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ONE YEAR \$1.00
FIVE YEARS \$5.00



Listening In

Select The Right Analysis For Your Crop

Through years of research and actual field experiments, the state agricultural colleges and experiment stations have determined the analysis of fertilizers which will give you the best results on each crop and soil.

For Michigan, the Michigan Agricultural Experiment Station recommends the following analyses:

Corn—Sands, light sandy loams: without mixed meadow, manure or green manure, 4-12-0; with mixed meadow, clovers, alfalfa or soy bean or with manure Acid Phosphate. Heavy sandy loams, silt loams, clay loams: Acid Phosphate. Muck: 0-12-12, 0-8-24, Potash.

Oats, Barley (with spring seeding of alfalfa or clovers)—Sands, light sandy loams: without mixed meadow, etc., 0-12-6, 4-8-6; with mixed meadow, etc., 0-14-4; with manure, Acid Phosphate. Heavy sandy loams, silt loams, clay loams: without mixed meadow, etc., 2-16-2; with mixed meadow, etc., or with manure, Acid Phosphate. Muck: 0-12-12, Potash.

Alfalfa, Clover—Sands, light sandy loams: without mixed meadow, etc., 0-12-6; with mixed meadow, etc., 0-12-6, 0-14-4; with manure, 0-14-4, Acid Phosphate. Heavy sandy loams, silt loams, clay loams: without mixed meadow, etc., or with mixed meadow, etc., 0-14-4, Acid Phosphate; with manure, Acid Phosphate. Muck: 0-12-12, Potash.

Potatoes—Sands, light sandy loams: without mixed meadow, etc., 3-12-4, 3-8-6; with mixed meadow, etc., 2-16-2, 2-12-6, Acid Phosphate; with manure, 0-14-4, Acid Phosphate. Heavy sandy loams, silt loams, clay loams: without mixed meadow, etc., 3-12-4, 3-8-6; with mixed meadow, etc., 2-16-2, 2-12-2, Acid Phosphate; with manure, 0-14-4, Acid Phosphate. Muck: 0-8-24, Potash.

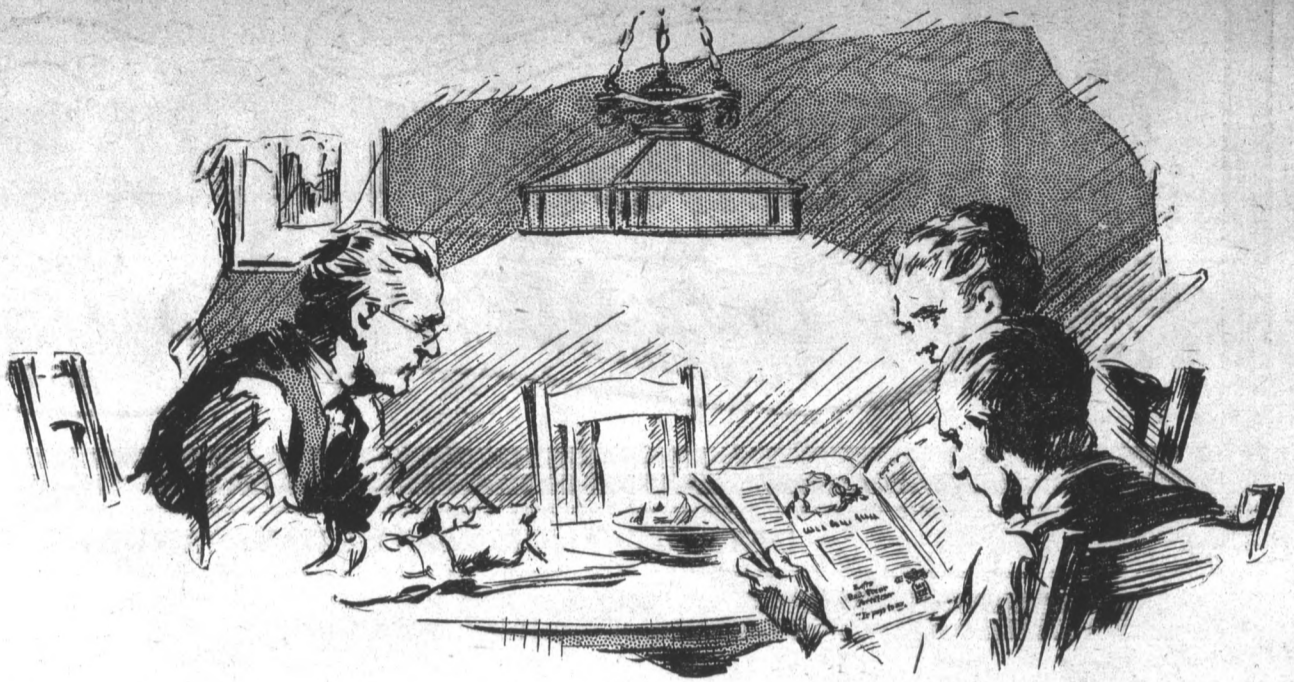
Sugar Beets—Sands, light sandy loams: with mixed meadow, etc., 3-12-4, 2-12-6, 4-8-6; with manure, 0-12-6, 3-12-4. Heavy sandy loams, silt loams, clay loams: without mixed meadow, etc., 3-12-4, 2-16-2, 2-12-6; with mixed meadow, etc., 0-12-6, 2-12-6, 2-16-2; with manure, 2-16-2, 0-14-4, Acid Phosphate. Muck: 0-8-24, Potash.

