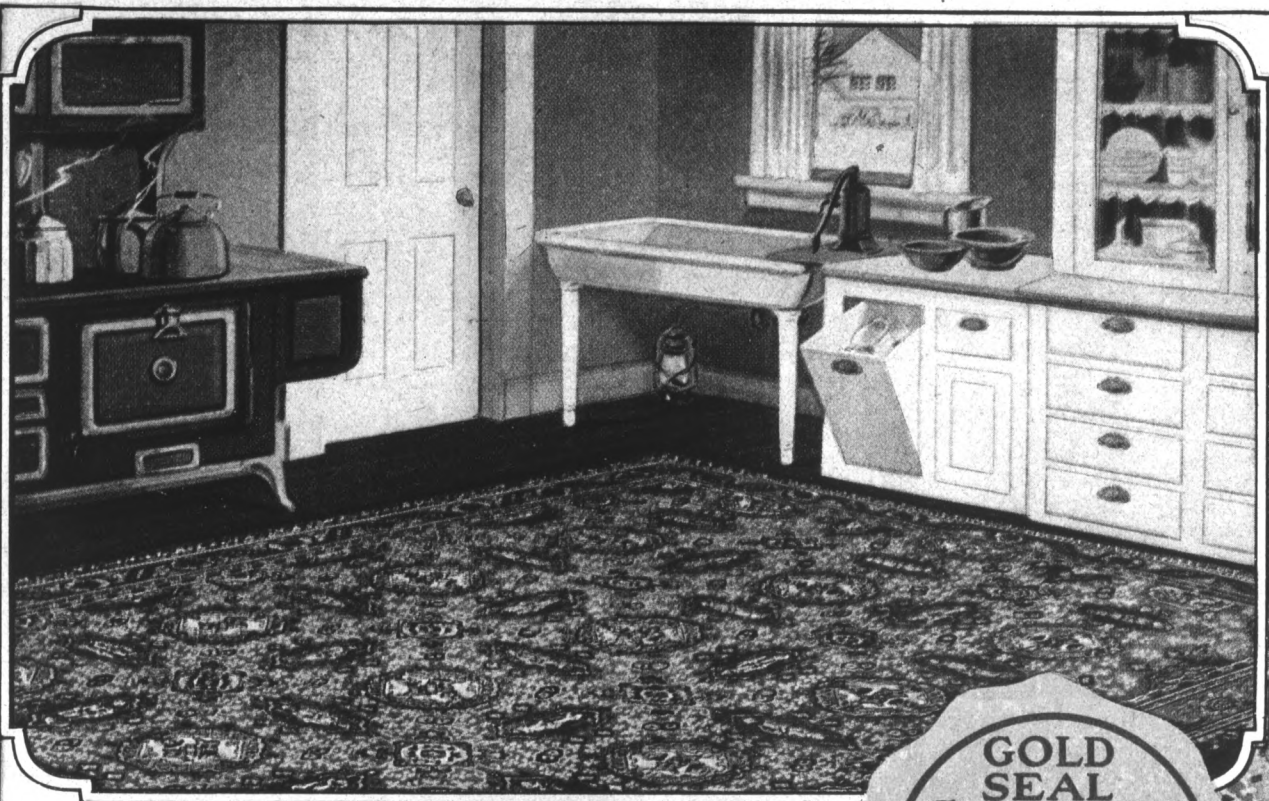
**M**OTHERS whose foals had been branded were in a field at foot of the hills. The field had yielded a crop of oats and the oats had been reaped and taken from the field; but there was still enough grain left to make it worth their while to remain there. If, when they followed the fugitives with their eyes, they had any desire to go along, they knew that

AL ACRES—Al's New Invention Might be All Right as a Feed Grinder.

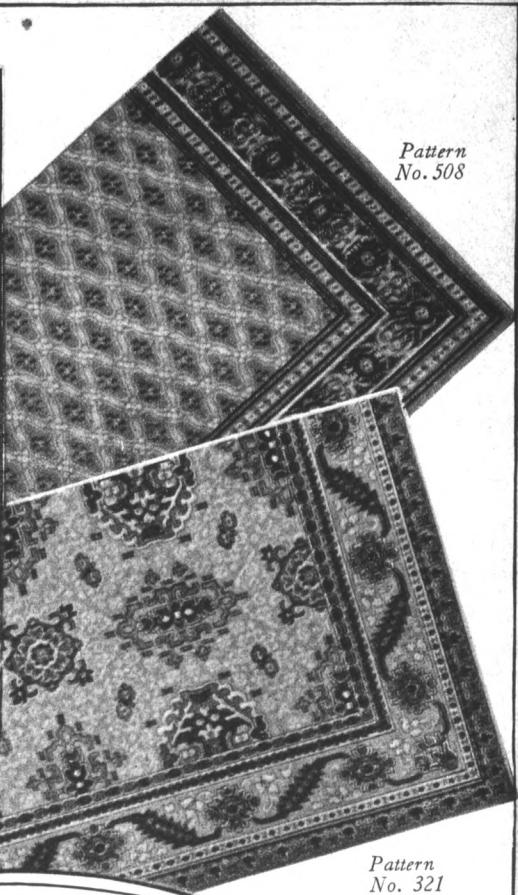
—By Frank R. Lee.



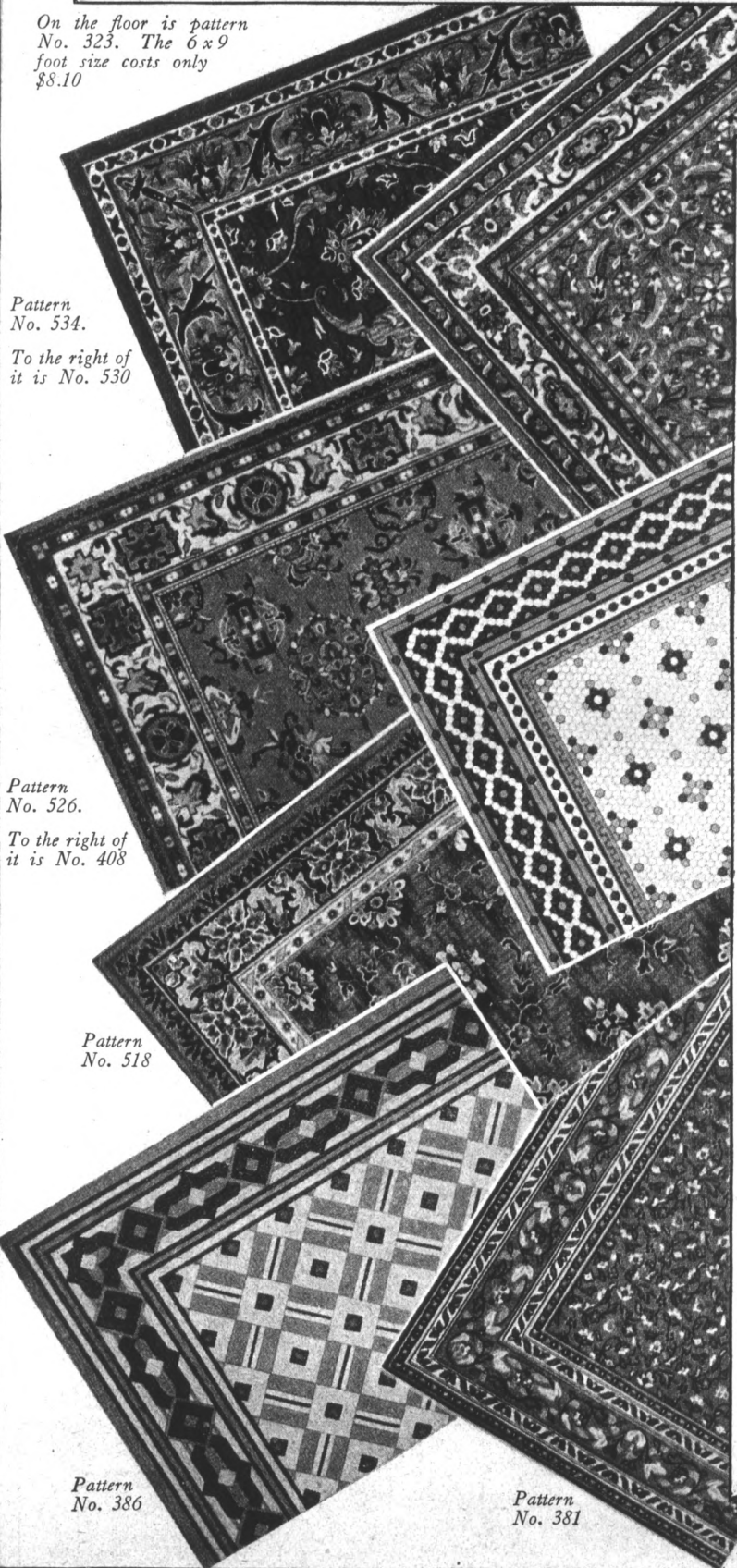




On the floor is pattern No. 323. The 6 x 9 foot size costs only \$8.10



Pattern No. 321



Pattern No. 534.

To the right of it is No. 530

Pattern No. 526.

To the right of it is No. 408

Pattern No. 518

Pattern No. 386

Pattern No. 381

**GOLD SEAL**  
**CONGOLEUM**  
**GUARANTEE**

SATISFACTION GUARANTEED  
OR YOUR MONEY BACK

REMOVE SEAL WITH  
DAMP CLOTH

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## This Gold Seal identifies America's most popular floor-covering

To protect yourself against inferior printed floor-coverings, be sure to look for this Gold Seal. It is *always* pasted on the face of the rug patterns. It is usually displayed in the windows of stores that sell *Gold-Seal* Congoleum Rugs.

These little corner glimpses can give you only the slightest hint of the real charm of *Gold Seal* Congoleum Rugs. To fully appreciate their beauty and variety of coloring and design you must see the rugs themselves.

### Appropriate Patterns for Every Room

There are patterns for every room in the house—simple tile designs for kitchen and bathroom, restful color combinations for bedroom, dining room and living room. You will be charmed by their beauty—amazed at their very low prices.

And Congoleum Rugs are so easy to clean and so practical. A light mopping makes them bright and spotless in a twinkling. They hug the floor without fastening of any kind.

6 x 9 feet \$ 8.10	Patterns No. 386 and 408	1½ x 3 feet \$ .50
7½ x 9 feet 10.10	illustrated are made in all	3 x 3 feet 1.00
9 x 9 feet 12.15	sizes. The other patterns	3 x 4½ feet 1.50
9 x 10½ feet 14.15	illustrated are made in the	3 x 6 feet 2.00
9 x 12 feet 16.20	five large sizes only.	

Owing to freight rates, prices in the South, west of the Mississippi and in Canada are higher than those quoted.

Attractive designs and colorings, durability, ease-of-cleaning and amazing economy of price—small wonder that Congoleum *Gold Seal* Rugs are America's most popular floor-covering!

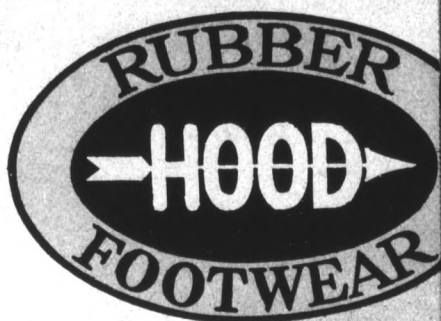
CONGOLEUM COMPANY

INCORPORATED

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*Gold Seal*  
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RUGS





-HOOD- RED BOOT



-HOOD- KATTLE KING

-HOOD- WURKSHU

## The Wurfshu and Kattle King

# A great combination to buy Now

Own a Pair of **-HOOD-** Boots  
Best Wearing RED or BLACK Boot

Know what long and comfortable service such boots can give. You get to be "old friends" with Hood Boots.

To build strong boots without clumsy weight requires the best of materials to begin with—and experience. It will be a long time before Hood Boots show signs of wear. Then it is a slow, even wear that reveals their perfect construction rather than any hidden imperfection.

*Boots for all the family*

SHORT—STORM KING—or HIP

This combination can be bought at about the price of a pair of good leather shoes, and ought to last the spring, summer and well through next winter. While built for long wear, the Wurfshu is as comfortable as a slipper. Protect it with the all-rubber, fleece lined Kattle King when cold or stormy, and you have the ideal combination for all weather. The Wurfshu is a wonderful shoe for summer work, and its comfort may be now enjoyed all winter. At night, the Kattle King is easily cleaned with a little water, and the Wurfshu becomes a splendid house shoe. This same Hood combination is available for every member of the family.

Hood made the first Kattle King. It was originally worn by stockmen because it retained no odor. Now it is a general shoe because so quickly and easily cleaned—you wash it, not scrape it.

The Wurfshu has been a Hood leader for years. You

will enjoy the comfortable, mail-bag duck uppers and, with the patented pneumatic heels, you will "walk on air." With this combination your feet will be less tired by night, and you can save some money.

Ask your Dealer or write for the **-HOOD-** Buying Guides

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Utility Coupe

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## Beyond Rope and Fence

(Continued from page 380).

northward, they trotted without stopping till they came to where the range fence forced them to halt.

Here at last they rested, though the buckskin mare kept anxious vigil for the first sign of any one pursuing them. The mothers began grazing slowly while their young, moving with them, strove to get the milk they felt belonged to them. As soon as the colts had had all the milk there was for them they went leisurely in search of tender grasses and soon all were grazing as if nothing had ever happened.

But the buckskin mare was still worried. She walked to the two wires that barred her way and with her head above the upper wire she gazed to the north. A quarter of a mile away, the coulee ended. Its floor curved upward like the bottom of a ship. Where it ended and the prairie floor began there was a cluster of sagebrush. The evening was rapidly turning the sage into a silhouette against the bright background of the sky. Fear of pursuit came back with the coming of the night and the old mare roused herself. With a sudden impulse she backed away from the wires and dropped to her knees. Pushing her head under the lower wire she moved cautiously forward, an inch at a time. Slowly she felt the wire move backward over her body and each time the barb dug through her skin she stopped and tried to crouch lower. With a sharp scratch it rolled over her withers and stuck painfully into her back. She tried again to crouch down lower, but failing to rid herself of the barb, she rested a moment.

THE barb hurt her considerably and she made a great effort to lower herself out of its reach, and in so doing pressed her outstretched muzzle right into a rosebush. While the pain of thorns still pricked her lips there was a sudden flash of white right before her eyes and a thump on the ground as if a rock had been thrown at her. With all the strength in her body, forgetting in her fright the wire on her back, she sprang backward to her feet, snapping the lower wire and stretching the upper one as if it had been a string.

Her frightened jump, the momentary struggle with the upper wire that had caught in her mane, and the cry that escaped her, set the group into a stampede, and she herself when finally freed from the entangling wire, dashed off to the rear for a dozen rods. The slopes of the coulee were dotted with the mares and colts who had fled in every direction. Outside the range and on the rim of the coulee lay a silly rabbit, stretching himself and gazing down with foolish eyes.

There was nothing dangerous visible and nothing in the air to worry her, so the old mare started slowly and cautiously back again toward the one wire now hanging limply, and, in one place, less than two feet from the ground. There she sniffed about carefully and suddenly raising her head, she caught sight of the rabbit, as he was bounding away.

There were many things that the old buckskin was afraid of, but a rabbit was not one of them. Realising that she had allowed herself to become alarmed at nothing, she went at her task with greater determination. She was about to get down to her knees again when she realised that the remaining wire was now low enough for her to step over it. Carefully lifting each leg, her skin quiver-

ing with her excitement, the buckskin mare stepped over the wire into freedom; and little Queen, frightened to see her mother beyond the fence, made it with a single leap.

THE old buckskin was for running as fast as she could for the north, but she wanted the rest of the mares to go with her. She turned to look at them. There they were grazing at various points with absolute indifference to the great achievement she had consummated. She called to them to follow, but beyond a busy reply they paid no heed to her. When, however, they heard the sound of her tearing the more abundant grass outside the range, they awoke to the fact that they were not getting all they might get. Whereas the ideal of liberty had been an abstraction to them, the fact of abundant grass was a reality, and it was not many minutes before, one by one, they had all made their way over the hanging wire.

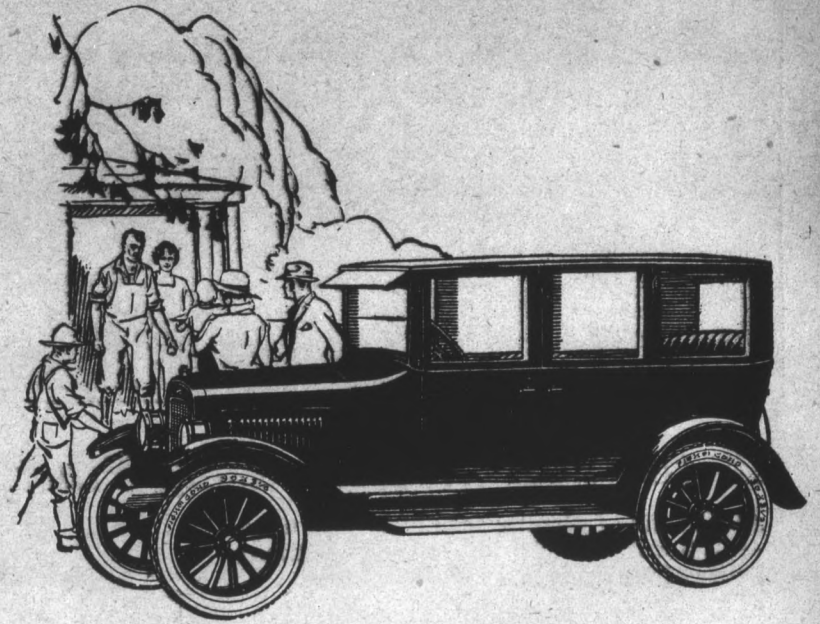
The late autumn nights had steadily grown colder and, since hollows are colder than the higher portions of the prairie at night, they moved rapidly to the plains above. Round about them lay the silent night, dark and infinite, and the stars looked down upon its hidden desolation. Closely together they grazed, lips fairly touching lips, without protest or impatience. As they grazed, they moved on to the north, and the rhythmic tear-tear of grass interspersed with rhythmic footfalls was the accompanying cadence of their half-unconscious flight.

Some four miles from the range, they slept for the night on a low round hill and when dawn came they found the earth covered white with frost. The sun rose, putting a slight tinge of red into the whiteness, and Queen was so curious about it she went looking for the spots where it was thickest and licked it off the sage or rose-bushes.

TO warm up they raced for half an hour, following the old buckskin to the north, then spent the rest of the morning grazing and moving leisurely. It was well on toward the middle of the day when an open triangle of honking geese, high in the air, made them look up. The old mare watched the geese move across the sky till they were lost in the south and was just about to return to her grazing when she saw two small objects appear on the horizon. They were so far away that they were indiscernible, but she did not wait to make certain what they were. With a call that frightened the little herd she turned north and fled.

For several hours they raced on toward the heart of the wilderness; then complaint on the part of the little ones, who did not like this endless running, stopped them. But they had rested only a few minutes when they discovered the rancher and his assistant rounding a hill about two miles behind them. The frantic mothers, remembering yesterday's struggle, fled at top speed, never slackening for a moment till, nearly twelve miles farther north, the little ones deliberately hung back. When, however, half an hour later, their pursuers surprised them by coming up on top of a hill only half a mile to their rear, the colts fully realised the danger and from that time on they sped along without a murmur.

(Continued next week).



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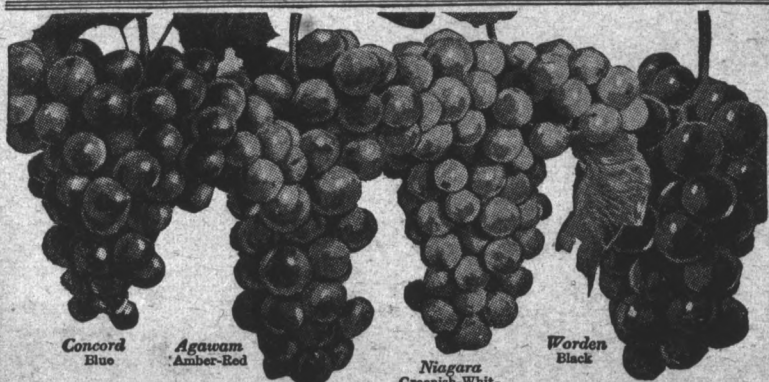
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## Greatest Event of History

Our Weekly Sermon—By N. A. McCune

IF one is to judge by results, the greatest event that has taken place on this earth since "the morning stars sang together," was the death of Jesus Christ. This is not said from a religious standpoint, alone, but from the standpoint of the welfare of the human race. Before that took place, there was not a hospital in the world, nor an orphan asylum, nor political or industrial liberty, nor a public school system. And we are told that these do not exist in non-Christian lands today, except where they have been established by outside agencies. A man may declare he does not believe in Christ, will have nothing to do with the "Christ myth," and so forth, but

he can't escape Him. Every time he writes a letter he dates it with figures that are reckoned from the time of Christ, and every time he votes, or pays his taxes, he is participating in the work of a government which was set up by men

who believed in the guidance of this same Christ.