As Authorized Swift Agent for the sale of Swift's Red Steer Fertilizers, we are co-operating with the Michigan Agricultural Experiment Station in recommending and selling these analyses.

Come in and we will help you select the analysis and decide on the amount per acre to make you the most profit.

asa

Authorized Swift Agent



Plan for more profit

Profit on crops is the difference between the selling price and the production cost.

The selling price is practically controlled by supply and demand. But the cost of production is governed mainly by the yield per acre and per man, which to a large measure, you can control.

Fertilizers influence the yield and the quality more, probably, than any other factor, except the weather. Therefore, in planning for more profit it is of utmost importance that you consider carefully who makes the fertilizer you use and the analysis and amount you should apply per acre.

Your guarantee of quality

Swift & Company's extensive facilities afford unusual opportunities to determine the agricultural value of the different forms of plantfood, and to make use of the findings of Experiment Stations and other recognized scientific authorities.

Only the most productive sources of plantfood are used in the manufacture of Swift's Red Steer Fertilizers. Back of each bag is the 50-year-old Swift reputation of making every product the best of its kind.

Twenty-three factories, conveniently located, are ready to serve you—special manufacturing equipment enables us to properly process and combine the carefully selected fertilizer ingredients. Every pound of fer-

tilizer is thoroughly and evenly mixed so that each plant will be supplied with its proper proportion of plantfood to make the biggest yield of best quality product.

When you use Swift's Red Steer Fertilizer you know you are using the best.

See the Authorized Swift Agent

The A. S. A. (Authorized Swift Agent) is an individual or firm in your community with a reputation for square dealing.

His success depends upon your success. He is pledged to co-operate with Swift & Company in supplying the farmer with the fertilizer that gives him the most plantfood for the money; the analysis that produces biggest yield and best quality crops, and to recommend the amount per acre that gives the farmer the most profit. This Swift Service is based on actual results secured by your State Experiment Station and practical farmers, and is worth money to you.

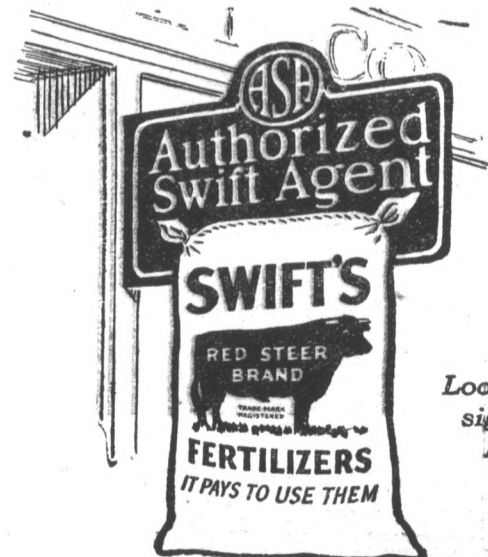
Plan now next spring's fertilizer requirements with the A. S. A. If you do not locate him readily, write us and we will put you in touch with him.

Buy Swift's Red Steer Fertilizers—"It pays to use them."

Swift & Company
Fertilizer Works Dept. 41, Hammond, Ind.

Swift's Red Steer Fertilizers

"It pays to use them"



Look for this
sign of the
A. S. A.

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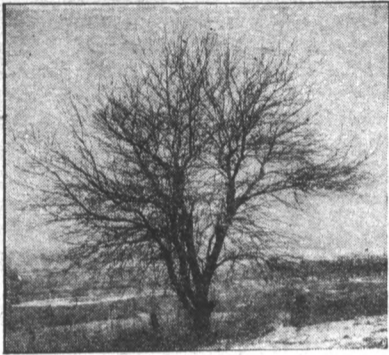
A Practical Journal for the Rural Family
MICHIGAN SECTION THE CAPPER FARM PRESS

QUALITY
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NUMBER THREE

How I Pruned Smith's Orchard

A Student Gives Some Good Pointers on Trimming

By E. A. Kirkpatrick



The Tree Before It Was Pruned.