The influence of the crucifixion of our Lord cannot be overestimated. I recently read a most stirring book, "Saint Jeanne D'Arc," (Macmillan, New York). If one wants a bit of gripping biography concerning a remarkable individual, here it is. Joan of Arc was the strange, mystical peasant girl of the fifteenth century who led the French forces to victory, was captured later by the English and burned to death at the stake. The powerful impress of the death of Christ is to be found all through her short, throbbing life. When she had been tried on a false charge, and was confined in the gray, cold tower at Rouen, it was the thought of Him who suffered in the garden and on the cross that sustained her. She was told one day that she was to die by fire before sundown. She has already been scourged, and she remembered that He, too, had suffered thus, and that He died for others. Her last words were addressed to her Lord, some one holding a cross for her to look at.

NOW this idea of progress by suffering is old. Yet it is the most baffling of subjects, and the one we are slowest to learn. For instance, read two or three chapters in Isaiah. These are the most exalted pictures of suffering and its meaning to be found anywhere. Take this: "The Lord God hath opened mine ear, and I was not rebellious, neither turned away back. I gave my back to the smiters, and my cheeks to them that plucked off the hair: I hid not my face from shame and spitting. For the Lord God will help me; therefore shall I not be confounded: therefore have I set my face like a flint, and I know that I shall not be ashamed. (Chap. 50). Or take this: "Yet it pleased the Lord to bruise him; he hath put him to grief: when thou shalt make his soul an offering for sin, he shall see his seed, he shall prolong his days, and the pleasure of the Lord shall prosper in his hand. He shall see the travail of his soul and shall be satisfied: by his knowledge shall my righteous servant justify many, for he shall bear their iniquities." (Chap. 53). The idea, then, of one suffering for others, was old long before Christ came into the world. But only He gave a perfect illustration of it. Where did this writ-

er of Isaiah get this conception? The more you read these chapters the more you marvel at them. It is a picture of unselfish suffering that finds no parallel outside the Bible. One can only say that such is instinctive in the very spiritual nature of man.

In other words, good comes by suffering. It is much easier to talk about than to experience. No one likes suffering. And yet we are certain that God suffers with us, and with the race. "In all their affliction He was afflicted, and the angel of His presence saved them." When one is sure of that, he can endure almost anything.

SOMETIMES the greatest good comes by suffering. In the Boxer uprising in China, in 1900, a mob gathered at Paoingfu, at the compound where some foreign missionaries lived. They were American missionaries. In the mob of Chinese was a recruit by the name of Feng Yu Hsiang. Miss Mary Morrill came out to find out what the mob wanted. She raised her hand for silence and said, "Why do you come here to kill us? Why do you want to take our lives? We are your friends. You know how we have taught your children, how we have visited you in your homes, and how we have cured your sick in the hospital. Is it for this that you seek to kill us? Cannot the many lives we have saved be put to our credit and ours spared?" "No, no," they shouted. "You are our enemies and we must kill you." Then Mary Morrill said, "Then let me die for the others. Kill me, but spare my friends. Here I am, helpless and alone; take me; you can do what you please." This so smote many in the mob that its spirit was gone. All but one were for sparing the foreigners. Gradually the crowd melted away. One soldier who had witnessed the scene was doing some thinking. It was young Feng. "There is a young woman," he said to himself, "who has a religion that is a religion. She offered to lay down her life for the others. The time is coming when I shall have to be a Christian."

A DAY or two later the mob reassembled, attacked the mission compound, and all the missionaries were murdered. But Feng Yu Hsiang never forgot Mary Morrill. He was as good as his resolution. He became a Christian, and he is the most remarkable general in China today. The stories told of him are as fascinating as the stories of Oliver Cromwell, whom he greatly admires. He is called the Stonewall Jackson of China. Some time ago he cut off the retreat of a rebel army and compelled it to surrender. But he did not execute the officers he had captured, but read them a lecture on patriotism, gave each officer ten dollars and each private five dollars and told them to go home. The effect was electric. "The amazed men fell all around weeping, then arose and went gladly home." In General Feng's army all smoking is forbidden, all drinking, gambling and prostitution. In territory which he rules the opium traffic and prostitution are fought with continuous energy. A school for officers' wives has been established in his army, an unheard of thing in China.

### SUNDAY SCHOOL LESSON FOR MARCH 18.

SUBJECT:—Jesus Crucified, Luke 23.  
GOLDEN TEXT:—He was wounded for our transgressions, he was bruised for our iniquities; the chastisement of our peace was upon Him; and with His stripes we are healed." Isa. 53.5.



## News From Cloverland

By L. A. Chase

### PICRIC ACID DELIVERED.

TWO cars of picric acid from salvaged government stores, are due to be delivered to Ontonagon county farmers the middle of March. This explosive costs farmers here twelve cents per pound, running three sticks to the pound. It is said to be equal, stick for stick, to any dynamite sold. Hitherto Ontonagon farmers have paid as high as twenty-eight cents a pound for explosives. Orders have been handled by the county agent, Mr. W. N. Clark, with the cooperation of local banks and county officials. Deliveries are to be made at Ewen and Ontonagon. The Ontonagon county board of supervisors has made an appropriation of \$200 to assist in putting on ten land-clearing schools this spring. These schools are conducted under the direction of the Michigan Agricultural College. One day will be given to each school. For these schools the equipment will consist of a horse-power stump-puller, a hand-power puller, an electric blasting machine, steel driving bars and earth-augurs, explosives, Paul Bunyan's hammer, siccor stoneboat, and Frost-tripod used in piling stumps, a tractor, and a tractor breaking-plow. A crew of eight men will be in charge. There is no charge for attendance at these schools.

### UPPER PENINSULA CEDAR POSTS.

MR. H. I. DAVIES, district engineer of the state highway department, assigned to the Upper Peninsula, is investigating the securing of six thousand cedar posts to be used in erecting road signs, this season. The specifications call for straight, well-formed posts about six inches thick and ten feet long. These posts will carry one-two-three and four-way signs indicating directions and distances at junction points to important places in the peninsula. The posts and signs will be prepared for erection at the departmental plant at Charlotte. The cedar-post output of the Upper Peninsula is large.

### STANDARDIZING FEES.

THE Ontonagon Valley Farmers' Association is advocating that all farmers in its territory plant only one kind of pea to avoid poor seed and mixtures. This will also permit car-load shipments out of the county at reduced rates. The favored variety is Pedigreed Scotch Green. At the February meeting of the association, the State Bank of Ewen distributed among the members present a farmers' account book prepared by the Michigan Agricultural College, and urged all farmers to keep accounts. The business men of Ewen will entertain the local farmers at luncheon March 17.

### HOW LONG WILL MINING LAST?

THE interdependence of mining and agriculture in the Upper Peninsula suggests the inquiry, how long will the deposits of iron and copper hold out? Iron Ore, of Ishpeming—a well-known mining paper, recently pointed out that the richness of iron and copper-bearing rocks here is much less than it used to be. Copper rock is not half as rich as it was a few years back and we are now taking copper out of rock that yields only one per cent of the red metal. This means that you must mine and work a ton of rock to get twenty pounds of copper. Time was when our iron ore deposits

ran as high as sixty-three to sixty-nine per cent of iron to the ton of rock. It now runs much less than this. The great problem now is to develop methods of handling low-grade ores that will make these available. A good deal has been accomplished in this direction already and more will doubtless be achieved. We are now working deposits that a few years back would have been considered worthless. There are billions of tons of low-grade iron ore in this region and hundreds of millions of pounds of copper recoverable from low-grade rock, and if these can be worked profitably by new methods that may hereafter be discovered, this country has still a long mineral future ahead.

### CLOVERLAND REINDEER.

IN the December number of American Forestry, Mr. Albert Stoll, Jr., secretary of the Michigan Conservation Commission, gives an account of the introduction of a herd of reindeer into northern Michigan, last fall. The herd consisted of sixty deer and cost in Norway, \$125 each. There were fifty cows and ten bulls in the herd. Dr. H. Christiansen, of Norway, who sold the herd to the state, and two Lapland boys as caretakers of the deer, accompanied the consignment to this country. Reindeer produce one calf each season, in late May or early June. Both males and females carry horns and one bull in the Michigan herd has horns with a spread of four feet ten inches. Reindeer average about 250 pounds in weight. They will dress about 190 pounds. In Norway their meat sells at about thirty cents per pound.

In the Lake Superior forest reserve north of Newberry the deer have been confined to a fenced tract four miles square and are in charge of an experienced Finlander. The herd lost five of the original consignment through accident but has been increased by twenty-six calves born since coming to this country, so the net number is now eighty-one deer. Wolves are said to be the most dangerous enemy of the reindeer and the increase of these varmints in northern Michigan during the past winter should warn us against over-optimism. Rev. William Thomas, of Port Hope, northern Alaska, and Dr. W. T. Grenfell, of Labrador, have been in Marquette, this winter, and the writer asked both men what they thought of the attempted introduction of reindeer into northern Michigan. Both thought well of it and thought the experiment ought to succeed. Each of them has a large herd of his own in the far north.

### LIVE STOCK IN CLOVERLAND.

THE February report of the Michigan Department of Agriculture, relating to live stock in Michigan, shows that there are 28,938 horses in the Upper Peninsula, of which Menominee county has 4,842, and Chippewa 4,365. There are 71,029 milch cows, of which Menominee county has 16,008, and Houghton 9,449. Other cattle number 42,329, of which Houghton has 5,323, and Menominee 5,795. There are 20,147 sheep, of which 4,014 are in Chippewa. There are 3,567 sheep in Houghton county. Of swine the number is 16,379, of which Menominee has 4,079.

The man who continually boasts of his ancestors is like a potato—the only good belonging to him is underground.



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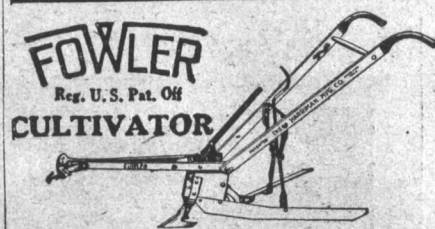
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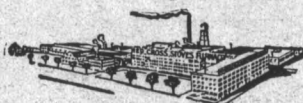


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The Daily Fuel of a  
Thousand Uses



## Woman's Interests

To Take the Place of the Worn One After Housecleaning

**B**UTTONHOLE around the linen center with No. 20 white cotton thread. Then crochet the lace on with chochet cotton No. 50.

**First Row.**—Make 1 tr under stitch of the buttonholing; 2 ch, 1 tr under next stitch. Repeat to end of round, and join to first tr.

**Second Row.**—Dc 1 in next 2 ch, 3 ch; 4 tr in same hole, \* 2 ch; 1 tr in each of next five holes with 2 ch between each; 2 ch, 5 tr in next hole. Repeat from \* to end of next hole, and join.

**Third Row.**—Make 4 sl st on the 4 tr at the beginning of the last row; 1 dc in next hole, 3 ch; 4 tr in same hole (this occurs at the beginning of the next seven rows, so will be described as 5 tr to save space); \* 2 ch, 1 tr in each of the next four holes with 2 ch between each; 2 ch, 5 tr in next hole; 2 ch, 5 tr in next hole. Repeat from \* to end of row and join.

**Fourth Row.**—\* tr 5 in next hole 2 ch; 1 tr in second hole from tr just made, 2 ch; 5 tr in second hole from tr just made, 5 ch; 1 long tr in hole between the two groups of tr, 5 ch. Repeat from \* and join.

**Fifth Row.**—\* tr in next hole, 2 ch; 5 tr in next hole, 5 ch; 1 dc under next 5 ch, 1 dc on the long tr; 1 dc in next hole, 5 ch. Repeat from \* and join.

**Sixth Row.**—Tr 5, \* 8 ch; 5 dc, one before, three on and one after the three dc of last row, 8 ch, 5 tr in next hole. Repeat from \* and join.

**Seventh Row.**—\* tr 5 in next hole of 8 ch in last row, 5 ch; 3 dc in center of the 5 dc, 5 ch; 5 tr in next hole of 8 ch, 4 ch. Repeat from \* and join.

**Eighth Row.**—\* 5 tr, 3 ch; 1 long tr on second dc, 3 ch; 5 tr in next hole, 3 ch; 2 long tr, 1 ch; 2 long tr, 4 ch; 2 long tr, 1 ch; 2 long tr all under the next 4 ch, 3 ch. Repeat from \* and join.

**Ninth Row.**—\* 5 tr in next hole, 2 ch; 5 tr in next hole, 2 ch; 2 long tr in first hole of 1 ch, 1 ch; 2 long tr in next hole, 1 ch; 2 long tr, 1 ch; 2 long tr all in middle hole of 1 ch, 1 ch; 2 long tr in next hole, 2 ch. Repeat from \* and join.

**Tenth Row.**—\* 5 tr between the two

groups of tr, 1 ch; 2 long tr in the first hole of 1 ch, 1 ch; 2 long tr in next hole, 1 ch; 2 long tr, 1 ch; 2 long tr, 4 ch; 2 long tr, 1 ch; 2 long tr in middle hole, 1 ch; 2 long tr in next hole, 1 ch; 2 long tr in next hole, 1 ch. Repeat from \* and join.

**Eleventh Row.**—Sl st on the first tr, 1 dc on the 3rd tr, 4 ch; \* 2 long tr in first between 1 tr, 1 ch; 2 long tr in 2d hole, 1 ch; 2 long tr in 3d hole, 1 ch; 2 long tr, 1 ch; 2 long tr, 1 ch; 2 long tr in middle hole, 1 ch; 2 long tr in 1st, 2d and 3d holes of 1 ch; 1 long tr in 3d tr of the group. Repeat from \* and join to the 4 ch at beginning of the row.

**Twelfth Row.**—\* 5 ch and 1 dc in every hole. In the previous row there is a 1 tr between the points, and the dc must come on the 1 tr, so there will be 10 holes of 5 ch. Repeat from \* and join.

**Thirteenth Row.**—Sl st on the first 2 st of previous row; 1 dc under the

5 ch; \* 6 ch, 1 dc into each loop around the point; at the tenth hole of last row after 6 ch insert the hook in the 10th hole and first hole of next point, and dc, which will make 9 holes around the point. Repeat from \* and join.

**Fourteenth Row.**—Like the 13th except that you make 8 ch instead of 6 ch, and insert the hook in the 9th row and 1st holes.

**Fifteenth Row.**—10 ch instead of 8 ch between dc.

**Sixteenth Row.**—12 ch between each dc.

**Seventeenth Row.**—14 ch between each dc.

**Eighteenth Row.**—15 ch between each dc.

This design was taken from Michigan Farmer Needlecraft Book No. 50, which contains numerous other equally pretty patterns, and can be had for fifteen cents from the Michigan Farmer, Detroit, Michigan.

## Sweet are Uses of Adversity

**S**O RAN the quotation on one of the cards in the old-fashioned game of Authors we used to play. In these days when the farmer's job is so hedged about with adverse conditions, will it not be time well spent to try to figure out a few of the "sweet uses?"

There is always that cheerful fellow who bobs up on the outskirts of every disaster and chirps, "Well, it could be so much worse." As though it solved any of the difficulty, or suggested any remedy.

And his hopeful brother who tells us that "everything is bound to come out all right." This may be a more pleasant little ditty to listen to, but the one great big thing we've got to settle is, what to do and think and feel in the present issue, not what we would have had to do had things been worse nor what we hope to be able to do when they are better.

One of the first advisable things to do is to take a real good look at things just as they are. It takes some heroism to just look at any situation fairly and squarely; we want so much to see as we want to and we are so afraid we will see what we do not want to see.

It seems to be a practice very much

in the present time to engage in an effort to "fix the responsibility," and the spectacle often looks like a pair of angry neighbors throwing a dead cat back and forth over the line fence. It wouldn't be so bad if anything nice came of it, and it takes up valuable time. Some pretty bad messes would fade away if folks could dispense with the glee of passing judgment.

What a "sweet use" of adversity we may find in a more discriminating sense of real values. To be able to know what we really want. If we could become so wise that, having in our possession some of life's rarest blessings, we are able to get from them all the good we ought to get.

Would it be altogether a bad thing if we farmer folks were to lose some of highly esteemed independence of each other which is the result of latter day inventions and many conveniences. Do we not miss the sense of our need of our friends as well as the feeling that we could and should be useful to them.

Then suppose we were able, everyone of us, a real "honest-true" this-world-as-well-as-the-next every-day-in-the-week religion.

Sweet, indeed, may be the uses of adversity.—Irene Kendrick.

### HINTS TO HOME-MAKERS.

L. M. T.

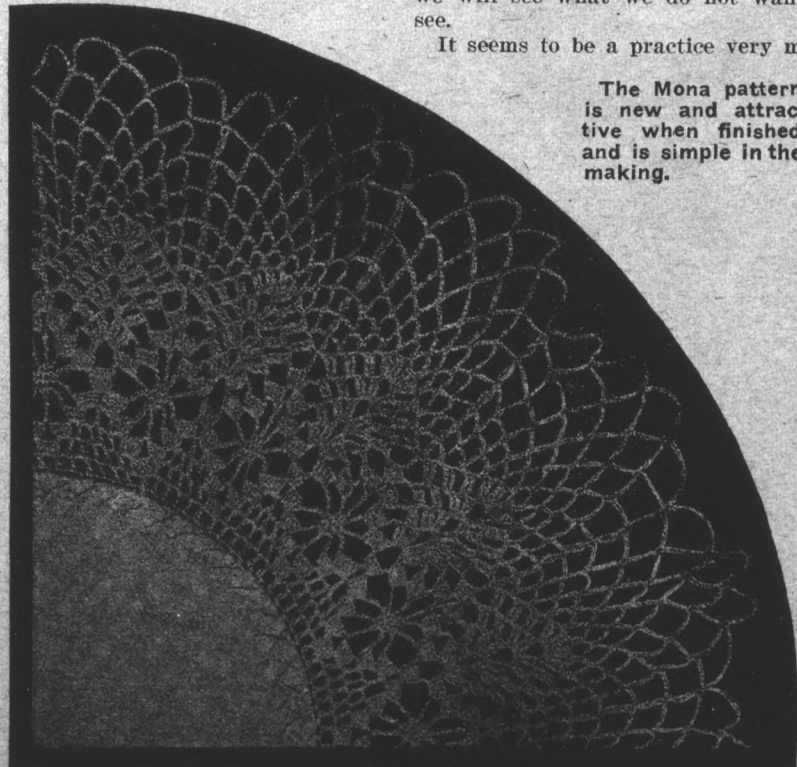
Instead of spending needless time "sising" flat irons, number them with white chalk and use in rotation, it being easy to tell the one that has been longest on the stove.

**Fresh Vegetables.**—Keep a box of moist sand and after using a part of a bunch of celery, carrots, or similar vegetables bury the rest in the moist sand. Vegetables may be kept fresh for weeks.

**Mashed Potatoes.**—After mashing potatoes and seasoning with salt, pepper and butter, add a few drops of onion juice and a dust of nutmeg. The novel flavor makes a very delightful change.

**Turkish Towels.**—When the edges of Turkish towels become frayed, bind with bright-colored gingham. The effect is decidedly good and the towels then match the gingham-trimmed pillow cases so much in vogue.

The Mona pattern is new and attractive when finished and is simple in the making.





## Goodies for St. Patrick's Day

**CHICKEN Fritters.**—Cut meat from a dressed chicken, into thin meat slices, flour these well, or if preferred, draw them through egg and cover them with bread crumbs, which have been mixed with a little butter in a small frying pan, when hot put in the slices of meat, cook them gently, turning them once or twice during the process. When brown pile them on a dish and send brown to the table.

**Potato Puffs.**—Boil six potatoes and put through ricer. Beat one egg, mix with it one-fourth cupful of milk, add the potatoes, piece of butter and salt. Form potatoes into fancy shapes, brush with egg and bake in hot oven.

**St. Patrick's Cake.**—One cupful of butter, two cupfuls of flour, two cupfuls of sugar, two teaspoonfuls of baking powder, one cupful of milk, four whites of eggs, one cupful of cornstarch, one-half teaspoonful of almond extract. Cream butter, add sugar, and almond, sift together, flour, cornstarch, baking powder. Add alternately with

through a sieve, turn into greased timbale molds. Stand them in a pan of hot water and bake in a moderately hot oven. Turn out on heated plates and serve with white sauce.

**Curled Celery.**—Select the fine white stalks, wash well, and cut in two-inch lengths, then with a small knife slit the ends into fringe, about one-half-inch long. Keep in a bowl of ice water to which a little lemon juice has been added to keep it white. Serve in dainty piles in individual dishes with French or mayonnaise dressing. —H. G. L.

### WHEEL TABLE IS BIG HELP.

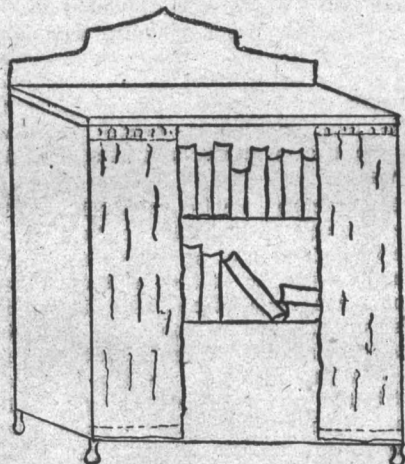
IT is nothing less than the effete tea wagon of the society novel that is made in a fashion big and strong to do the work of the farm wife, that is coming into high favor.

It has been found to save countless steps. Whole meals can be served with only one or two trips from the dining-room to the kitchen and it is just as useful in clearing the table afterwards. The dishes can be stacked on it as they are washed, and wheeled to the cupboard in one trip. The wheel table is also convenient for serving buffet lunches in any room of the house or on the porch. In time of sickness it is invaluable.

This wheel tray or table need not be expensive. If friend husband is handy with tools, he can transform an old wash-stand or kitchen table to this use. It should be made of durable material and covered with a hard finish so that it can be washed to keep it clean and sanitary. Wheels from an old baby carriage, particularly if rubber tired, have often been found useful for these home-made wheel trays.

### A CHILD'S BOOK-CASE.

HERE is an outline of the book-case we made for our little boy. It is made out of a dry goods box,



Easily Constructed, and is Useful.

with cracks filled with putty. The surface was sandpapered and then treated with a varnish stain. It is neat, durable and, of course, very inexpensive. The youngster takes a great deal of pride in a book-case which is his very own. The two upper shelves are used for books and the bottom one for toys, games, etc.—G. T.

### POTATOES HASHED IN CREAM.

Cut warm boiled potatoes into small even pieces and add a half pint of boiled cream and a teaspoonful of salt. Heat slowly for ten minutes.

More than 500 cities and towns in the United States had Better Homes campaigns recently, led by the Delin-eator. Many of the highest officials of the government cooperated with them.

The best remedy for a burn is plenty of turpentine. After it has been applied twice the burning will cease and the healing will be rapid.

## Housecleaning Time

HOUSECLEANING time is coming! These bright, sunny March days, even though they are few and far between, make us yearn to move the furniture out on the porch. We are eager to kick up the rug, to move it outside for a regular beating and with that thoroughly guaranteed cleaning compound, soap and hot water, to get busy to remove all indications of the winter's dirt and dust. Our judgment only restrains us until the weather is a little warmer.

We all have little helps and short-cuts that we make use of during our spring cleaning, which are practical and real time and labor-savers.

For the best letter containing the helps and short-cuts which have aided you most at this time of the year, we will give an aluminum double boiler. The second prize will be an aluminum preserving kettle, while third, fourth and fifth prizes will be aluminum sauce pans.

Address your letters to Martha Cole, Michigan Farmer, Detroit, Michigan, before March 29.

milk to first mixture, beat eggs (whites) until stiff, add to cake and beat vigorously. Make into loaves.

**Frosting.**—Whites of three eggs and pulverized sugar to make a good stiffening, add a little vanilla flavoring and green coloring.

**St. Patrick's Rolls.**—One cupful of milk scalded and cooled, one table-spoonful of sugar, a pinch of salt, one-half cupful of compressed yeast, two cupfuls of flour. Let rise over night. In the morning add flour, enough to make a stiff dough. Let rise again, then add one-half cupful of sugar, a piece of butter, a little nutmeg, two eggs. Beat butter, sugar and eggs to a cream, then add to dough. Knead, roll with rolling pin, cut with a large cake cutter, then cut in halves, dip in melted butter and lay against one another, with rounded part up. Let rise again then bake. Very delicious.

**Pea Timbales.**—Cook one table-spoonful of flour, in one and a half table-spoonfuls of butter, when bubbling, stir in gradually, one-half cupful of milk, cook until smooth, and season with a little salt and onion juice. Remove from fire, add three beaten eggs, and one cupful of cooked peas, pressed



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Standard Sanitary Mfg. Co., Pittsburgh  
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Trimmed with  
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**CRETONNE**

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This stunning and most beautiful model is suitable for home wear and for street. Cut full and roomy. Elegantly made. Here is a wonderful value you should not miss. This apron dress of silky, lustrous black sateen, is trimmed with beautiful gay flowered cretonne. Neck, pockets, half sash which forms into bow in back and sleeves are also trimmed with fancy white rick-rack braid. New style, novelty basket design pockets.

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BUY ORDER QUICK. Give your name, address and size. We will send this dress by parcel post. Pay the railroad \$2.49 and postage on arrival as good faith deposit. Try the dress on in your own home. If not satisfied in any way, return it to us and we will refund every cent of your money including return postage. Can say after the fact?

STARR & STARR  
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Latest Style Suitable for Street Wear

\$5 VALUE

Money Back If Not Satisfied

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10 Pkgs. Seeds 25c

Here is a beautiful old-fashioned garden of flowers for you for only 25 cents. Ten packages of Salzer's finest tested Cliffwood Farm seeds. Enough to make your garden bloom with loveliness all Summer. Note the varieties: Sweet Alyssum, Snapdragons, Balsam, Candytuft, Cosmos, California Poppy, Mignonette, Pinks, Sweet Peas, and Pansies. Your money back if not delighted. Send 25c for this collection and get our wonderful FREE SECRET GIFT.

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## Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.

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## CALUMET

**The Economy BAKING POWDER**



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Avoid disappointments. Millions of housewives are using Calumet because of its dependability. They know that the bakings will always turn out just right. Pies, cakes, biscuits, muffins, will always be perfectly raised, light and wholesome if you use Calumet, the real economical leavener.

Calumet sales are 2½ times as much as that of any other brand—always call for it.

**THE WORLD'S GREATEST BAKING POWDER**

## Michigan Farmer Pattern Service



No. 4304—Ladies' Dress. Cut in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 5½ yards of 40-inch material. The width of the skirt at the foot is 2½ yards. Price 12c.

No. 4305—Misses' Dress. Cut in three sizes, 16, 18 and 20 years. An 18-year size requires 4¾ yards of 32-inch material. The width at the foot is 2¼ yards. Price 12c.

No. 4089—Girls' Dress. Cut in four sizes, 6, 8, 10 and 12 years. A 10-year



size requires three yards of 32-inch material. For collar and sleeve facings as illustrated in large, ½ yard of 32-inch material is required. Price 12c.

No. 4322—Juniors' Blouse Dress.



Cut in three sizes, 12, 14 and 16 years. A 14-year size requires 2¾ yards of 36-inch material for the blouse, and 3½ for the skirt. Price 12c.

No. 4323—Child's Dress. Cut in four sizes, 4, 6, 8 and 10 years. A four-year



size requires two yards of 36-inch material. Price 12c.

No. 4315—Child's Play Dress. Cut in four sizes, 2, 4, 6 and 8 years. A six-year size requires three yards of 32-inch material. Price 12c.

No. 4098—Ladies' Apron. Cut in three sizes: Small, medium and large. A medium size requires 2½ yards of 36-inch material. Price 12c.



No. 4302—Ladies' House Frock. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires five yards of 40-inch material. The width at the foot is 2½ yards. Price 12c.

## Household Service

Use this Department to Help Solve Your Household Problems. Address all Letters to Martha Cole, Michigan Farmer, Detroit, Mich.

### ANOTHER WAY TO MAKE LEBKUCHEN.

In a recent issue of the Michigan Farmer, A. S. asks for a recipe for Lebkuchen. Here is a recipe that was given to me by an old German lady and we all like it very much.

One quart of cooking molasses brought to boiling; one quart of sour cream; one lump of butter or one pint of sour milk, and one cup shortening; three teaspoons soda; spices, nuts and raisins; flour enough to make as stiff as you can stir with a spoon. Let it stand over night. In the morning cut into lengths or any shape, but the lengths are best as the cookies are somewhat thicker than other kinds, and bake in a moderately hot oven. Keep in a cool place and they will always be fresh and nice. This makes a large batch but I find it very inexpensive for my family and we all like them very much.—Mrs. M. J. H.

### CLARIFY RANCID LARD.

If C. D. will boil rancid lard in equal

amounts of water, allowing it to cool in the same kettle, the lard can be removed when cold. Any sediment or water scraped from the under side should be thrown away. If necessary, repeat this operation two or three times, using fresh water each time. On account of the soda used in previous experiment, care must be taken to prevent boiling over.—M. M.

To clarify lard use white lye made with wood ashes or the concentrated. Use one tablespoon of concentrated lye dissolved in one-half cup of water for half a kettle of lard. Watch carefully as it quickly boils over. Skim and drain after boiling one and one-half hours. When a little cool, you will be surprised to see how sweet and white it will be. You will think when it is boiling you have soap, but it will finally become clear.—Mrs. M. C.

### HOMINY WITH SODA.

I would like very much a recipe for making hominy of sweet corn, using soda instead of lye. Could one of our readers send one?—Mrs. J. O.

## Teach Adaptability at Home

A CHARACTERISTIC too often overlooked, or at least unemphasized in the training of children, is that of adaptability. How does your child respond to adverse conditions or new contacts? When you take him visiting does he make a roar because he can't sleep in his own bed or eat with his own spoon or ride in the front seat of the car as he does at home? If he responds unfavorably to new conditions then his training in conforming to circumstances has been neglected.

A child that cannot comply with the routine of the home in which he is a guest can upset plans and create friction until the pleasure of the visit is spoiled for mother and hostess; and to prepare him so that this unpleasantness may be avoided cannot be done in the two or three days that precede a visit.

To be sure, a child should have his own things and should be held to a system of conduct at home—else how can he form any habits of regularity? Not for a moment can this theory be discounted. And it is very well to add that small children should be left at home as much as possible and not subjected to a change of living conditions—but every mother knows that there are exceptions to this rule. We cannot all have nurse girls and housekeepers, and we cannot always stay at home; so while we are training the children in good habits, let us not give them the idea that these habits are not adjustable to other conditions.

Well, how shall we do it? The fundamental point in adjustability is unselfishness. In fact, when you stop to think of it, doesn't unselfishness almost always solve the problem of friction in social and business life?

One little mother helped her children by having a guest day at home. On this day the whole family pretended they were dining some place else. Bobbie, instead of having his high chair, sat on two books and a cushion as he has to do at Aunt Ellen's when he visits there. And Esther had to eat with a big knife and fork and drink from a "grown-up glass" and there wasn't any milk so they drank water and were very polite about it.

You get the idea! The family are lifted out of the rut—boosted up as it were to peek over the highboard fence to see what is in the neighbor's yard. And the change of scene is inspiring rather than annoying.

In social life the happiest individual and the most popular is the one commonly known as a good mixer, the qualifications for which are simply adaptability to circumstances and respect for the interests and ideas of others. So the sooner and the more thoroughly our children cultivate these traits, the easier will everyday living be for them and their associates, but only by the careful patient guidance of the mother can these acquirements be attained.—N. K. A.



Father Can do Much to Teach His Son to be Unselfish.



# Rural Health

By Dr. C. H. Lerrigo

## BREAKING THE TOBACCO HABIT.

**I**N a recent issue I mentioned the fact that while it was almost impossible to administer drugs to cure the tobacco habit, without the cooperation of the victim, there were certain drugs that would prove quite helpful to a person who wanted help in quitting. Numerous requests have come that these helpful drugs be given publication; so we print the formula for the benefit of anyone who wishes to make the attempt. This is not an original formula but is one that has had wide use for many years.

**Local Treatment.**—Carry a box of one-grain zinc sulpho-carbolyte tablets, and nibble one of these whenever the desire to smoke is strong. They give a metallic taste but are harmless.

**Internal Treatment.**—One quinine pill of five grains in strength before each meal. As soon as the craving lessens reduce the size of the dose. Stop this treatment at the end of two weeks, but resume if there is any tendency to relapse.

**Diet.**—Eat well, not only regular meals, but lunches in between, if desired. A full stomach leaves less room for the tobacco craving.

**General Habits.**—Be as active as possible, both at work and recreation. Spend as much time as possible outdoors at active work and play. Plan your time so that there shall be no idle hours, being especially careful to provide something of interest to fill the time usually allotted to smoking.

Drink plenty of water and eat fruit. Be particular to see that the regular daily action of the bowels is maintained. These things have a decided influence on the mental processes upon which you will call to break up this habit.

I cannot tell you how long you will have to keep up the fight. One of our editors, a smoker for twelve years, becoming convinced that a rising blood pressure demanded that he forego the habit, simply laid his tobacco aside with the exclamation, "Here goes," and would not even take so much as a chew of gum to help pass the crisis. Others have to fight quite a battle before they get beyond the miserable feeling that they are constantly in need of something that they cannot get.

## INDIGESTION.

Please tell me what causes my stomach to ache. It feels as though there was a weight on it pulling it down. This comes one or two hours after mealtime.—A. G. L.

This is a very common symptom of indigestion and may be produced by any one of a number of different forms of indigestion. My suggestion is that you eat less, masticate much more thoroughly, limit amount of starchy food and make the diet rather laxative. To do this you must include a good supply of fruit and the leafy vegetables, such as lettuce, cabbage, chard and cauliflower. It is just possible that you have a dilated stomach, in which case you must never eat large meals.

## PNEUMONIA CONTAGIOUS?

Is there any reason to think that pneumonia is a contagious disease? I have never heard that it was, but recently my mother died of pneumonia and following that were four members of the family who developed the disease, all of them being fortunate enough to get well, but not without severe illness.—Want to Know.

It is now well recognized by the

medical profession that pneumonia is contagious, and several states require that it be reported as such. This information should be given as much publicity as possible so as to avoid such unfortunate experiences as yours. Had you known that pneumonia is contagious you might have taken precautions that would have saved the other members of your household from the disease.

## GET WELL BY REMOVING CAUSE.

Will five drops of oil of wintergreen, on sugar, taken three times a day for neuritis, cause ulcers or cancer of the stomach?—A. B. C.

No! I do not recommend the prescription, however. Find out what is causing the neuritis and get the cause removed. Then you have a chance to get well.

## SPREADING OF MUMPS.

Does a case of mumps always have to spread to both sides?—B. B.

There are many cases in which the whole force of the attack seems to be spent on one side and the other escapes. Probably both glands are affected to some degree, but in one there is not sufficient disturbance to produce a noticeable swelling.

## TUBERCULAR CONTAGION.

When a person has had tuberculosis of the lungs and has been in a state sanatorium, and then comes home a good deal better, but not altogether well, is he a safe man to be going around in the neighborhood? Can he still spread the disease?—M. J.

I consider such a patient to be perfectly safe to the community. In the first place, it is not likely that he would be discharged from the state institution unless his sputum had cleared up and was no longer contagious. Secondly, a person who has been in a sanatorium for tuberculosis is always careful about anything that would spread the disease. It is a part of their training and is insisted upon in every such institution. Tuberculosis is spread by people who are careless about their sputum. There is no danger in contact with a careful consumptive. I think you may rely upon this man who has had sanatorium training being a perfectly safe man to have in your community.

## PSYCHOLOGICAL CURES.

How do you account for the marvelous cures the Frenchman, Coue, worked while he was in this country?—Reader.

I do not positively know that M. Coue worked any marvelous cures. He said himself that he did not, and I am inclined to agree with him. Marvelous cures are being worked every day right in the hospitals of our own state. It is a splendid thing that we have men willing to give their lives to such work. We should support them.

## TENDENCY TOWARD COSS-EYES.

What about a child, five years old, who has a little tendency to look cross-eyed out of one eye? Is it anything to be anxious about? Would wearing glasses make it all right? Could he discard the glasses later?—M. G.

While this is hardly a cause for anxiety the child's eyes should certainly be given attention. At this age corrective glasses may do all that is necessary to correct the beginning squint. There is no way to tell whether he would be able to discard them later.

# Let the Sunshine in!

**ARE** you fagged and foggy when you wake up in the morning? "There's a Reason."

Coffee and tea are known to affect many people that way. Often, these beverages cause nervousness, sleeplessness and severe headache. "There's a Reason."

Postum, made from wheat roasted just like coffee, is a delightful mealtime beverage free from any element of harm.

Try it instead of coffee or tea, and let the sunshine in.

## Postum FOR HEALTH

"There's a Reason"

Your grocer sells Postum in two forms: Instant Postum (in tins) prepared instantly in the cup by the addition of boiling water. Postum Cereal (in packages) for those who prefer to make the drink while the meal is being prepared; made by boiling fully 20 minutes.

Made by  
Postum Cereal Company, Inc.  
Battle Creek, Michigan



# Aspirin

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Unless you see the name "Bayer" on package or on tablets you are not getting the genuine Bayer product prescribed by physicians over twenty-two years and proved safe by millions.

Accept "Bayer Tablets of Aspirin" only. Each unbroken package contains proper directions. Handy boxes of twelve tablets cost few cents. Drug-gists also sell bottles of 24 and 100. Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.

**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. Michigans foremost variety, but none International and M. A. C. sweepstakes winner. \$4.00 bu. shelled and graded or \$6.00 packed in ear F.O.B. Mason, limited amount, high germination, guaranteed. Chas. Laughlin, Dansville, Mich.

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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.

## SAVE MONEY

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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**CLOVER BARGAIN**  
Don't buy until you get our low wholesale money-saving prices, also free catalog Farm and Garden Seeds tells 18 ways to make money in 1923.  
Galloway Bros. Co. Dept. 137 Waterloo, Iowa





**OF COURSE** it is. One application of Gombault's Balsam quickly relieves the most stubborn pain. A second use and you're well again, feeling sound as a dollar.

If you have a lame back, stiff neck, cut, bruises, strain or sprain, sore throat, bronchial cold, muscular or inflammatory rheumatism, sciatica or lumbago, get a bottle of Gombault's Balsam today—it will drive out the pain in a hurry.

Safe, healing, antiseptic—this remarkable remedy has been the favorite in many households for a full forty years. Unequalled for external application.

People who have used Gombault's Balsam are never without it. There's no need to suffer if you have it handy.

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#### GOOD FOR ANIMALS, TOO

GOMBAULT'S Balsam is a safe, reliable and effective remedy for most horse troubles. Keeps your horses sound and working. The Lawrence-Williams Company, Cleveland, Ohio. Sole Distributors for the United States and Canada.

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The Imported Liniment  
HEALING and ANTISEPTIC

**for FORDSON Tractor**  
**PIERCE GOVERNOR**  
Will Pay for Itself in Two Weeks  
Saves fuel and oil. Saves one man's time on all belt work. Makes tractor last longer. Can be installed in twenty minutes. Lasts for years. Write today for free literature. The Pierce Governor Company  
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are over on Tanning  
**Hides and Furs**  
and making them into FINE FUR COATS, FUR SETS, ROBES, ETC. Our Prices for doing this WORK are on a level with what the Farmers received for this year's crops. Our CATALOG is Free, it tells how you can be the Wearer of a Fine Fur Coat, etc., at the lowest prices quoted in years for Custom Fur Work. Address  
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**FREE Samples & Roofing Book**

## Our Boys' and Girls' Department

### Found In Our Letter Box

Letters from Pals for Our Correspondence Corner

Dear Uncle Frank:

I hope I may call you by that name if you have room for another niece. I want Russel Carter, of Dighton, to know I saw his article on "Sports," and think it fine. Wouldn't be surprised if my cousin, Norbert Curtice, was with him when he killed the rabbit.—Your niece, Emma Jane Winfield, Grandville, Mich.

Russel undoubtedly knows if you are a good guesser. Glad to have you for a niece. Write again.

Dear Uncle Frank:

I was born in the same city you are living in. My mother died, so I came to live with my aunt in the country. I would sooner live in the country than in the city.

I don't quite understand how to set down the Read-and-Win answers, so please give me an example.

I guess I won't howl about the waste paper basket, because you can't publish all of them.

I have a lot more to say, but I will



Jemmy Kelly, Jr., Taking a Ride.

say it in my next letter. I wish to be a member of the club, so please send me a button and a membership card.

Well, I will close.—From your nephew, Herbert Estes, Webberville, Mich., R. 3.

It is fine that you like living in the country. I like your attitude about the waste basket. The answers to the Read-and-Win contests which I print will show how I would like to have them. Write again, Herbert. I hope you win a button.

Dear Uncle Frank:

This is my second letter. I am 11 years young, in the fifth grade in school, have four sisters, one brother. My little sister that was in Ann Arbor Hospital is home again. She came home Xmas with mamma. We were so pleased she is getting along nicely.

I help mamma do the work. I can cook and bake cakes as good as most girls of my size.

I like to work in the fields. We raise peppermint mostly and distill it here. We have a big distillery but we don't make whiskey. My papa doesn't use any such stuff, nor use tobacco or bad language. So you see, I have a good papa.

Well, this is getting long so I will close.—Your niece, Dora Williams, Niles, Michigan.

I am glad your sister is getting along so nicely. I bet you are a good helper. Your father is the right kind to have. His habits are the kind I like.

Dear Uncle Frank:

Do you think you could add another boy to your Merry Circle? I go to school, and am in the sixth grade. I want to get a good education, and grow up to be a good man as all boys should do. Let us make the best men we can of ourselves, boys. Come on!—Everett A. Fifield, Lake City, Mich., R. 3, Box 106.

Yours is the kind of ambition to have. You can't start too soon to make something of yourself. You certainly are welcome.

Dear Uncle Frank:

Well, I've written four other letters and I guess they've all arrived at the

waste basket, and stayed there, too, but I don't think they all ought to go there, so I'll "try, try, again," that is my motto.

There is a basket-ball game in our town tonight. I'd like to go, but I can't, as I've got a gathering in my head.

Well, I guess you'll die reading this "dry" letter, if I don't close. A niece, if accepted, Ruth M. Anderson, Kent City, Michigan.

I get heaps of letters that ought not to go to the waste basket, but it gets them just the same, because I can't find places for them in the paper. I judge you could not attend the gathering in town because of the gathering in your head. I hope the latter disappears soon.

Dear Uncle Frank:

Once more I am trying the Read-and-Win contest, though I have never won I enjoy trying.

When I come from school Thursday I can hardly wait to get my things off before seeing the Michigan Farmer. (Can you guess what for?)

I am ten years old, in the sixth grade, and spend most of my spare time reading.—From your niece, Margaret A. Fish, Manchester, Mich., R. 4.

You have the right idea regarding the contests. Just because you feel that way about it, I hope you win some time.

Dear Uncle Frank:

I wish to thank you for the beautiful pencil box that you sent me. I consider myself lucky, as this is about the fifth time I have tried various contests and this is the first time I have received any results.

I thought I had quite a good Uncle Frank until I saw your picture. It was very good as a baby picture, but I was very much disappointed with it. I had hoped and expected that you would publish one of your recent pictures.

I should enjoy hearing from some of your other pals.—Your niece, Margaret Thompson, Paris, Mich., R. 1.



Bad Axe High School Boys Inspecting Some Herefords.

## State Club Champions

IN recognition of the achievements of Boys' and Girls' Club members who win championships in their respective projects, the State Board of Agriculture awards scholarships to the Michigan Agricultural College to those who win such honors.

Following is the list of club members who were awarded scholarships for the year just past:

**Clothing.**—First year Helen Marshall, Newaygo; second year, Grace Aldrich, Ridgeway; third year, Miriam Hagerman, Tekonsha; fourth year, Fanny Moog, Coldwater.

**Handicraft.**—First year, Stanley Wehner, Hemlock; second year, Aldric Mongrain, Quinnesec; third year, Geo. Wicklund, Ishpeming.

**Canning.**—First year, Celia Weber, Sand Creek; second year, Alice Zurburg, Quincy; third year, Mary Piechowiak, Bay City; fourth year, Viola Stevens, Bay City; fifth year Beatrice Effrick, Bay City.

**Cooking.**—First year, Marian Rus-

I congratulate you on your persistency. It brings results, doesn't it? I am sorry that you are disappointed about me. I still feel that is the best picture I have had taken.

Dear Uncle Frank:

I received the Merry Circle button and the membership card today. And, Uncle Frank, I fairly held my breath, when I opened the envelope and out came the button.



Eva Whidby Going After the Cows.

Uncle Frank, I'm going to try and win another pin and card, so I can wear one this spring and summer on my school coat and Sunday coat. I also hope to win a prize.

I think your idea about having a contest every other week is good. I will try to enter the contest every time.—Your niece, Grace Frances Cramer, Comstock, Mich., Box 2.

We do not give membership cards and buttons to those who already have them. Couldn't you change your button from your work-day to your Sunday coat? I'm glad you like the every-other-week contest idea. I wonder if everybody likes it.

"Wooden houses may not last; but farms will last, and farming will always last. The Americans can sow and plow and reap and live by these foundations of their state be moved."

—G. K. Chesterton's "What I Saw in America."

sell, Athens; second year, Zeta Thomas, Hemlock; third year, Nellie Howell, Topinabee.

**Beans.**—Paul Sherwood, Bellevue.

**Corn.**—Lester Case, Jasper.

**Potatoes.**—Edward Domke, Ocqueoc.

**Poultry.**—First year, Russell Miller, Plymouth; second year, Herbert Miller, Plymouth; third year, Russell Price, Romulus; fourth year, Elroy Damerow, Romulus.

**Garden.**—Linford DeForest, Memphis.

**Pig, Breeding Gilt.**—Walter Ball, Charlotte.

**Sow and Litter.**—Clifton Lyon, Pittsford.

**Pork Production.**—Reuben Kinnunen, Keewenaw Bay.

**Dairy Calf.**—Lloyd Baker, Clayton.

**Yearling Heifer.**—Andrew Waite, Iron River.

**Dairy Production.**—Wendel Holmes, Clayton.

**Beef Calf.**—Ferris Foster, Rives Jct.

**Beef Cow and Calf.**—Donald Shepard, Charlotte.

**Baby Beef.**—Louise Morse, Jasper.

**Sheep.**—Lucile Wilson, Reading.



# The Merry Circle

By Uncle Frank

THE Merry Circle is growing. Over three hundred will be added to its list this week because of getting the Read-and-Win answers correct.

The letters I get show that most all are very much pleased with their buttons and membership cards. Many of them say that they are wearing their buttons every day. That is what I am doing. I have mine on all the time. I also carry a membership card.

It pleases me that the sentiments on the membership card are liked and that many of my



pals have said they are going to try to live up to them. Our loyalty to goodness is the only thing that does not bring regrets.

Everything that has the least element of badness in it, regardless of how enjoyable it may be, will bring regrets and punishment at some time.

Several boys and girls anticipate getting buttons and membership cards after they have received one. This is not necessary as one button and membership card to each is plenty and it leaves more to pass out to others who meet the requirements.

Some still ask what is necessary to join the Merry Circle. So I will repeat the requirement here. All who get the correct answers to one Read-and-Win Contest get a button and card. Also, all who do worthy work in our other contests, such as the little essay, drawing and poetry contests, will get them. No buttons will be sent to those who send in drawings, poems and little stories not entered in the contests.

All who have had correct answers to the Read-and-Win Contests and have done good work in the others since the first of the year should have received buttons and cards. If you think you are entitled to a button and have not received it, write me and I will look up our records.

I have been thinking of getting out a very neat metal Merry Circle pin which has a regular safety clasp on it and looks like a regular lodge or sorority pin. Who of those now having pins, would like to get one of these better kind for a little additional work? Please let me hear from you about this.

Just remember, this is our department and Merry Circle, not mine. So, always feel free to make suggestions and criticisms. What kind of contests would you like next?

## THE WINNERS.

THE following are the one who had the neatest and most correct answers to the Read-and-Win Contest of March 3:

### Pencil Box.

Nina Maxine Hover, Akron, Mich.  
Homer Vanderkolk, Hopkins, Mich., R. 1.

### Pencils.

Frances Herring, Litchfield, Mich.  
Linnea Bruce, Bark River, Mich., R. 2.

### Maps.

Lawrence Jumper, St. Johns, Mich., R. 5.  
Geneva Macomber, Howell, Mich., R. 3.  
Kenneth Calkins, Morrice, Mich., R. 1.  
Ernest Krueger, Saginaw, Mich., E. S. R. 4.  
Stephey, Harold, Bremen, Ind., R. 3.  
Florence Schaefer, Dundee, Mich., R. 4.

## THE CORRECT ANSWERS.

HERE are the correct answers to the Read-and-Win Contest of March 3:

1. Fifty out of every 100 hogs—316-28.
2. Two million pounds—3-291.
3. Denmark—3-291.
4. Add a little flour and knead again—308-20.
5. When soft water is not readily obtainable—13-391.
6. Close to \$100—314-26.
7. When mixed with the proper amount of air—9-297.
8. \$1.20—11-299.
9. Ninety-three million miles—306-18.
10. Seven pounds—312-24.

## Fool Stunt Contest

APRIL first will soon be here. We all know that day is the international holiday for fools. It means a holiday for all of us because every one of us has qualified as a fool some time or other. For that day we are all interested in stunts which make other folks feel foolish. Some of these stunts are good and furnish innocent amusement. In order that we all can get next to some good stunts I ask you to tell the best April Fool stunt you know. The best ones we get will be published in March 31, issue, so you will have them in time to try them out. The best ten will get the usual prizes: The first two, pencil boxes; the next three, nickled pocket pencils, and the next five, Michigan Farmer maps of the world and Europe.

Send your stunts in to Uncle Frank, Michigan Farmer, Detroit, Michigan, on or before March 22.

## WANT TO CORRESPOND.

The following boys and girls would like to correspond with others interested in this department:

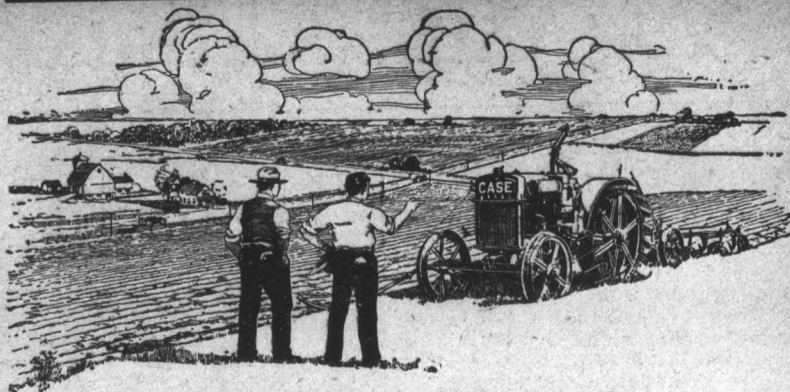
Leona Renner, Reese, Mich.  
Alice J. Keller, Watervliet, Mich.  
Gertrude Bruen, Manitou Beach, Mich., R. 1.  
John Snomi, Trenany, Mich., R. 4.  
Sara Beach, Grand Blanc, Mich.  
Gladys Sigler, White Pigeon Mich., R. 3, Box 21.  
Clarissa Conlan, Hardwood, Mich.  
Gertie Munroe, Manistique, Mich., R. 2, Box 47.  
Irene Horton, Fowlerville, Mich., R. 1.  
Mary Picha, Owosso, Mich., R. 6, Box 108.  
Elizabeth Hudecek, Owosso, Mich., R. 6, Box 104.  
Gladys G. Miller, Alma, Mich., R. 2.  
Jennie Gusler, Atlanta, Mich., Box 94.

## THEY LEARNED ABOUT CERTIFIED SEED.

(Continued from page 363).

toes went 200 bushels to the acre, and why are these certified seed any better?"—tell it to him like this: "My friend, if you know leaf roll and mosaic—know them and pull them out of your field, root and branch—and if you can recognize hopperburn and flea-beetle injury and keep them off with thorough spraying with Bordeaux—I said through spraying, not sprinkling—yes, and if you pull out all mixed varieties—then you're on your way, and you'll stack up with the certified growers pretty soon."

But potatoes aren't worth anything. True. Sadly true. But how about next year, and the next, and the one after that? We need less acres and more to the acre. We need to eliminate the potato plunger, in this year and out next, and probably getting a low yield per acre, too. We've got to lower the cost of producing a bushel. And certified, pedigreed seed producing as much on one acre as scrub stuff on four, is the answer. At least six Mason county potato growers see the point. They tried it out, and they know.



## Additional Profits

"Since buying my Case 15-27 I have doubled my farming operations to 320 acres."

—Everett Taubeneck, West Union, Illinois.

Besides larger profits from better farming, the Case tractor gives you two other sources of profit. You can farm more land with the same help, or you can do profitable custom work. These additional profits often pay for



It is not uncommon for a farmer to find his working capacity doubled when he begins to use a Case. This increased efficiency is due to many proved Case advantages:

Ample power is furnished by efficient, Case-built engines, with a fuel system assuring extreme economy on low grade fuels.

Power is transmitted to both drive wheels through simple, cut steel, spur gears—all completely enclosed.

Belt pulley is mounted on engine crankshaft, with no waste of power through gears.

Because of these and many other practical qualities, Case tractors are well adapted to all kinds of farm power work, both drawbar and belt. Ask any Case owner or write for "Better Farming With Better Tractors," which tells you why the Case tractor is superior in many ways.

Engine has removable bearing shells and bushings. Practically all other bearings are renewable roller and ball bearings.

All gears, bearings and wearing surfaces are enclosed, thoroughly lubricated, and protected from dust and dirt.

A patented Case air washer keeps all dust and dirt out of the engine.

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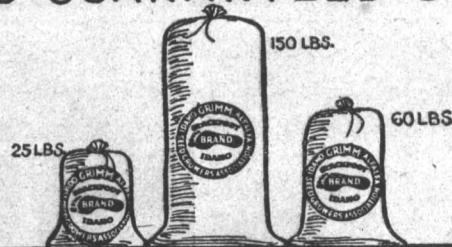
Racine

Wisconsin

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Of BLACKFOOT BRAND Certified Genuine Grimm Alfalfa Seed, is not an accident. Everything possible is done to make it the best. Grown under very severe climatic conditions on REGISTERED FIELDS, CERTIFIED GENUINE GRIMM by the STATE PURE SEED COMMISSIONER, FIELD INSPECTED, HAND ROGUED, HIGH IN PURITY, and SCARIFIED assuring a HIGH GERMINATION. To protect you against mixture or adulteration with weaker strains BLACKFOOT BRAND Certified Grimm is packed in 25-60 and 150 pound sealed bags. If your dealer cannot supply you with our Certified Grimm in the SEALED and LABELED bags write direct to

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# BLUE VALLEY BULLETIN

FOR BETTER  
CREAM MARKETING

Circulation 2,095,434

CORRESPONDENCE  
INVITED

## Greater Blue Valley Cream Market

This bulletin will be published every month for the benefit of those who want to make more money from their cows. It will contain articles of special interest to milkers, and we invite questions regarding breeding, feeding and care of cows, as well as production, handling and marketing of cream. It will be edited by the Blue Valley Staff—thus giving it the benefit of wide experience and unusual facilities.

Blue Valley cream shippers will be glad to know that more cream was sold to Blue Valley last year than ever before. Also, more packages of Blue Valley butter were bought by consumers and at a higher price, compared with wholesale butter quotations.

That explains to Blue Valley shippers who kept tabs on their cream income for the year, why the Blue Valley Cream Market was the most profitable to them and assures them a still better Blue Valley Cream Market this year. It has been that way ever since the Blue Valley Creamery Company was organized in 1900 and the Blue Valley Direct Cream Shipping System was first introduced.

Every year since then additional thousands of farmers have found out for themselves that the Blue Valley way is the direct way to the butter consumer, cutting out all the increasing number of expensive middlemen and therefore making more money for the farmers.

Here are the reasons why—for the benefit of all new Blue Valley shippers and other farmers who realize the need of improved marketing.

### No Middlemen the Blue Valley Way

There are no middlemen in the Blue Valley Creamery System.

Blue Valley has no cream stations to take toll of every gallon of the farmers' cream and lower its quality by mixing and holding before shipping.

Blue Valley cream is made into butter by the largest exclusive butter manufacturing company in the world—twenty-three years' successful experience in economical, high grade buttermaking behind it.

Blue Valley sells this butter in Blue Valley packages direct to retailers in large cities. The consumers pay more, because they know they are getting Blue Valley butter. The great volume turned out by the seventeen Blue Valley creameries insures steady supply and most economical distribution.

No commission men, brokers, or speculators ever make a cent on Blue Valley butter. They never get a chance.

All the middlemen's profits and expenses all along the line from the farm to the grocery store are cut out by Blue Valley and a higher price obtained for the finished product. That's why farmers find the Blue Valley Cream Market the most profitable.

### Deal Direct

Every farmer deals direct with Blue Valley. We deal direct with you. You write us. We write you. You know us. We know you. Same way with every one of thousands of grocers. And every one of millions of Blue Valley butter consumers gets his butter out of an original Blue Valley package right in his own home.

It is the simple, direct, man-to-man deal in marketing of cream.

### Blue Valley Guarantee

The Blue Valley Guarantee which for many years has insured every Blue Valley shipper against loss, also protects absolutely any farmer who is not familiar with Blue Valley ways and who is desirous of trying out the Blue Valley Cream Market for himself. The Blue Valley Guarantee reads:

### We Guarantee

That our check in payment for each and every can of cream you send us will satisfy you.

We guarantee the safe return of your empty cans.

If for any reason whatever you are not satisfied we expect to hear from you.

We guarantee to satisfy you perfectly.

Every Blue Valley creamery is always glad to hear from cream shippers and help them solve their dairy problems. Every Blue Valley creamery is also glad to answer inquiries from farmers who want to know more about Blue Valley before shipping us their cream—but shipping a can of cream will tell better than anything else how profitable the Blue Valley Cream Market is.

## Ship Your Cream Direct

**Full Value for Your Cream.** You produce the cream, why not get all the money it is worth? Why help a middleman make an easy living out of your labor? You own your cows. Get all the profits out of them. Don't divide with any cream agent. Make your cows work for you alone. Keep the Easy Money yourself by shipping direct. Simply take your can of cream to nearest railroad station addressed to nearest Blue Valley Creamery. (See list of towns below). Check for full value of cream in each can will be sent you as soon as we receive shipment, and cans thoroughly cleaned and sterilized will be returned to you.

No obligations. We do not bind you to any contract; you ship of your own free will. Hundreds of thousands Blue Valley Shippers continue to deal direct with us because we pay them full value. Just ship one can of cream and see.

### CREAM CANS on Thirty Days' FREE TRIAL

If you are not shipping direct at present because you have no cream cans, we will send you by prepaid parcel post direct to your door, two cream cans on 30 days' free trial. If at the end of this time you are satisfied with our market and the material and workmanship, pay out of your cream checks; 5-gallon can, \$2.25; 3-gallon can, \$1.50; 10-gallon can, \$3.35. If not satisfied return cans at our expense and no charge will be made.

## BLUE VALLEY CREAMERY CO.

Detroit, Mich.  
Columbus, O.  
Sioux City, Ia.  
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Grand Rapids, Mich.  
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**NEW BUTTERFLY** Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 54, shown here: sold on **30 DAYS' FREE TRIAL** and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money.  
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WILL FIT ALL STANDARD MILK BOTTLES  
PARAFINED AND PRINTED RED LIKE DESIGN.  
BOX CONTAINS 1750 LIP CAPS OF 2000 WITHOUT LIP. PARCEL POST PREPAID—ORDER A BOX NOW.  
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**\$7.50 After  
30 Days  
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The Belgian  
Melotte Separator—  
is the wonderful  
Self-Balancing  
Bowling Ball.  
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 to separate. The Melotte bowl is self-balancing. Positively cannot get out of balance therefore cannot vibrate. Can't remix cream with milk. The Melotte has won 24 Grand and International Prizes.

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Write for new Melotte catalog containing full description of this wonderful cream separator and the story of St. Jules Melotte, its inventor. Don't buy any separator until you have found out all you can about the Melotte and details of our 16-year guarantee which is infinitely stronger than any separator guarantee. Write TODAY.

**The Melotte Separator, H. B. Babson, U.S. Mgr.**  
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Runs so easily,  
bowl spins 25  
minutes after you  
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apply brake. No  
other separator  
needs a brake. Bowl  
chamber is porcelain lined.

### Greater Savings!

Natco Silos save in extra butter fat, more milk, more beef or mutton. They save in upkeep—no painting or repairs—no hoops to tighten—air tight—resist frost and dampness. Easily and quickly erected.

Write for the new Natco on the Farm Book, and ask for prices, terms and guarantee.

**NATCO DOUBLE SHELL TILE**  
NATIONAL FIRE-PROOFING COMPANY  
1308 FULTON BUILDING :: PITTSBURGH, PA.

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# Dairy Farming

## Holstein Honor Roll

**OWNERS** of the Loeb Farms of State Hospital; W. W. Mountain, of Charlevoix, whose cow, Kolrain Marion Finderne, holds second place in the entire world for milk and butter-fat production, also have in their herd Michigan's second best Holstein cow, it is shown by the honor roll just issued by the Michigan Holstein-Friesian Association.

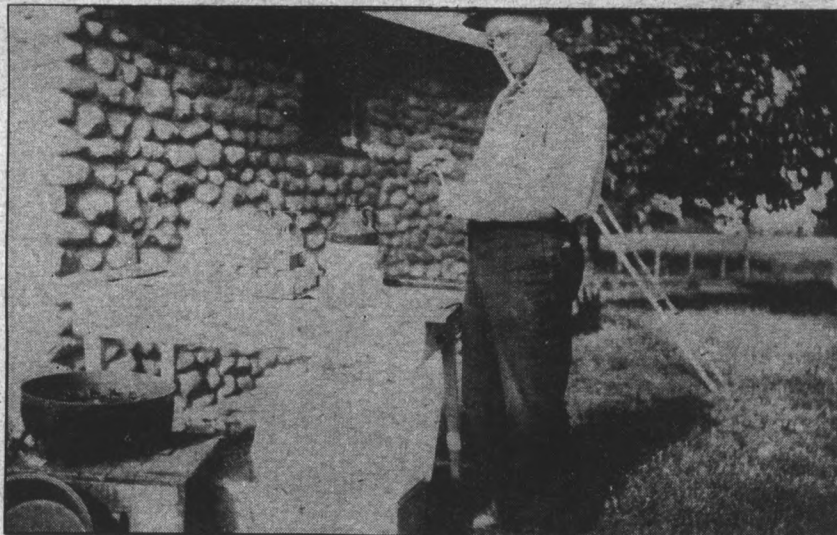
For the year ending October 30, 1922, Kolrain Marion Finderne is credited with 35,339.5 pounds of milk and 1,022.85 pounds of butter-fat. Kolrain Eleanor Pontiac Korndyke, second in the full-aged class, produced 26,995.4 pounds of milk and 914.47 pounds of fat. Annabelle Anza Posch, owned by the Detroit Creamery Company, of Mount Clemens, was third in this class with 25,711.4 pounds of milk and 902.68 pounds of fat.

The Loeb farms also took second in the senior four-year-old class and second in the junior two-year-old class.

Flint; C. S. Heeg, Howell; E. W. McNitt, Grand Rapids; Detroit Creamery Company, Mount Clemens; H. E. Rising, Woodland; I. A. Kidney, Brant; J. H. Winn, Rochester; G. W. Ridge-man, Vassar; John Bazley, Ypsilanti; W. E. Fellows, Flint; M. H. Piper, of Flint, and J. N. Lamoreaux, of Comstock Park.

In the thirty-day division the Traverse City Hospital took the first two places in the full-aged class. Traverse Inka Hartog gave 2,855.4 pounds of milk and 114.494 pounds of fat, and Traverse Colantha Walker gave 2,398.4 pounds of milk and 113.906 pounds of fat. Eureka Segis Dossie owned by Mr. Berkheimer was third with 2,779.1 pounds of milk and 106.119 pounds of fat. Additional dairymen represented

were D. D. Aitken, of Flint; Dudley E. Waters, Grand Rapids; C. S. Mott,



The Cow-tester Often Works in an Improvised Laboratory But he is Able to Give the Dairyman Exact Data on Every Cow.

John Schlaff, of Mount Clemens, was first in the ten-months' division. His Artis Pontiac Easkia gave 19,875.3 pounds of milk and 715.18 pounds of fat. Traverse Duchess Walker, owned by the state hospital at Traverse City, was second with 19,853.4 pounds of milk and 877.13 pounds of butter. Carrie Johanna Wayne, owned by A. R. Black & Sons, of Lansing, was third with 17,648.8 pounds of milk and 609 pounds of fat. The roll for this division includes Otis Scott & Sons, Clio, and H. G. Booth, Gladwin.—H.

### KEEP MILKING MACHINES CLEAN.

**EXPERIMENT** station authorities at Geneva, New York, have found that unless milking machines are given care, they are likely to become sources of bacterial contamination.

There are two methods of keeping milking machines clean and sterile. The most prevalent one is to thoroughly clean the machine in the ordinary way and then immerse the teat cup and milker tubes into some chemical solution, usually strong brine made by adding two pounds of salt to a gallon of water. The brine is kept sterile by adding hydrochloride solutions or chloride of lime.

Another accepted method of keeping milking machines clean is to immerse the milking tubes and teat cups in hot water at a temperature of 160 to 180 degrees F. There is no doubt but what

vision are L. J. Matthews, Hastings; Wilder Brothers, Bay City; Musloff Brothers, South Lyons; Newberry not withstand the high temperatures.



# The Value of the Dairy Cow

**D**AIRYMEN generally recognize there is a marked variation in the milk and butter-fat producing capacity of different individuals in the herd. On practically the same ration and care some cows will produce a large uniform flow of milk of high butter-fat content, while other cows will not. In herds bred and cared for in the same manner over a period of years, cows of low milk yields and butter-fat test are found along with cows of high production.

Practical dairymen know that profit from dairying depends in a very large measure upon cows of large uniform milk and butter-fat production. Cows that respond at the pail to liberal feeding and proper care. Cows that can consume roughage and grain proportioned into a well-balanced ration and convert it into a good profit over cost of consumption.

The value of the dairy cow as a profit-making organization rests quite entirely upon her breeding, feeding and care. To consume feed profitably she must be bred for the purpose for which she is being maintained. She must have the capacity to consume food. Sixty per cent of all the food the cow eats goes to sustain her body and only after this is taken care of can there be any return to the dairyman. The dairy cow must have a constitution that will endure heavy work, for she labors night and day digesting and assimilating food for milk products.

The dairy cow, to prove her value to convert roughage and grain into profitable returns must be well fed. The milk and butter-fat products of the cow contain the richest and most nutritious food elements. To manufacture this highly nutritive product the cow must be supplied with a splendid quality of raw material and in liberal amounts. Her ration should at all times be palatable, appetizing, easily digestible and well balanced in essential nutriment.

Every dairyman knows that no two cows are just alike. They may be bred, fed and cared for in the same manner, yet there is a decided difference in their ability to consume food and convert it into profitable returns. To make dairying most profitable the dairyman must make a very careful study of his cows. He must understand their individual need. He must cater to their likes and dislikes. The value of a cow as a milk and butter-fat producer can only be computed when she has been supplied with all the vital requirements that meet her individual needs.

I believe one of the commonest mistakes made by the average dairyman is an unwillingness to pay additionally for the cow of large producing capacity. Many a large producing cow has passed on undeveloped, simply because her owner failed to cooperate with her and supply the essential food ingredients to encourage maximum production. To work profitably the cow must at all times be in perfect

condition. She must have a good appetite, a strong work digestive system and furnished with a variety of palatable feed to induce large consumption.—L. C. Reynolds.

## THE STORY OF TWO MILK PATRONS.

**F**RANK ADAMS was a neighbor of Tom Jones. Both belonged to the same cow-testing association in a western Michigan county. During 1922 both men milked nine mature cows and both sold their product on the same market. Some interesting facts resulted when the summaries on these two herds were obtained:

	Adams.	Jones.
Pounds milk .....	7,471.00	5,152.00
Pounds butter-fat ...	396.8	190.1
Value product .....	\$1,442.65	\$680.41
Feed cost .....	408.62	402.04
Value less feed cost	1,034.03	278.37
Net value per cow	114.79	30.93

Every dollar that Adams spent for feed on his cow returned \$3.54, while Tom Jones had only \$1.70 return for each dollar spent. Many stories could be told from these records. One story to be emphasized, however, is that the dairyman should not fail to study his home market. The cows that he milks may mean the difference between success or just average results when it comes to returns on the last year's crops grown on his farm.

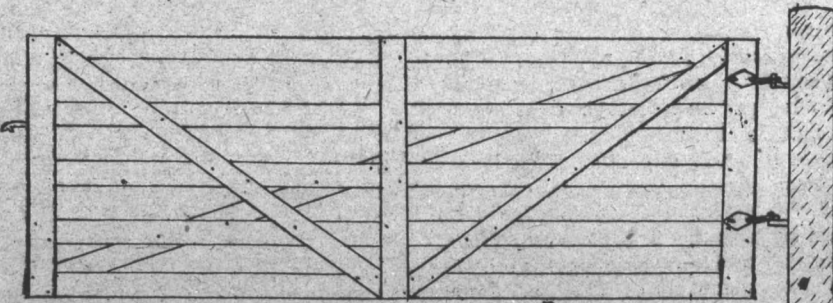
## MICHIGAN HOLSTEIN MEMBERSHIP.

**T**EN Michigan dairymen were recently admitted to membership in The Holstein-Friesian Association of America, according to an announcement just issued by Secretary F. L. Houghton. They were Lyman E. Beach, of Crosswell; F. B. Brooks, of Corunna; C. E. Chappell, of Charlotte; Robert J. Crouse, of Howell; A. B. George, of Garland; Francis D. Gunner, of Riga; Edward B. Henne, of Manchester; Mark A. Knight, of Rockwood; O. B. Merriman, of Deckerville, and Marion B. Wilkinson, of Dowagiac.

The Michigan membership in this association now numbers 1,443. According to the 1920 government census, there were 46,533 pure-bred dairy cattle in this state, of which 32,702 were Holsteins. With a total membership of over 22,000 living animals registered in its herd books, this live stock breeders' association is the largest in the world.

If you've still apples in your cellar, better get out the recipe book and serve them up fast and variously. They won't keep forever.

The reason the boys in France used to crave the juice of canned tomatoes is that this juice is loaded with vitamins, dietitians say, and vitamins ran low in the overseas diet. One dietitian figures that the family ought to eat twelve quarts a head of canned tomatoes between fall and spring.



Here is a Sketch of an Easily Constructed Gate that Can't Sag. The Sketch is Self-explanatory. Engineers will Tell You the Can't Sag Principle in this Gate is Correct.



## Thousands of De Laval Separator Users Have Received 20 to 30 Years of Efficient Service.

As a result of the Oldest De Laval Separator contest in which it was announced \$25 would be given to the owner of the oldest De Laval in each state, thousands of letters have been received, which prove beyond all question of doubt that 20 to 30 years of satisfactory service from a De Laval Separator is not unusual, and with reasonable care, to be expected.

### \$25 for the Oldest De Laval

This contest will be open until April 7th and other users of Old De Laval who have not entered the contest, still have time to do so. Simply write us, giving the date of purchase, length of service, serial number, and a statement concerning its service. Even though your De Laval may not be as old as some mentioned here, enter it anyway, as it must be kept in mind that this contest covers every state; and in some sections separators have not been used so long as in others. Winners will be announced May 1st.

Following are a few of the many letters from old De Laval users, which are typical:

### 30 Years

"Our De Laval Separator was purchased July 12th, 1893. It has taken care of all the milk produced on this farm from 1893 until November, 1917, and we were milking over 30 cows at times. Since November, 1917, I have shipped the whole milk. The last time I tested the skim-milk it showed 2/100 of 1% fat."—Henry Petersen.

### 29 Years

"I have a De Laval Separator bought in May or June, 1894, which has been run twice each day ever since, but one day. It has many a day separated 2,000 lbs. of milk and is still in first-class condition."—Fred G. Palmer.

### 20 Years

"We have a De Laval Separator that we bought in the fall of 1903. It has been used twice a day nearly every day, separating on an average of 83,579 lbs. of milk per year, and is still in good repair and doing its work well. The last time that the skim-milk was tested by the testing association it was skimming to 1/100 of 1% fat. If this separator ever wears out we shall want another De Laval."—A. B. and J. M. Bicknell.

### 22 Years

"I purchased my De Laval on December 21, 1901, and it is still in very good working condition. My neighbor has worn out two other makes already and has the third. Mine still skims cleaner than his and I hope to use it about ten years yet. It is not to be worn out."—George P. Leibold.

### 25 Years

"My De Laval Separator was bought in the spring of 1898. We have used no other. This summer we had our skim-milk tested at the creamery and it tested 2/100 of 1%. It will be good for years yet."—Mrs. Tena Larson.

### 24 Years

"My De Laval Separator was purchased in 1899 and has been in service every year. This machine has separated about 18,000 gallons of milk annually. It has given me excellent service and skims cold milk perfectly. My sister purchased a new De Laval last spring and has saved nearly enough to buy a good milch cow."—Emil S. Shubert.

### Four to Five Times' More Use

Evidence such as this from thousands of users proves that a De Laval will last from four to five times as long as the average separator, and do better work all the time. It proves conclusively that the De Laval is the best and cheapest separator. The De Laval you buy today is the best cream separator ever built. With reasonable care it will last you a lifetime, and will pay for itself within a year. Sold on easy terms. See your De Laval agent or write us for full information.

**The De Laval Separator Co.**  
NEW YORK CHICAGO SAN FRANCISCO  
165 Broadway 29 E. Madison St. 61 Beale St.

## MADISON CEMENT STAVE SILOS

**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. Agents Wanted  
**MADISON CEMENT STAVE SILO COMPANY**  
Madison, Wis. Boscobel, Wis.  
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## For CUTS And WOUNDS

on man or beast, you will find Corona Wool Fat soothes the pain almost instantly and heals very quickly, often without leaving a scar. Can't be beat for  
**Sore Shoulders Collar Boils Caked Udders Scratches Cracked Hoofs Rope Burns Barb Wire Cuts Sore Teats Sore of Any Kind, Etc.**

## CORONA WOOL FAT COMPOUND

is one of the best remedies you can use. Made from the fatty secretions extracted from the wool and skin of sheep. Will not smart nor blister. "A friend in need" both in the home and barn—a REAL first aid. Sold by Druggists, Blacksmiths and Harness Dealers. If yours can't supply write us.

### Sample Box FREE

It won't cost you a cent or place you under any obligations—just send me your name and address. It's worth its weight in gold to any farmer or dairymen. Write.  
C. G. PHILLIPS, Pres.  
**THE CORONA MFG. CO.**  
14 Corona Block, Kerton, O.

When writing to advertisers please mention the Michigan Farmer.

## MINERAL COMPOUND FOR SYMPTOMS OF HEAVES

Booklet Free.  
\$3 Pkg. guaranteed to give satisfaction or money back. \$1 Pkg. sufficient for ordinary cases.  
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## \$24.95 ON TRIAL American FULLY GUARANTEED CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$24.95. Closely skims warm or cold milk. Makes heavy or light cream. Different from picture, which illustrates larger capacity machines. See our easy plan of  
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## ATTENTION—GUARANTEED BABY CHICKS WORLD'S GREATEST EGG PRODUCERS

Tom  
Barron  
Imported  
White  
Leghorns



Sheppard  
Famous  
Anconas  
Direct

From grand selected flocks on free range, built direct from laying contest winners. Strong, vigorous chicks that will prove great layers. Flock culled by poultry experts and headed with vigorous pedigreed males from the best laying strain in the country, postpaid. Full live delivery guaranteed. Fine instructive catalog free. Reference two banks.

Silver Ward Hatchery, Box 30, Zeeland, Mich.

## JUST-RITE LOOK! Baby Chicks

A Hatch  
Every Week  
All Year

POSTAGE PAID, 25¢ live arrival guaranteed. MONTH'S FEED FREE with each order 40 Breeds chicks, 4 breeds ducklings, select and exhibition grades. Catalog free, stamps appreciated.

NABOB HATCHERY, Dept. 15, Gambler, O

## 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.

WOLVERINE HATCHERY  
ZEELAND, MICH. R 2

## Baby Chicks

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.

**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 & Guineaes, also breeding stock. Send for prices and circular. Booking now for early delivery. CLINTON HATCHERY & POULTRY FARMS, Wilmington, Ohio.

**EVERLAY BROWN LEGHORNS**  
The beautiful business hen! Wonderful winter layers. Big white eggs. World Record layers American Egg Contest. Greatest winners New York Chicago. Hardy, vigorous money makers. Stock Eggs, Chicks, shipped safely. Catalog free. EVERLAY FARM Box 22, Portland, Ind.

**GUARANTEED BABY CHICKS**  
From World's Champion Layers. Certified, Trap-Neated, Pedigreed, Snowden's English White Leghorns, 250-291 Egg records; Sheppard's 531 Egg strain Anconas. Guaranteed strong healthy chicks. Real money makers. Beautiful Catalog FREE. FRANK A. VAN SHEL, Box 32, Zeeland, Mich.

**Guaranteed Chicks: S.C. Tom Barron Eng. Leghorns.** Brown Leghorns, Sheppard's Anconas, 130 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 Hatchling eggs. Young Wycoff and Hollywood strains. Also Barron. Customer reports average 22-25 eggs for December. Circular. GLEN E. OLARK, Hopkins, Mich.

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



## RELIABLE CHICKS

We are reliable in business of hatching and selling chicks. For years we have been furnishing the public with high class chicks, which have proven so satisfactory that 60% of our business is now from old customers. Reliable chicks are produced from selected heavy laying hens on free range, with Pedigree matings, which are strong and vigorous. State approved Barron Strain English White Leghorns and Park's Barred Rocks. Prices reasonable, 100% live delivery guaranteed. Get our 1923 Catalogue now for your foundation stock.

Reliable Hatchery and Farm, 92 E. 17th St., Holland, Mich

**300,000 CHICKS**  
Guaranteed Michigan Bred and Hatched  
ENGLISH WHITE & BROWN LEGHORNS, SHEPPARD'S Famous Strain ANCONAS, 50, 57, 100, 113, 500, \$80. BARRED ROCKS, R. & S. O. REDS, 50, \$8.50; 100, \$16; 500, \$75. 1,000 orders at 500 rate. RHODE ISLAND WHITES, 100, 18; 200, \$35. Postpaid, full live delivery guaranteed. Strong, vigorous Chicks from heavy laying flocks. Order right from this ad. WE SATISFY OUR CUSTOMERS. Catalog free. Reference Holland City State Bank.

KNOLL'S HATCHERY, Box H, Holland, Mich.

## Karsten's FARM



4 1/2 Months Old  
and Laying

## 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 care and feeding of poultry for profit.—It's free.

Karsten's Farm, Box 101, Zeeland, Mich.

## STRONG PURE BRED CHICKS

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 4 1/2 to 5 months. 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

10 Years in Poultry  
R. No. 2 Zeeland Michigan

## Quality Chicks



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.



R 4 Holland, Mich.

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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 of SUPERIOR QUALITY

From 12 select heavy laying varieties of Standard bred poultry, free range and Hogan 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.

Bowling Green Hatchery & Breeding Co.  
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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 lb. cock. R. W. MILLS, Saline, Mich.

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

## LIVER TROUBLE.

About five weeks ago my hens began with their eyes swelling shut and after that when the swelling went down they had a bowel trouble. Several of the hens have died and they don't eat after they get sick, and then their combs turn black before they die.—W. L.

The eyes swelling shut indicates colds. Remove the mucous from the nostrils and inject a commercial disinfectant. The bowel trouble may be caused by a lack of a balanced ration. When the comb turns dark it is often a sign of liver trouble. Perform a post-mortem on birds that die and note the condition of the internal organs. This often furnishes information that is helpful in determining treatment. Liver trouble is usually caused by too concentrated a ration, combined with lack of exercise, and must be treated by prevention as it cannot be diagnosed soon enough for treatment.

## CONGESTION OF BLOOD.

Can you tell me what is the matter with some of my hens? They seem thrifty and well, but when I kill them and come to clean them, I find all the skin back of the breast bone, beneath the vent is of a very dark color and scarcely any fat, and what there is, is very tough. All of my chickens are not like that. Others would have a cup or more of fat where those with dark skin have scarcely any. They are all in the same coop. Would they be fit to eat?—W. D. L.

The skin beneath the vent of old hens might be rather dark, due to congestion of blood or sunburn if the parts were not protected by feathers. The skin and layer of fat in a thin bird might be very tough at that point. Whether such a bird would be fit for food would probably depend on its general physical condition, as indicated by a postmortem examination. However there is a general prejudice against using poultry for food, except when in prime physical condition and I could not pass on the value for that purpose without seeing the bird.

## BAD CONDITION OF CROP.

We have found three hens with rotten crops. The first one we operated on according to crop-bound rules found in the Michigan Farmer. She is still alive, eats, sings, and seems to feel fine, and I can't tell how she can live as her crop all seems to have rotted away. They all eat lively and well and the only way we can tell anything is wrong is by their breast being wet and rotted. We have a nice dry, sunny pleasant coop, with oat straw for them to scratch in on the floor. And feed them a balanced ration of dry mash in hoppers, which consists of the following: Equal parts of bran, middlings, ground oats and ground corn, also half part of meat scrap, oyster shell and clean water are before them all the time. For scratch feed in the morning we give them equal parts of cracked corn, wheat and a few oats. For green feed at noon we give them sliced raw potatoes, and at night cracked corn and a warm wet mash, minus the meat scrap. About two weeks ago we gave wood ashes from the cook stove, only once. Could this have caused the trouble?—R. P.

Wood ashes are not good for hens because of the lye they contain. Hens on range will pick bits of charcoal from a heap of wood ashes without causing harm, while hens confined in the house in winter might eat a large amount of wood ashes if they were available. This might cause a bad condition in the crop. It does not seem to harm hens to eat coal ashes.

Possibly the trouble is caused by sour crop. The contents of the crop can be removed by kneading after giving the bird a dose of castor oil. Several teaspoonfuls of warm soda water may be beneficial. Discontinue using wood ashes and after the hens are on their spring range the crop condition may show rapid improvement.

## HIGHEST QUALITY CHICKS

### Michigan's Old Reliable Hatchery

(The most modern and best equipped Hatchery in the state)



Pure Bred English and American S. O. W. Leghorns; S. O. Anconas; Barred Plymouth Rocks and R. I. Reds. Strong, well hatched chicks from tested Hoganized 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.

## BABY CHICKS

BEST LAYING, HEAVY LAYING, PUREBRED Tom Barron English White Leghorns, S. C. Rhode Island Reds, Park's Barred 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 16?" We are the first and oldest importers of White Leghorns in this state. Watch our pen number 17 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.

## 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, 2 1/4 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.

## Pioneer BABY CHICKS

Bargain Prices from our Superior Egg Breeds. English White Leghorns & Barred Rocks. Vigorous, healthy, early maturing chick from our leading strains will start you right in the poultry business. Order now—for early deliveries, valuable catalog free. Write tonight.

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



## CHICKS

White Leghorns and Anconas. Our stock is scientifically culled by experts, assuring you strong healthy, bred to lay chicks. That will live and grow. Live delivery guaranteed. Catalog free. Sterling Poultry Farm & Hatchery, Zeeland, 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

**CHICKS \$10.50 AND UP** from Hogan tested hens. Wh. Br. & Buff Leghorns, 50, \$7; 100, \$13; 500, \$62.50. Bar. Rocks, Anconas, 50, \$7.50; 100, \$14; 500, \$67.50. Reds, Wh. Rocks, Minorcas, 50, \$8; 100, \$15; 500, \$72.50. Buff Orpingtons, Wh. Wyandottes, 50, \$9; 100, \$17; 500, \$82.50. Mixed, 100, \$11; 500, \$52.50. Order now. Catalog Free. Eggs for Hatching. Ref. 4 Banks, Tri-State Hatcheries. Box 512, Archbold, Ohio

**White Leghorn CHICKS**  
Heavy Laying, pure bred, English strain. Flocks culled and tested for laying ability. Strong, healthy chicks. 100 percent live delivery guaranteed. Postage paid. Catalog, low price list free. Write quick. Catalpa Grove Hatchery, Box 1, R. 2, Holland, Mich.

**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.

**CHICKS**  
S. C. W. Leghorns, Purdue University heavy laying strain. Buff Orpingtons, R. I. Reds, White and Barred Rocks, and other varieties. Order now. Postage prepaid. Satisfaction guaranteed. Colonial Place Hatchery, R. 4, Kokomo, Ind

**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.

**Baby Chicks** Selected chicks from the heart of the baby-chick industry. Leading pure breeds from heavy egg producing strains. Alive 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. All eggs set produced by our own breeding pens. Price \$12 per 100. Cruse & Warner, Hudson, Mich.

**Barred Rocks** Eggs and baby chicks from Silver cup winners. Eggs \$2.00 per 15 delivered by P. Circular free. FRED ASTLING, Constantine, Mich



# White Diarrhea

Remarkable Experience of Mrs. C.M. Bradshaw in Preventing White Diarrhea

The following letter will no doubt be of utmost interest to poultry raisers who have had serious losses from White Diarrhea. We will let Mrs. Bradshaw tell of her experience in her own words:

"Gentlemen: I see reports of so many losing their little chicks with White Diarrhea, so thought I would tell my experience. I used to lose a great many from this cause, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 507, Waterloo, Iowa, for their Walko White Diarrhea Remedy. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after giving the medicine, and my chickens are larger and healthier than ever before. I have found this company thoroughly reliable and always get the remedy by return mail.—Mrs. C. M. Bradshaw, Beaconsfield, Iowa."

## Cause of White Diarrhea

White Diarrhea is caused by the Bacillus Bacterium Pullorum. This germ is transmitted to the baby chick through the yolk of the newly hatched egg. Readers are warned to beware of White Diarrhea. Don't wait until it kills half your chicks. Take the "stitch in time that saves nine." Remember, there is scarcely a hatch without some infected chicks. Don't let these few infect your entire flock. Prevent it. Give Walko in all drinking water for the first two weeks and you won't lose one chick where you lost hundreds before. These letters prove it:

## Never Lost a Single Chick

Mrs. L. L. Tam, Burnetts Creek, Ind., writes: "I have lost my share of chicks from White Diarrhea. Finally I sent for two packages of Walko. I raised over 500 chicks and I never lost a single chick from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor; they develop quicker and feather earlier."

## Never Lost One After First Dose

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes: "My first incubator chicks, when but a few days old, began to die by the dozens with White Diarrhea. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the Walker Remedy Co., Waterloo, Iowa, for a box of their Walko White Diarrhea Remedy. It's just the only thing for this terrible disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."

## You Run No Risk

We will send Walko White Diarrhea Remedy entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is for White Diarrhea in baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for package of Walko—give it in all drinking water for the first two weeks and watch results. You'll find you won't lose one chick where you lost hundreds before. It's a positive fact. We guarantee it. The Leavitt & Johnson National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of this guarantee. You run no risk. If you don't find it the greatest little chick saver you ever used, your money will be instantly refunded.

WALKER REMEDY CO., Dept. 507, Waterloo, Iowa.

Send me the [ ] 50c regular size (or [ ] \$1 economical large size) package of Walko White Diarrhea Remedy to try at your risk. Send it on your positive guarantee to instantly refund my money if not satisfied in every way. I am enclosing 50c (or \$1.00). (P. O. money order, check or currency acceptable.)

Name .....  
Town .....  
State ..... R. F. D. ....

Mark (X) in square indicating size package wanted. Large package contains nearly three times as much as small. No war tax.

## A DUCK REMEDY.

HAVE noticed so many times in the Michigan Farmer of different ones having trouble with ducks and goslings going lame, at times they can walk, and again they seem to have no use of their legs.

Would say that a neighbor and myself have had the same trouble. We take a piece of fat salt pork about the size of a kernel of field corn (or a little larger) and cut it up in pieces and put this amount down each one. One dose usually will bring them out all right, if not repeat again.—Reader.

## KEEPING TURKEYS HEALTHY.

HAVE had some sick turkeys. Their bowels were real loose and yellow. I think they had cholera. Just as soon as I found they were sick I put them in a warm place away from the rest of the turkeys and gave each one a teaspoon of castor oil, and continued giving a teaspoonful every morning until nearly well. The last few doses I gave about half a teaspoonful. If they eat and are where they can get what they want to eat and drink, and plenty of grit they will be all right.

Two of my turkeys didn't care to eat, so I took some ground oats and corn and put in a little pepper, some wheat, and some charcoal pounded up fine. I mixed this with a little warm water and put a little at a time down their throats until I thought they had enough. Bread crumbs and apples are also good. Feed them twice a day. I brought one of my turkeys out in a little over a week by using castor oil.—Reader.

## HATCHING GOOSE EGGS.

Can geese eggs be hatched in incubator, and at what temperature? How would it be to use incubator for a week or two, then place under hens or geese? Can you tell me what caused the young to have spells of not being able to walk for an hour or so? After having several spells they die.—R. C.

Goose eggs can be hatched in an incubator although most breeders have the best success by using hens and the mother geese. Other breeders have been successful in keeping the goose eggs in an incubator for three weeks and then finishing the hatch under hens. A temperature between 101 and 102 degrees is right for the incubation of goose eggs.

For the first three weeks some goose breeders dip the eggs in water at about 110 degrees and do it twice each week. The fourth week the eggs are dipped every night until some of them begin to pip.

Goslings sometimes have congestion of the brain, often caused by acute indigestion or worms. Two teaspoonfuls of castor oil as a laxative may help such cases. If parasitic worms are found in the droppings give a half teaspoonful of turpentine to each gosling. A medicine dropper placed as deep in the throat as possible is handy to administer the dose.

Exposure to very hot sun, lack of range, and spoiled feed might cause similar trouble.

## BLUE OINTMENT FOR LICE

Last summer I noticed an item in your paper telling how to use Blue Ointment, but forgot how and how much to use. Please let me know how to use same, how much to use and if it may be applied in winter.

—A. J.

The blue ointment can be mixed with equal parts low grade vaseline. Apply a bit of the ointment about the size of a pea beneath the vent and rub it thoroughly into the skin. Place a very small dab under each wing and rub it in thoroughly. This treatment may be used in winter or at any season with very good results.

# BABY CHICKS

that Pay Big Profits. MAKE GREAT WINTER LAYERS WHEN PRICES ARE HIGHEST. WORLD FAMOUS 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.



## Low Bargain Prices!—Write Quick!

Will you be satisfied next winter when eggs may be 75 cents a dozen or more with common ordinary stock when it costs no more to buy or to feed "Superior" stock that lay twice as many eggs as ordinary chickens do? All our flocks are free range, healthy birds, tested and culled by Michigan Agricultural College experts!

STRONG, HEALTHY, PERFECT CHICKS—THE BEST THAT MONEY CAN BUY.

Superior Poultry Farm

BOX 101, ZEELAND, MICH.

## Valuable Catalog FREE

WE GUARANTEE TO SAVE YOU MONEY. Ship PREPAID to your door, GUARANTEE LIVE DELIVERY, and ABSOLUTE SATISFACTION OR REFUND YOUR MONEY. Write today for free catalog that describes these wonderful chicks and gives valuable money-making suggestions.

White Holland Turkeys Tolouse geese  
AL DEN WHITCOMB, Byron Center, Mich.

PERMANENT WHITE LEGHORNS FREE  
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 Farms. GEO. B. FERRIS, 99 UNION, GRAND RAPIDS, MICH.

## 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

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.

## BABY CHICKS

The most Progressive Hatchery in the country

## SEX GUARANTEED

By years of experimenting we have evolved a system of sex determination. We guarantee 60% of the sex ordered. Our average is considerably higher. We guarantee 100% live delivery; bred from males whose dams have egg records of 250 to 287. Specialize S. C. White Leghorns but fill orders for any breed. Further information if asked

## UTILITY HATCHERIES AND FARMS

Dept. 30  
ZEELAND, MICH.

# 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 An onas. 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., Postoria, 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 328 eggs in January from 180 pullets.

A. Dull, Port Huron, Mich., The pullets began to lay at 4 1/2 months old and averaged 23 1/2 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.

Wyangarden Hatchery, Box M, Zeeland, Michigan



**140 EGG Wisconsin ONLY \$13.25 Freight Paid**

Just think of it! This fine, California Redwood Wisconsin 140-Egg Incubator, with double walls, dead air space between, hot water heat, copper tank and boiler, double glass door, nursery, self-regulating—everything complete, set up ready to run, for only \$13.25, freight paid east of Rockies. With 140-chick hot air brooder, only \$17.75.

**180 Egg size, only \$15.75 with Brooder, both \$22**

You take no risk in buying Wisconsin. You have 30 days to try them—money back if not pleased. Select the size you want—order today.

**30 Days Trial Why Pay More**

**Wisconsin WICKLESS Colony Brooders**

For those who want Colony Brooders here is the finest on the market. Automatic control—can't go out—can't overflow—burn steady blue flame—no wick—no troubles. Look at these

**Express Paid Prices** 22 in. Canopy, 100 chick, \$8.95  
32 in. Canopy, 300 chick, 15.55  
42 in. Canopy, 500 chick, 17.75

Write for our New 1923 Catalogue or order direct from this ad.

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Box 116, Racine, Wis.

**This Big 250 Egg Size only \$22.75**  
With Hot Air Brooder \$31.00

**POULTRY CHICKS WITH PEP**

Try some of our guaranteed Hogan Tested, Dont-Stop-Laying kind of chicks. They will pay you big. Rocks, Reds, Wyandottes, Leghorns, Minorcas, Anconas, Orpingtons. Catalog Free. Post-paid Safe Delivery.

**Member I.B.C. Association**  
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This is approximately what Zeeland Poultry Breeders will produce this year. Our catalog tells about Zeeland's large chick industry; also our stock and prices. Chicks 10c up. Write

**Zeeland Poultry Farms**  
ZEELAND, MICHIGAN

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Toledo's largest hatchery. Known for quality. All leading varieties hatched daily. Complete catalog and prices. Both phones.

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**BABY CHICKS**

Insure your success in the poultry business by starting with "CLOVERLEAF" chicks. Every chick guaranteed. Send for free catalog. Don't wait.

**Cloverleaf Poultry Yards**  
(H. J. Cook)  
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**B-A-B-Y C-H-I-X**

Order Now For 1923

**WHITE LEGHORNS AND MOTTLED ANCONAS**  
Also Black Leghorns, Brown Leghorns, Buff Leghorns, Black Minorcas, R. C. Rhode Island Reds, Barred Plymouth Rocks, White Plymouth Rocks, Silver Wyandottes, White Wyandottes. WE HATCH eggs from Hoganized flocks on free range on separate farms. Send for Price List.

**CRESCENT EGG COMPANY**  
Allegan Michigan

**BABY CHICKS**

Of quality from real winter layers, mated by pedigree males from Michigan Agricultural College. All our matings are inspected and accredited by our state Dept. Agr. as to their laying ability and health. By close culling year after year we can say we have a real improved egg machine in S. C. American and English strain. White Leghorns and S. C. Sheppard strain. Anconas. Write for our 1923 catalogue and price list. It's free. Chicks 10 cents and up. Reliable Poultry Farm & Hatchery, Zeeland, R. I. Mich.

**Chicks Caball's Barred Rocks, Eggs.**

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 200 eggs so why take chances. Order now. Catalogue Free.

**G. C. BALL**  
Box M. Hudsonville, Mich.

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**More Chicks—Less Cost**

This brooder is a chick-saver and a money maker. It raises more and better chicks, at less cost than other brooders. Stove is best in the world to hold fire—air-tight and self-regulating. It burns soft coal—the cheapest brooder fuel—perfectly. Cuts fuel costs in half. Stove will also burn hard coal, wood, coke, etc. Regulator maintains even heat night and day. No trouble. Sizes for 500 or 1000 chicks. Low priced. Write TODAY.

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**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 Both only Hot-Water Double-Walled Brooder \$18.95

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**THINK OF IT 140 EGG Ironclad FOR ONLY \$13.85**

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**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

**Both for \$19.75**

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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 \$29.90**

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Your success in the poultry business depends on the right start. Clean, wholesome feed, pure water, fresh air, and good care. Columbus Feeders, and all our other appliances are great helps for the modern poultry raiser. Our literature tells a convincing story. We sell through your local dealer. WRITE US.

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140-Egg Size—Guaranteed—has double walls, copper tank, full-size nursery, automatic regulation thermometer held so that chicks cannot break it when hatching. Detroit Brooders, too. Double walled, hot water heated. Write for special low price on both machines.

**Detroit Incubator Co.**  
Dept. 11 Merritt St., Detroit, Mich.

## March Poultry Notes

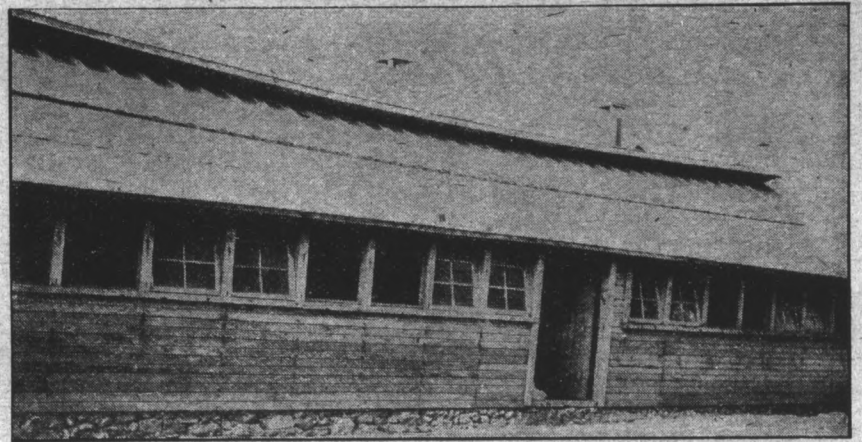
By R. G. Kirby

A CELLAR with a little ventilation is an ideal location for the incubator. The temperature will not vary greatly and the floor is free from jarring. If the machine must be operated upstairs do not have it close to the stove. Avoid heavy walking and slamming doors. Keep the room temperature as uniform as possible as the outside air is constantly passing through the incubator. Regulation is difficult if the room is hot during the day and cold at night.

Chicks often knock down the thermometer at hatching time. Then you have to run the machine by guess

lay much better than day-old chicks. Such shipments would save buyers' time in going for express consignments. But I suppose the authorities must draw the line somewhere.

When buying hatching eggs at a distance the advice has been to allow them to stand and settle for a day before starting incubation. I cannot find that this delay is of any special value. It takes a few hours for the eggs to warm up in the machine and they should have ample time to settle before much growth starts. It seems good judgment to start incubation at once, as every day lost means the



This House Has the Essentials of Good Light and Good Ventilation.

work as the door cannot be safely opened when the chicks are emerging. I find it pays to wire the thermometer to the tray when the eggs are turned the last time. Then it will stay upright and you can keep the machine from becoming four or five degrees too hot at hatching time.

The air around an incubator is improved if you use high-grade oil and have a fresh wick for each hatch. The burner can be boiled in hot soda water to remove gummy accumulations. Then the wick will turn easily and the flame is more easy to regulate.

Do not worry too much if a few chicks die in the shell. I understand many experienced poultrymen are satisfied if they obtain close to fifty per cent hatches as an average for the season. Of course, the fertility of the eggs is much higher and it must be that even the best of poultry keepers cannot be sure of hatching every egg. Breeding stock will produce a larger per cent of fertile eggs if they are allowed free range as soon as weather conditions are at all favorable. Balanced rations in the winter laying house are necessary, but fresh green grass, angleworms and exercise on the soil is the original formula for poultry vigor and thrifty chicks.

### Shipping Hatching Eggs.

Parcel post shipment of hatching eggs is a great help to poultrymen. Keep a supply of the commercial cardboard cartons and know the weight of different sizes of boxes when packed. Keep a map handy and know the zone to which your shipment is made. Buy stamps in quantities of the different denominations you will need. Don't make the postman fish around in the mail box every day until he has harvested enough pennies to stamp your boxes of eggs.

Many poultrymen receive inquiries about shipping mature breeding stock by parcel post. The post office will only accept day-old chicks. Personally I think a neatly crated cockerel is about as easy for the postman to deliver as a big box of chirping chicks. If a cull apple is placed in the crate it would supply enough moisture for a short trip and a sloppy water dish would not be needed. A vigorous cockerel would stand the hardship of a de-

eggs are older, and experiments prove that the freshest eggs bring the best chicks.

The problem of applying moisture to hatching eggs has not been solved to my satisfaction. Sometimes the best hatches have seemed to result when warm water on woolen cloths has been applied to the eggs for a couple of hours the last time they have been turned. Some poultrymen report the best results when no moisture has been used. There is a great deal of poultry information of this kind that is not backed up by thorough experimental data. Until such facts are known an abundant supply of common sense will be useful in running a poultry business. Not all successful managers do everything in exactly the same way.

### Poultry Yard Plantings.

Evergreen hedges for windbreaks should be started as early in spring as the ground can be worked. Fruit trees must be ordered early to insure a supply of the desired varieties. Cool shade on the poultry range is a help in delaying the moult in summer and keeps the birds more healthy and productive. A little work with fruit is very useful in helping a poultryman to occasionally get his mind off the worries of caring for poultry. I think many of the men who have stayed with the poultry business the longest have maintained their interest by not getting an overdose of hens 365 days a year. They can appreciate a good cow or a productive fruit tree as well as a heavy laying hen. They do not get too narrow and the variety of work helps to make life more interesting on the farm.

A double range is useful near a large laying-house. While the birds are on one side of the fence it is possible to start corn, or sunflowers on the other side. When the crop is about high the birds can use the field as a range and they will gather many bugs and weed seeds around the corn and enjoy working in the fresh soil. This chance of turning under the soil where the hens have been running should not be neglected where many hens are using a limited range. The truth is that most hens use a limited range regardless of the acreage.



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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. It 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.

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You can now send your order for Chicks in 11 breeds of the Pure Breed Practical Poultry that is making egg records in the hands of our customers on their own farms. If you own stock that is guaranteed, stock that will make you real money, send for our description and price list. All stock guaranteed 100% pure bred. We want you to try our stock this year. It is of the best practical stock you can buy.

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Are from stock carefully selected for those qualities essential to good egg production, broiler production, roaster production, or caponizing. Write for free price list.

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**Barred - Rock - Baby - Chicks**

**Chicks That "GROW and LAY and PAY"**

Hatched Right and Priced Right  
**GUARANTEED**

**KAZOO HATCHERY CO.**  
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100,000 chicks 13c up to 20 pure bred certified egg-tested exhibition varieties. Hatching eggs. Catalogue. Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

**FOR SALE** Bourbon Red Tom Turkeys, large birds, \$12.00 each.  
SIM L. VINCENT, R. 5, Lapeer, Mich.

**GEO. H. LEE'S NEW POULTRY BOOK**  
AND EGG RECORD

**Just Out - 400,000 Copies FREE**

Tells about every poultry trouble and disease—how to avoid, how to remedy when already present. Mr. Lee is the most widely consulted "chicken doctor" in the world. This latest book is much larger and better, containing valuable new matter, also one year's egg record for four years. Free at any dealer handling Lee's Chickens and Eggs, or write us stating name.

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**THE PANAMA TILTING DRUM MIXER**

Capacity, 3 Cu. Ft. per Batch. Mixes concrete, mortar, plaster and feed. Costs less than the simplest concreting job. Order Now. Pay on delivery. Satisfaction guaranteed.

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**MARVEL CARBIDE GAS**

Ideal for lighting, cooking and ironing—produced by famous Marvel Carbide Gas Plant—"out in the yard like a cistern"—automatic; months without attention; lasts lifetime; economical. Simply show your plant to your neighbors; get yours without cost; be our agent. Write for booklet "THE MARVEL GAS CO." 425 STATE LIFE BLDG., INDIANAPOLIS, IND.

**FARMER AGENTS WANTED**

**VICTORY PLANTS**

5 butternut trees \$1.00. 5 beautiful Virginia cedars \$1.00. 100 Gibson or Dunlap and 100 Everbearing Strawberry plants for \$2.00. 1000 choice strawberry plants for \$3.50. 25 choice Gladwell bulbs for \$1.00. One Spirea or two Concord grape vines free with every order of \$4.00 or over. 5 Spirea V. H. for \$1.00. 1000 fine Concord grape vines for \$40.00 or \$50.00. 20 or 12 Concord grape vines for \$100. 12 gooseberry bushes for \$1.00. 100 asparagus roots for \$1.00. Not the cheapest but the best. Live and let live prices. All above small bargains post paid. Catalogue worth seeing. Free.

**THE ALLEGAN NURSERY, Allegan, Mich.**

**PATENTS**

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

**CLARENCE O'BRIEN, REGISTERED PATENT LAWYER, 952 Southern Bldg., Washington, D. C.**

**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 lines. 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 percent live arrival guaranteed. Parcel post paid. Write today for free catalog and prices.

**ROYAL HATCHERY & FARMS**  
S. P. WIERSMA, Prop. R. 2, Zeeland, Mich.

**WOOL PRICES FOR 1923.**

THE writer has received many inquiries as to wool prices for 1923 and the cost of shearing. When any man undertakes to name positive prices, he may be perfectly justified in the analysis of supply and demand as to prices, yet this very fact may be negatived by the failure of sellers to hold to the index of supply and demand. Then all the deductions are worthless, and the would-be "prophet" becomes the laughing stock of the "profiteers."

The wool dealers get the very best line possible on the markets then "drop under" what is called the "margin of safety," and this becomes the price. This margin carries with it a profit in addition to the handling charge. It may or may not be realized. Many of the wool dealers are financed by wholesalers and merely get a commission for handling, and in this way have no option in matters of price advances until "advised." Unfortunately the weakness on the part of the seller is that he has no community of advices or knowledge of what other producers are asking, or market tendencies, as the master of the State Grange, A. B. Cook, styles it, "no mark to shoot at."

Michigan wool is excellent in tensile strength and is desirable for using with tender wools to make a strong fabric and is in good demand. A comparison of Boston, London and the prices in the west where feeders are being tried out, should make Michigan wool sales to the farmer at not less than fifty cents for good average clips. This is a mark to shoot at.

The margins between delaines and cross-bred wools is much less than last year. The clean scoured wool content duty of thirty-one cents a pound works to the advantage of the middle wools—together with fabric styles for coarser weaves.

The writer has a folio of price currents, forecasts and statistics that he has compiled to reach the above conclusion, and feels that it is a fair price. There is a provision in the tariff law which permits tariff reductions in case the sales price becomes excessive as compared to the cost of production. The duty may be changed by the President of the United States. Production costs are fairly met at the above prices. Based on the low prices and losses of past years, the price should be higher. As a new basis, it is now equitable with general price levels. The level of wool at this base would be 166, as compared with 100 in 1913, and the general cost of living at 164. Pig iron at 170; lumber 193, and railroad rates at 188; cotton 209. Wool at these figures is not out of line with what the farmer has to buy.

The cost of sheep shearing, based upon skilled labor prices which are conceded to be high, should not exceed fifteen cents; shearers demanding board, twelve and one-half cents.—James N. McBride, President of the Michigan State Breeders' and Feeders' Association.

**THE TON LITTER CONTEST.**

(Continued from page 372).

will be inspected before July 1 by the county agent or the state leader, along with two or more disinterested farmers of the township. Litters must be weighed within three days before or after they are 180 days old.

**CHOICE STRAWBERRY PLANTS** \$3.75 per 1000  
prices at \$3.75. Guaranteed first class or money refunded. Cat'g. Mrs. Filena Wolf, Allegan, Mich.



**THE PLOW BOY**

Plow time is near at hand. This shoe is high enough to keep out the dirt and low enough for coolness. It fits snug and protects and supports the ankles going over rough and broken ground. It wears like iron.

**Ask for Stock Numbers**

470 if a double sole is wanted  
446 if a single sole is wanted

**A Double Tanned Horse Hide Shoe. THAT STAYS SOFT PAIN OR SHINE WORK SHOES ARE OUR SPECIALTY**

We are exclusive makers of work shoes made of horsehide double-tanned by our own secret process.

This is our specialty. Our every energy is bent on making the world's strongest work shoes.

To insure the best wearing leather we do our own tanning, in our own specialized tanneries. We tan horsehide, and it is known as the toughest fibre leather on earth, yet we make it soft and pliable as buckskin. Horsehide is used to cover league baseballs because it is the only leather tough enough to stand the grief.

And it stays soft when double tanned our way. When other leathers get wet they dry out hard. Rouge Rex double-tanned horsehide stays soft. Wet it, soak it in water, snow, slush, mud, and it dries out soft and flexible as velvet. Wear Rouge Rex shoes and you'll say you have gained an entirely new conception of shoe service, endurance and comfort.

We are the largest tanners of horsehides for work shoes in the country. We buy only the choicest hides. In making Rouge Rex shoes we use only the strongest part of each hide—the butts, where the fibre is toughest and most enduring.

You'll say that Rouge Rex Shoes are the most economical shoes you ever owned, and you'll rejoice in the comfort they give you. Notice how thick the leather is, and then feel how soft it is. Just like velvet. Yet Rouge Rex shoes wear like iron. And they never tire your feet.

We make a Rouge Rex work shoe for every purpose. All are horsehide through and through. For field and factory, for lumber and mining camp or oil fields, for hunting and motoring, where a husky, grief defying comfort-giving shoe is needed, there is a special Rouge Rex shoe.

If your dealer hasn't the Rouge Rex we'll see that you are supplied them by our nearest dealer. Write to us if you can not find a Hirth-Krause dealer in your town.

**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 Postpaid to your Door, \$11 per 100 Up**

FROM HOGAN TESTED, FREE RANGE HEAVY LAYING FLOCKS, ALL VARIETIES.

WHITE, BROWN and BUFF LEKHORNS and ANCONAS	\$14.00
BARRED ROCKS and R. I. REDS	\$16.00
WHITE WYANDOTTES, WHITE ROCKS, BUFF ROCKS	\$17.50
BLACK MINORCAS, BUFF ORPINGTONS	\$18.00
EXTRA SELECTED FLOCKS	\$20.00 per 100 higher

All lots of 500, \$1.00 per 100 discount. Large Price List for return mail. Postpaid full live delivery guaranteed. Hatched by the most modern method of incubation from good, vigorous, pure-bred varieties, carefully selected and safely packed. No catalogue. Order right from this ad and save time and disappointment. Reference, Chesaning State Bank or any business in Chesaning.

Address BABY'S FRUIT AND POULTRY FARM, Guy L. Babion, Prop., Chesaning, Mich.

**Buy "Better Quality" CHICKS**

We are in a position to furnish chicks from some of the best flocks of ENGLISH, WHITE LEKHORNS 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 42, Zeeland, Mich.**

**Egg Bred White Leghorn Chicks**

From our famous winter-laying English White Leghorns. Large, vigorous birds of fine utility type. Wonderfully the result of many years of breeding for increased production of large, white eggs. Our grade A chicks are from these selected females mated with pedigreed sires bred from 200 to 300 egg dams, descendants from Penna. Poultry Farm's egg laying contest winners, notably Lady Victory, 304 eggs and Keystone Maid, 306 eggs. Prices: 25, \$3.75; 50, \$7; 100, \$13; 500, \$62.50; 1000, \$120.00. Full count and live arrival guaranteed by prepaid parcel post. Order direct from ad. You can do so with absolute safety, as you are fully protected by our guarantee of perfect satisfaction. Reference, Zeeland State Bank. Catalogue free.

**PATER'S POULTRY FARM, R. 4 Hudsonville, Mich.**

**GUARANTEED RURAL CHICKS**

**EXCEPTIONAL VALUES IN HIGHEST QUALITY, PROVEN LAYERS**

PURE BRED S. C. English White Leghorns, Heavy Laying Brown Leg., Select Anconas, Heavy winter layers. Result of constant breeding for high flock averages. Buy direct from large modern hatching and breeding institution. All stock scientifically culled and approved and headed by large vigorous males. New LOW PRICES. Chicks sent post paid, and 100% live delivery guaranteed. Write for fine 1923 catalogue. Its free. Ref. two Banks.

**RURAL POULTRY FARM, R. 1, Dept. M, Zeeland, Mich.**

**Good Chicks - Fair Prices**

Pedigreed and Utility Grades of Barron Type White Leghorns, Barred Rocks, S. C. R. I. Reds. Customers report pullets laying at 4 mos. 20 days. Pedigreed chicks from flocks headed by males bred by Mich. Ag. College from trapnested hens of 200 to 300 egg records. Leghorns, 25, \$5.50; 50, \$10; 100, \$20. Rocks and Reds, 25, \$6.75; 50, \$12.50; 100, \$25. Utility chicks from selected, free-range flocks, pure-bred, heavy egg-strain hens. Great Value in Medium Priced Chicks. W. Leghorns, 25, \$4.50; 50, \$7.50; 100, \$15; 500, \$70; 1000, \$136. Barred Rocks and Reds, 25, \$5.50; 50, \$9.50; 100, \$18; 500, \$85; 1000, \$165. Special Discount of 2c per chick on all orders with remittance in full sent in before April 1st. Prepaid 97% live delivery guaranteed. Instructive catalog free. Bank reference.

**Michigan Hatchery & Poultry Farms, Box C, Holland, Michigan**



## BREEDERS' DIRECTORY

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

**Andy Adams**  
LITCHFIELD, MICHIGAN  
Michigan's Leading Live  
Stock Auctioneer  
DATES and TERMS on APPLICATION



### 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.

## AUCTION

MAR. 22, 1923

I will sell at public auction all the live stock of the late Frank R. Smith, Somerset, Hillsdale County, Mich., consisting of a herd of 17 registered and eligible to register Ayrshire Cows and Heifers, and three bulls. (Catalog on request.) Eleven head of extra good Grade Holstein Cows. Fifteen head of Grade Holstein Young Cattle. 13 head of good Work Horses. Ten Large Type Poland China Brood Sows from registered stock. Also one 12-horse Gasoline Engine, one Hinman Visking Machine.

Ayrshire Cattle will be sold between 11:00 a. m. and 1:30 p. m. Somerset is located on N. Y. C. R. R., Ypsilanti and Hillsdale Branch. Trains arrive and depart from the East 10:37 a. m. and 4:00 p. m. From the West 8:57 a. m. and 1:45 p. m. Good hotel accommodations here if desired.

TERMS OF SALE—All sums of \$25.00 and under cash, over that amount 5 months' credit, with good bankable notes at 7 per cent interest. Those coming from a distance please bring Bank Reference. Auc. John T. Hoffman, Andy Adams Fred S. Smith, Admin. J. D. McLouth, Clerk

**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, Olio, 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. Co. 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.

## 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.

## 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.

### FOR SALE KING SEGIS BREEDING

Born Sept. 26, 1922. His dam recently completed semi-official test giving 12,475.3 pounds of milk and 448.004 pounds of butter. Average figures recently given show 3600 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.

**Bull** adv. Jan. 27 sold to Ex-Gov. Warner. Daughters of his bred to son of largest semi record heifer. **erin Wayne Co.** Terms \$50 a year. Federal tested. **M. L. McLAULIN**, Redford, Mich.

**A Good Note** accepted in payment of finely bred reg. of the best, and at prices within reach of all. Write **GEO. D. CLARKE**, Vassar, Mich.

**FOR SALE** Reg. Holstein Heifer, 3/4 Black. 4 weeks old at \$40.00, **ARTHUR C. MOORE**, Lawrence, Mich., R. 1.

**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 C. Lillie**, Coopersville, Mich.

**Registered Jersey** cattle, young bulls, for sale. Tuberculin tested **J. L. CARTER**, Lake Odessa, Mich.

**FOR SALE** entire herd Reg. Holstein Mich Cows (10). Young males. **RAY B. PARHAM**, Bronson, Mich.

**Produce Your Own Feeders**  
**under EARLRIPE**  
**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, Maxwalton Rosewood 3d, 2d Dam, Imp. Rosewood 86th. 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

**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.

**FOR SALE** Shorthorn cattle tuberculin tested. Bred Berkshire sows. **SIMON G. MAICHELE**, R. 5, Middleville, Mich.

**DOUBLE** Standard Polled Shorthorns, milk strain. Bulls and Heifers all ages at farmers' prices. **Paul Quack**, Sault Ste. Marie, Mich.

**RED POLLED** Bulls for sale. Cows with calves and heifers. **G. A. CALHOON**, R. 1, Bronson, Mich.

**REGISTERED** Brown Swiss Cow for sale. 6 yr. old. Ret. freshen May 10, splendid milker. T. B. Tested. Price \$160. **Dewey Hartley**, Kalkaska, Mich.

## Breeders' Page

By P. P. Pope

### RUSSELL BROTHERS' DOINGS.

THERE is a farm over in the Saginaw Valley that folks call "The Bellevue Stock Farm." It is close to the little town of Merrill one mile north of M. 46 and is owned by Russell Brothers. They have been devoting their energies for several years to the production of Aberdeen-Angus cattle. Periodically they sell a draft of them at public auction, and they have a very attractive lot of cattle to offer this spring. The type of cattle they have been producing on the rich level fields of the Bellevue Stock Farm, have lots of scale and a very good degree of quality.

I was much interested in a cross-bred heifer that offers a very good demonstration of the quality of beef that can be produced by mating Holstein cows to Angus bulls. Also a few grade steers and heifers on this farm showed a marked degree of Angus quality.

It is a useful lot of cattle that the boys have developed on this farm and it is with no little pride that they show them to visitors. One of the brothers has moved to town so they are making a considerable reduction in the size of the herd, but are reserving a few of the good ones for themselves.

### GRATIOT COUNTY DUROCS.

THE Gratiot county breeders of Duroc swine have formed themselves into an association and one of their activities is an annual combination sale. They are in the habit of putting up a high-class offering at these sales and as a result have been realizing strong prices. Weather conditions, the price of pork, and plenty of bred sows for sale in this community, combined to hold prices down this year, and results were not so satisfactory as last year.

The top of the sale was first prize winner in her class last fall at the local county fair. She was consigned by J. B. Miller, and bought by Roy Marzloff, of Ithaca, for \$155.

The forty-six head realized \$2,056, an average of \$45 per head. The list is as follows:

1. Alonzo Simcox Ithaca.....\$47.00
2. Eli Roberts, Middleton..... 50.00
3. L. E. Johnson, Sumner..... 40.00
4. Harvey Wasson, Ithaca..... 40.00
5. Jas. Hnetynka, Perrinton... 45.00
6. O. O. Hagerman, Ithaca.... 29.00
7. Louie Schultheiss, St. Louis 40.00
8. O. O. Hagerman..... 35.00
9. J. H. Warner, Breckenridge 35.00
10. Eli Roberts..... 44.00
11. Wm. Hubbard, Ithaca..... 45.00
12. L. E. Johnson, Sumner..... 43.00
13. Howard Erickson, Ithaca.... 39.00
14. C. A. Story, Lowell..... 60.00
15. Haynes & Green, Elsie..... 42.50
16. Wm. Edgar, Breckenridge... 50.00
17. Elmer White, St. Louis.... 41.00
18. Haynes & Green..... 38.00
19. Daniel H. Fisher, Ithaca.... 46.00
20. Daniel H. Fisher..... 46.00
21. Geo. D. Clark, Ithaca..... 60.00
22. Alonzo H. Simcox..... 40.00
23. O. N. Martin, Ithaca..... 30.00
24. J. H. Warner, Breckenridge 55.00
25. T. M. Lamy, Ithaca..... 42.00
26. D. S. Herriott, St. Johns... 43.00
27. Haynes & Green..... 49.00
28. G. E. Ester, Ithaca..... 60.00
29. Roy Curtiss, Breckenridge.. 52.00
30. Roy Marzloff, Ithaca..... 155.00
31. Dr. F. R. McNabb, Ithaca... 70.00
32. Alonzo Simcox..... 40.00
33. Haynes & Green..... 60.00
34. Star Evans, Bannister..... 40.00
35. J. H. Warner, Breckenridge 37.00
36. Wm. Hubbard, Ithaca..... 33.00
37. Eli Roberts, Middleton..... 35.00
38. DeMott Bros., Pompeii..... 31.00
39. Victor LaDuke, Merrill..... 42.00
40. Glenn Hart, Ithaca..... 36.00
41. Elmer White..... 29.00
42. Elmer White..... 30.50
43. Rudolph Glinke, Wheeler... 50.00
44. Wm. Sanders, Wheeler..... 41.00
45. Eli Roberts..... 40.00

### 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'

### BROOKWATER DUROC JERSEYS

SPRING GILTS BRED FOR MARCH AND APRIL LITTERS  
ALSO A FEW GOOD BOARS  
Herd sires: Panama Special 55th, 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. BARLEY**, Alma, Mich.

### I AM OFFERING BRED SOWS

fall yearling and spring gilts, bred for March and April farrow, that are tops. Mated to O. O. K. Col. 2nd and Orion Giant Col. Write for price list.  
**W. C. TAYLOR**, Milan, Mich.

**DUROCS**—Special Sale of big fall yearlings and spring gilts, bred for March and April farrow. Also fall pigs now weighing 200 lbs. All sired by or bred to State Fair winners.  
**MICHIGANA FARM**, Pavilion, Mich.

**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.

**Duroc—Jerseys** A few Pathfinder Gilts bred to good sows 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** 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 for April Farrow. Pigs all ages. Best Bloodlines Shipped on approval. **OSCAR FATE**, Edison, Ohio.

**Chester Whites** boars all sold, bred gilts \$35 to \$50 C. O. D.  
**ALBERT DORR**, Clinton, Mich.

**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.

**O. I. C.** 20 large growthy gilts farrow in Mar also 131 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. 3/4 mile west of Depot, Clitz's phone.  
**OTTO B. SCHULZE**, Nashville, 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.  
**C. J. THOMPSON**, Rockford, Mich.

### RADIO GIANT

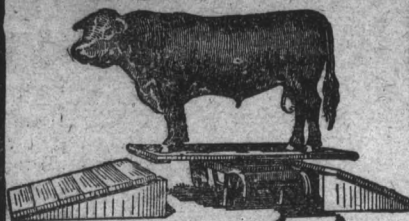
Represents the worlds largest strain of Poland China Hogs. Boars, Sows, Pigs at bargain prices from Mich. pioneer herd. We have bred them big for 30 years. We can furnish what you want.

**JNO. C. BUTLER**, Portland, Mich.  
Leonard's Big Type P. C. gilts sired by Leonard's Liberator and Orange Cleonaman and Tall Pigs at bargain prices. **E. R. LONARD**, St. Louis, Mich.

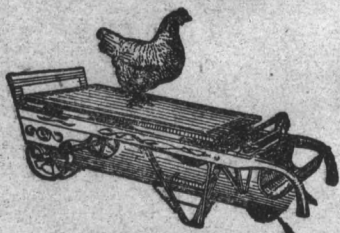
**Saginaw Valley Herd of O. I. C.** & Chester White Swine. C. O. Mich. Boy and Selection 1st, bred to Jumbo's Giant 1st, son of Grand Champion Boar at Mich. State Fair. Photos on request. **John Gibson**, Fosters, Mich. E. 2.



## Weigh a Bull



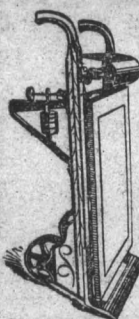
—or a Hen—



**\$7.50**

After Trial  
and You  
Keep the

## RENFREW Truck Scales



The first time the famous Renfrew scales have been offered on such liberal terms.

Here is a portable weighing machine as easily handled as a wheelbarrow which weighs with absolute accuracy anything from one pound to 2000 pounds. Absolutely guaranteed to be the equal in capacity and accuracy of any farm scale, regardless of price.

Will stand up under hardest usage. Enables you to check up on everything you buy and sell.

## Saves Its Price

Users everywhere tell us that it saves money and makes money every day. In three deals alone one buyer reports a saving of \$50.00—principally because he was able to take the scales to where the stuff was to be weighed.

## 30 Days Trial

Try it absolutely free for 30 days. If it cannot prove itself in that time don't keep it. We ask you to send no money—not a cent. Just say you want to try the scales. You be the judge. If, after 30 days, you think you ought to keep it, send \$7.50 and the balance in monthly payments.

## Mail FREE Coupon Today!

Just cut off and mail the coupon and we will send you full information. Do this today. Sending the coupon does not obligate you in any way.

Babson Bros.

Dept. 31-03, Chicago, Ill.

Send me full information about the free trial—easy payment offer on the Renfrew Truck Scales.

My Name \_\_\_\_\_

My Address \_\_\_\_\_

County \_\_\_\_\_

State \_\_\_\_\_

## SPOHN'S DISTEMPER COMPOUND

Is indispensable in all cases of Distemper, Influenza, Coughs, Colds, Heaves and Worms among horses and mules. Used and endorsed by leading stock farms and veteran drivers of U.S. and Canada for 30 years. Sold in two sizes at all drug stores.

SPOHN MEDICAL CO. GOSHEN, IND. U.S.A.

## HEAVES

Is your own horse afflicted? Use 2 large cans. Cost \$2.50. Money back if not satisfactory. ONE can at \$1.25 often sufficient. In powder form. Most for cost.



## NEWTON'S

A veterinary compound for Horses, Cattle and Hogs. Heaves, Coughs, Distemper, Indigestion. Worm expeller. Conditioner. At dealers or by parcel post.

30 years' sale by parcel post. THE NEWTON REMEDY CO., Toledo, Ohio

## Veterinary.

CONDUCTED BY DR. W. C. FAIR.

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

—Elephantiasis.—During last summer I fed my horse some oil meal; hind leg swelled, opened in several places, but healed. Our veterinary said he had elephantiasis and treated him for it. His leg remains enlarged, but he does not walk lame. A. G. O., Lawton, Mich.—Light feeding of grain when idle, keeping bowels open, daily exercise will help ward off future attacks, but his ailment is incurable. Hand-rub leg twice daily.

Chronic Lymphangitis.—Horse was all right in the evening; next morning leg was badly swollen; have applied liniment, also blisters, but leg remains thick. Can he be cured? I. P., Ray, Indiana.—No, his leg will remain thick. Had you given him cathartic, fomented swelling with warm water, fed no grain, walked him some three times a day, his leg would have soon reduced to its normal size. Another bad result of stuffing idle horses with grain and failure to exercise them daily.

Ringbone.—My seven-year-old horse has ringbone. I would like to cure him. W. M., Evart, Mich.—Give him rest, clip off hair, apply one part red iodide of mercury and four parts lard, once every week or ten days. If this fails, have him fired.

Itchy Tail.—Our three-year-old filly rubs her tail. E. M. J., Buchanan, Mich.—Don't forget the importance of washing tail occasionally, with soap and water, apply one part bichloride of mercury and 1,000 parts of water three times a day.

Horse Eats Wood.—I have a horse sixteen years old that eats his manger, chews wood, licks earth. Had teeth floated one year ago. E. E. D., Fowler, Mich.—Mix equal parts baking soda, ginger, gentian, salt, powdered wood charcoal together and let him help himself. Feed some roots.

High-colored Urine.—Urine which my eleven-month-old heifer passes seems to have a little blood in it, or it may be only high-colored. She seems to be in good health. H. J. M., Pontiac, Mich.—Give her a teaspoon of acetate of potash in feed or water once a day. She may have been injured.

Want on Navel.—I have a ten-month-old heifer that has a large bunch on navel which resembles a wart. There are three more small ones between the navel and udder. C. B., Riga, Mich.—Cut them out, then apply one part of alum and nine parts boric acid daily.

Loss of Appetite.—One of our cows came fresh three weeks ago; since then her appetite has been poor; she is most fond of grain; she passes some blood. T. L., Levering, Mich.—Give her a half-ounce of powdered gentian three times a day. Feed her some roots and clover or alfalfa.

White Scours.—We have registered cow that has had three calves, every one of them have died of the "white scours." One of them lived about three months, one a week old, the other lived only a few days. S. P., Clare, Mich.—You should clean and thoroughly disinfect your stable, prepare a stable for your cow to calve in; promptly clean the navel of calf, paint cord stub with tincture of iodine, then apply boric acid three times a day; also give calf a full dose of white scour serum soon as it is born.

Abnormal Appetite.—Some of my cows are inclined to chew leather sticks, old pieces of blankets. W. N. M., Bay City, Mich.—In treating such cases we must try to improve the process of digestion and to supply the animal with a sufficiency of sound, wholesome food. Mix carbonate of iron, four ounces; powdered gentian, six ounces; powdered fenugreek, four ounces; salt, eight ounces; finely ground bone or flour, one pound; give each cow a tablespoonful, and three tablespoonfuls of powdered wood charcoal in each feed three times a day.

J. M., Rhodes, Mich.—Your young cow died as the result of being choked. If you have another case, oil rubber tubing and put it down gullet into stomach, and recovery will soon follow.



## DR. LEGEAR'S STOCK POWDERS

"I never found anything give such results for horses, cows, hogs or cattle," says Henry Schwarts, of Wiggins, Colo.

Dr. LeGear's Stock Powders sharpen the appetite, eliminate constipation and put stock in healthy, normal condition. Horses shed quickly as a result of its use, and consequently work better. Cows give more and richer milk, while all stock, including sheep and hogs, have better digestion—purer and richer blood—keener appetites—freedom from worms. It is the Spring help that all your stock should have now.

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JOSEPH RIVARD is but one of hundreds of men who have taken up this big-money business of ditching.

"We made \$4,500 last year with our Buckeye," write Herr Bros., Piper City, Ill. "We have just ordered two more machines, making five in all, which we own."

R. W. Sherrard, Rochester, Ind., writes, "In one day's work with my Buckeye, I cut 117 rods of ditch 42 inches deep, for which I received \$71."

### We Will Show YOU How

We have started hundreds of others—farmers, farmers' sons, contractors—in this high-profit business of ditching. Right in your own locality, spare time or full time, you too, can easily make thousands of dollars a year in this big money-making work. (No experience necessary. Our service engineers start you right and stand behind you.

For the ability to dig through the toughest jobs, through hardpan or frost; for built-in ruggedness and durability; for the utmost service through season-after-season continuous work, the Buckeye Ditcher is without equal!

Drop us a line today. We will give you our unbiased advice about starting in this large-paying business in your locality. (1)

The Buckeye Traction Ditcher Co.  
361 Crystal Ave. Findlay, Ohio

### HOGS

Chester Whites. Gilts bred for April and May farrow, sired by State Fair prize yearling. Fall gilts. LUCIAN HILL, Tekonsha, Mich.



Winter Problem solved by the Inner Overcoat Hive. Send for illustrated catalogue 32 pages of bee keepers supplies. Bees wax wanted. Best white Michigan honey for sale 5 lbs. \$1.25, 10 lbs. \$2.25, 50 lbs. \$10. Goldenrod 5 lbs. \$1; delivered anywhere in Michigan. A. C. WOODMAN CO., Dept. M. F., Grand Rapids, 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. P. POPE, Mt. Pleasant, Mich.

Big Type P. C. some very choice boars doublelimb immune, out 180 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Barr Oak, Mich.

## 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.

L. T. P. C. Gilts and boars all sold. Thanks 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 bred sows at reasonable 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.

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 Chinas

Fall pigs of either sex. Sired by Foxy Clansman 43975 Mich. Sr. Champ. 1922. T's Clansman 391211 Mich. Sr. Champ. 1920 and T's Big Orange 481463. Write or come and see them. A. A. FELDKAMP, Manchester, Mich.

Large Type Poland China Gilts sired by Mich. Liberator, & Big Checkers. Bred to model Giant and Mich. Liberator. d. 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

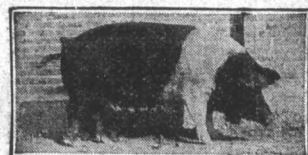
Lone Maple Farm Big Type Poland Chinas. Nothing for sale at present. F. R. DAVIS & SON, Belding, Mich.

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. 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 Register. W. E. LECKY, Holmesville, Ohio.

The great forage Hog



11 Owners in 1903—55,000 Today Why this enormous increase? They top the market. Packers choice—Five Straight years grand champion car load of fat hogs at Chicago Fat Stock Show. Famous Forcens—greatest gain on cheapest feed. Write to Michigan's Leading Hampshire Breeders.

Armstrong and George	Cassopolis
Donald C. Espie	Jonesville
James G. Arthur	Grass Lake
Lloyd Aseltine	Okemos
John W. Snyder	St. Johns
Clarence L. Campbell	Parma
John L. Landon	Addison
S. H. Van Marter and Sons	Parma
D. I. McBean	Manitou Beach

Hampshires spring boars and bred gilts from 25 sows to select from. Place your order now or you may be too late. 1923 yearling. JOHN W. SNYDER, R. 4, St. Johns, 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. A. M. and B. Chapman, So. Rockwood, 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.

FOR SALE Choice Registered Stallions and Mares. Prices reasonable. LEMAN O. BISHOP, St. Johns, Mich.



# LATEST MARKET REPORTS

## GRAIN QUOTATIONS

Tuesday, March 13.

**Wheat.**  
Detroit.—No. 2 red at \$1.34½; No. 2 mixed \$1.34½; No. 2 white \$1.34½.  
Chicago.—No. 3 red at \$1.31; No. 2 dark northern \$1.23; May \$1.19.  
Toledo.—Cash \$1.35@1.36.

**Corn.**  
Detroit.—Cash No. 2, 79c; No. 3 yellow 77c.  
Chicago.—No. 2 yellow 73½@75½c; No. 2 mixed 73½@74½c.

**Oats.**  
Detroit.—Cash No. 2 white 49½c; No. 3, 48c.  
Chicago.—No. 2 white 45½@46¼c. No. 3 white 44@45c.

**Beans.**  
Detroit.—Immediate and prompt shipment \$7.75.

Chicago.—Choice hand-picked Michigan beans \$8.25; red kidneys at \$8.60.  
New York.—Choice pea \$8.50; red kidneys \$8.50.

**Rye.**  
Detroit.—Cash 84½c.  
Chicago.—None.

**Seeds.**  
Detroit.—Prime red clover cash at \$12.75; April \$12.25; alsike at \$10.25; timothy \$3.30.

Toledo.—Prime red clover cash at \$12.75; alsike at \$10.50; timothy cash at \$3.40.

**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 \$33; 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 \$5.50@5.75; Northern Spies \$5@6; Greenings \$5.50@5.75; Wageners \$4@4.50.

## WHEAT

While exporting countries altogether have more wheat than importing countries will be able to buy, stocks in the United States are not excessive. The official estimate upon farm reserves as of March 1 was 153,134,000 bushels as compared with 134,253,000 bushels last year and an average of 156,000,000 bushels. Prices advanced following the issuance of the report and the market may be lifted out of the rut by it. Conditions as to receipts, flour production and export demand remain about the same as in the last two or three weeks. Prices recently prevailing should be sustained in the next few weeks and an advance may occur, especially if the southwest does not receive more rain. On the other hand, an extremely favorable turn in spring weather would have a very depressing effect.

## CORN

Based on the estimate of March 1 reserves, disappearance of corn in the last four months was 1,965,000,000 bushels which is the largest on record with the exception of last year when the total was 2,027,000,000 bushels. Farm reserves on March 1 were 1,087,412,000 bushels. Adding the visible supply makes a total of 1,115,000,000 bushels, or about 230,000,000 bushels less than last year and 475,000,000 bushels less than two years ago. Likewise it is less than the apparent consumption in the last eight months of each of the last two crop years. Considering the increased number of animals to be fed, the outlook for corn prices is promising.

## OATS

Holdings of oats on farms and in the visible supply on March 1 were about 450,000,000 bushels or 30,000,000 bushels less than last year and 58,000,000 bushels less than the twelve-year average. Since oats consumption has been running rather high in the last seven months, the market should show strength in the remainder of the crop year. Seeding of oats is nearly complete in central and eastern Kansas and Oklahoma and has started in Missouri.

## SEEDS

Receipts of clover seed at the principal markets are running heavier than at this time a year ago, while shipments therefrom are lighter. The spring demand has been disappointing thus far, and prices are the lowest in many weeks. Official estimates indicate that less of the crop of red, alsike and sweet clover seed, but more of the surplus alfalfa and timothy seed has been shipped from producing sections than at the corresponding time a year ago.

## FEEDS

While prices of most feeds are practically steady with a week ago, offerings are increasing, especially of wheat feeds which are quoted at a discount of \$3 per ton for April shipment. Demand usually subsides as soon as grass is available. At present consuming sections are buying at a moderate rate, while production of most feeds is in fairly large volume. Linseed meal has declined sharply in the last ten days.

## HAY

Prices for good hay are firm in most markets, with advances quoted at several points. Receipts are relatively light because of weather and road conditions.

## POULTRY AND EGGS

Receipts of eggs at the four leading markets in the last ten days have been about one-third lighter than in the corresponding period of 1922. The prolonged cold spell in February is probably responsible, as the check in production which it caused is now being reflected in market supply. But offerings from Texas and Oklahoma for early shipment have increased in the last few days and prices have weakened sharply. With heavy consumption during the Easter period still to be supplied and no sign of accumulation thus far, the market may regain a good deal of this loss. The receipts of dressed poultry at the four leading markets have dropped down to a more normal figure for this season, and with current consumption running higher than last year, heavier

withdrawals from storage have been necessary in the last week.

Chicago.—Eggs miscellaneous 25½@26c; dirties 24@25c; checks at 23@24c; fresh firsts 26½@26¾c; ordinary firsts 25@25½c. Live poultry, hens at 24c; springers 25c; roosters 16c; ducks 25c; geese 13c; turkeys 20c.

Detroit.—Eggs fresh candled and graded 33c. Live poultry at 26@27c; light springers 24c; heavy hens 26@27c; light hens 24c; roosters at 17c; geese 20c; ducks 30c.

## BUTTER

After opening strong and higher, the butter markets declined slightly then turned firm toward the close of last week. Production reports show further increases and the supply at the leading markets is expected to enlarge gradually as spring weather develops. Stocks of storage butter are extremely small for this season of the year so that the market lacks a balance wheel. Dealers avoid accumulations and the market is highly sensitive to indications of an increased supply.

Prices on 92-score fresh butter were as follows: Chicago 47½c; New York 48c. In Detroit fresh creamery in tubs sells for 46@47½c.

## POTATOES

Shipments of potatoes from producing sections have averaged around 5,000 cars in each of the last two weeks. This is slightly larger than the record movement in corresponding period of 1922. The early crop of white potatoes in the southern states is estimated at 146,750 acres as compared with 190,379 acres last year.

## APPLES

Barrelled apples were steady to firm last week while boxed stock is advancing. Shipments from producing sections are running about fifty per cent above the average for this season of the year. New York Baldwins are quoted mostly at \$5@5.50 per barrel in consuming markets.

## BEANS

The bean market is quiet with the choice hand-picked whites quoted at \$8 per 100 pounds f. o. b. Michigan

shipping points, and red kidneys at \$8.25. Statistically, the situation is strong as the quantity of beans still held back is light but prices are rather high, which tends to restrict trading.

## WOOL

The wool consumption by domestic mills in January was close to 80,000,000 pounds grease equivalent weight and probably the highest in the history of the industry. As most mills are oversold on orders for cloth, they have been using wool at somewhere near the same rate during February and early March. The tone of the wool market improved last week. The British markets and foreign primary markets have become steady at the slight declines which developed in the last month. Prices in this country did not follow the trend abroad although the amount sold to mills declined while foreign markets were easy.

## CHEESE

Exporters bought two and one-half million pounds of cheese for the English trade last week and it was rumored that a similar amount was being negotiated for. This sale practically cleans up the supply of twins, both at Chicago and at country points. Prices declined last week following the break at country markets, although dealers were inclined to oppose making concessions until the situation was more definitely known. The loss in values would have been greater if export buying had not occurred. Stocks in city markets are light and dealers are reluctant to increase them to any extent at present. Storage holdings in the United States on March 1 were 21,063,000 pounds, as compared with 15,606,000 pounds last year and a five-year average of 22,820,000 pounds.

## DETROIT CITY MARKET

The activity on the market is not very great as it is the tag end of the season. Apples and poultry are in the greatest demand and onions and potatoes still drag. Apples bring \$1@2.25 per bu; beets 75c@1.25; celery 25@70c per dozen; cabbage \$1@2; carrots 60c@1.25; eggs 40@50c per dozen; dry onions \$1.25@1.75; potatoes 50@60c; live poultry 26@35c; veal 16@18c; hogs 12@14c.

## FARM CHUNKS MOVING.

Trade in farm chunks is reported brisk at practically all markets and is expected to continue for another month, by which time it usually tapers off. Prices are far from flattering with \$75@150 taking the bulk. Good and choice drafters weighing 1,600 to 1,900 pounds are selling at \$200@300, with the demand exceeding the supply.

## COMING LIVE STOCK SALES.

**Aberdeen-Angus.**  
March 21.—Russell Bros., Merrill.  
**Ayrshires.**  
March 22.—Fred S. Smith, Somerset, Mich., Farm Auction.  
**Poland Chinas.**  
March 22.—Sonley Bros., St. Louis.  
March 22.—Fred S. Smith, Somerset, Mich., Farm Auction.

Accounts kept by some farmers show them that they ought to add to their incomes around \$700 a year, to take care of the part of the family living which is furnished by the farm.

## Live Stock Market Service

Wednesday, March 14.

### DETROIT

Receipts 430. Market is strong at Tuesday's advance.

Best steers .....	\$ 8.25@ 8.50
Handyweight butchers ..	7.50@ 8.25
Mixed steers and heifers	7.00@ 7.50
Handy light butchers....	6.25@ 6.75
Light butchers .....	5.00@ 5.75
Best cows .....	5.25@ 6.00
Butcher cows .....	4.25@ 5.00
Common cows .....	3.00@ 3.50
Canners .....	2.50@ 3.00
Choice bulls .....	5.50@ 6.00
Bologna bulls .....	4.75@ 5.50
Stock bulls .....	4.00@ 4.50
Feeders .....	6.00@ 6.50
Stockers .....	4.75@ 6.00
Milkers and springers....	40.00@75.00

### Veal Calves.

Receipts 698. Market steady.  
Best ..... \$13.50@14.00 || Others ..... | 6.00@12.50 |

### Sheep and Lambs.

Receipts 674. Market steady.  
Best lambs ..... \$14.50@14.75 || Fair lambs ..... | 12.50@14.00 |
Light to common .....	8.00@11.00
Fair to good sheep .....	7.00@ 8.50
Culls and common .....	2.00@ 4.00

### Hogs.

Receipts 2,252. Market is steady to five cents higher.  
Mixed hogs and yorkers..\$ 8.80  
Stags ..... 4.00@ 5.00 || Pigs ..... | 8.25 |
| Roughs ..... | 6.90 |
| Heavies ..... | 8.00@ 8.25 |

### CHICAGO

#### Hogs.

Estimated receipts today are 25,000; holdover 6,966. Market is around 10c higher. Bulk of sales \$8@8.55; tops \$8.65; heavy 250 lbs up at \$8.15@8.35;

medium 200 to 250 lbs at \$8.25@8.60; light 150 to 200 lbs \$8.50@8.65; light lights 130 to 150 lbs \$8@8.60; heavy packing sows 250 lbs up \$7.25@7.50; packing sows 200 lbs up \$7.10@7.35; pigs 130 lbs down \$7@8.25.

#### Cattle.

Estimated receipts today are 8,000. All classes active; unevenly higher, mostly 10@25c up. Beef steers medium and heavyweight 1100 lbs up at \$9.40@10.60; do medium and good at \$8.25@9.90; do common at \$6.75@8.25; light weight 1100 lbs down at \$9.25@10.45; do common and medium at \$8.50@9.25; butcher cattle heifers \$5.65@9.65; cows \$4.50@7.75; bulls bologna and beef \$4.75@6.75; canners and cutters cows and heifers \$5.60@6.40; do canner steers \$3.75@5.25; veal calves light and handyweight at \$9.75@10.75; feeder steers at \$6.45@8.35; stocker steers at \$4.75@8; stocker cows and heifers \$3.75@5.50.

#### Sheep and Lambs.

Estimated receipts today are 16,000. Market slow and steady. Lambs 84 lbs down \$13.25@14.85; do culls and common \$9.50@13.25; spring lambs at \$9.75@13.50; ewes \$6.50@6.75; ewes cull and common \$3.75@6.75; yearling wethers \$13.50@15.30.

### BUFFALO

#### Cattle.

Receipts, one car. Market steady. Calves at \$14.50.

#### Hogs.

Receipts 15 cars; market is higher. Heavy \$8.75@9; yorkers \$9.25; pigs at \$8.50.

#### Sheep and Lambs.

Receipts 12 cars. Market is slow. Top lambs \$15.25; yearlings \$12@14; wethers \$9@9.50; ewes \$8@9.



"MEHRING'S MILKER"

This pioneer milker has been in use 30 yrs. It leads in clean milking, speed, cheapness of operation, and repair. It milks 20 cows per hour. Price \$35 on trial. \$25 for a five unit Engine Milker.  
W. M. MEHRING, Keymar, Maryland



## 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 3 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 2 cents a word. Count as a word each abbreviation, initial or number. No display ads or illustrations admitted. Remittances must accompany order.

Real estate and live stock advertising have separate departments and are not accepted as classified. Minimum charge, 40 words.

### MISCELLANEOUS

**BOYS, GIRLS**—15 big packages cucumber seed postpaid \$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 for seed returned. Order now, pay when received. Sweet Home Seed Farm, Pentwater, Mich.

**LUCKY HEALTHE CHARME**, made with Gold finish, beautiful Green enamel and gold letters, with long dress sash or cord for wearing around the neck, very popular with women throughout America. At leading stores or direct from the originator. Prepaid for \$3.00. Address W. O. Brown, Ford Bldg., Detroit, 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. CO-OPERATIVE 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.

**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.

**NATURAL LEAF**—Four years old, unexcelled quality and flavor. 5 lbs. chewing, \$1.50; smoking, \$1.25; second grade smoking, 5 lbs., \$1.00; 10 lbs., \$1.50. Pay for tobacco and postage when received. Farmers' Exchange, Hawesville, Kentucky.

**FOR SALE**—Strawberry Plants \$3.75 per 1,000 and up. Raspberry Plants \$1.00 per 1,000 and up. These plants are all state inspected. Write for price list. Fred Dowling & Son, Holly, Mich.

**GRAPEVINE SPECIAL OFFER**—12 No. 1 Concord, 2 white, 1 red, postpaid \$1.00. Gobles, Mich., Nurseries. If above doubled, with neighbor, you get 2 yr. Spirea, free.

**TOBACCO**, extra quality, hand picked, nothing shoddy, satisfaction guaranteed. Chewing, smoking and mild smoking; 5 lbs. \$1.75, 10 lbs. \$3.00. Send no money, postage unpaid. Chas. Goff, Hardinsburg, Ky.

**MIXED Color Gladioli Flower Bulbs**, 1 1/2 to 2 inches in diameter. 25 doz., 5 doz., \$1.00. Postage paid by me. Martha Osmond, Vernon, Mich.

**SPEEDAWAY Farm Golden Russet Certified Seed Potatoes**. Single bushel or car-load lots. Write or wire for prices. Geo. Harrison, Mantion, Mich.

**DO IT RIGHT**. Keep safe record. Bill of Sale Form for Farmers and Breeders, \$1.00 per 100. 318 Dime Bank, Detroit, Mich.

**EARLY PLANTS**. Cabbage, Tomato, Potato, Pepper, etc. Hardy, open field grown. Produce earlier crops. Catalog free. Plant Farms, Ashburn, Georgia.

**CALICO SEED CORN**, also Early Golden Surprise. C. L. Freed, Lancaster, O.

**TREES, Plants, Vines, Shrubs**. J. Lands, St. Joseph, Mich., R. 2-B, 233.

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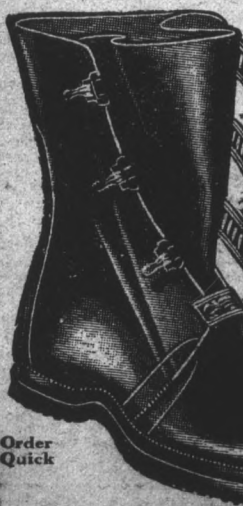


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