THAT orchard would be worth more than the rest of your farm if you'd have it pruned and spray it every year," said the county agent to Tom Smith. "You know what Sam Wilson got for his apple crop last fall? An even \$1,200, from three acres."

"Yes," Tom agreed. "But I haven't got time to prune the trees. And what's more, I don't know how."

"Get a young horticultural student from the state college to do it. It will cost you \$3.00 a day and his expenses and board. Hadn't ought to take him more than ten days or so to do it."

The result was, Tom wrote to the state agricultural college, and I got the job. While I didn't know an awful lot about pruning—not so much as I do now—Tom and the county agent and I were all satisfied, and Tom's orchard really is the best paying thing on the farm now.

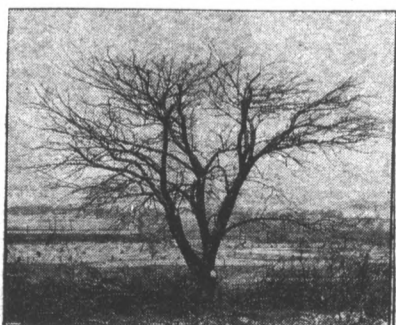
Would you like to hear how I pruned Tom's trees? Well, I'll tell you a little about it. Maybe you have an orchard of your own that you want to prune, and I hope these few pointers will help you.

Some of the trees were old-timers—thirty feet to the highest point—and had never been pruned; at least, they had never been pruned enough to show the effects of the work. It was necessary to take out some limbs as big as three or four inches in diameter, and Tom looked skeptical when he saw the first one come out.

"What's the matter with that limb?" he asked.

"It has a canker on it," I replied. "See there?" Tom examined the branch carefully, while I explained that canker was a disease that might kill his whole orchard. The next big limb was carefully examined, but he could find nothing that looked like canker, and so he asked again: "What's the matter with that one?"

"That one had to come out because it started on one side of the tree and



After Pruning. Note How the Tops Have Been Cut Down.

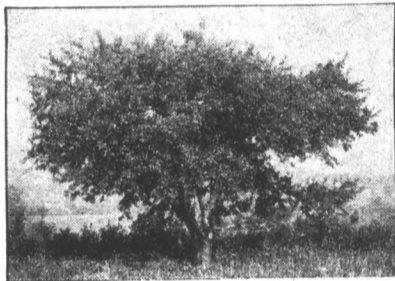
went right across to the other side," I explained. "Cross limbs are bad, because they make it hard to climb the tree to spray or harvest the fruit."

"I'm not finding fault, understand," said Tom, "but I want to know all about this so I can do it myself next year."

Thus it went—Tom asking for an explanation of each cut as I covered the first three trees. Then he remarked that it was "kind o' chilly just standing around watching," and added that if he "had one of the swivel saws like yours" he would help me out. I had two saws in my pruning outfit, and so I set Tom to work, cautioning him about leaving stubs, letting the branches split down, etc. By the end of the day he was as enthusiastic as any new convert at a camp meeting. That was the only day he helped, however, for the next day there was a sale, then the wood sawers came, and one thing after another, until I had the job finished. When I went to the house one evening and told him I was through, he insisted that I tell him all the rules so that he could do the work himself.

Here are a few of the pointers I gave him:

1. Cut out all dead branches.
2. Cut out all diseased branches, and before making another cut with the saw or shears, dip the blade in a solution of corrosive sublimate, one to 1,000 (it's poison, so be careful with it). This prevents spreading diseases to other branches or other trees.
3. Cut out all broken limbs.
4. Cut out the limbs going straight up from a horizontal branch. Such branches make spraying difficult, shade the lower branches, reduce fruit-



The Same Tree After it Leafed Out.

A Unique Poultry Business

A Part Time Proposition That Pays Well

A FRIEND of ours contends that the busy farmer who likes clean premises and freedom from annoyance in the garden would do well to take up his plan of keeping chickens only part of the year. He has small fruits and vegetables for his main crop and does not want his fowls running wild in the garden, neither does he think it pays to keep them shut up. His plan is to buy good young pullets in the fall when the price goes off, or along in early January, put them in a warm coop, feed them well and intelligently, skim the cream off the flock by spring and then sell the fowls before confinement tells on them.

By careful watching he has been able on many occasions to get fine young hens as low as a dollar apiece, for people know that he depends upon the open market and in emergencies sell direct to him. One family last year had two kinds of chickens kept carefully, but the man at the hatchery refused to take the one kind of eggs unless the other breed was disposed of, so for a dollar each the friend of ours got fine, pure-bred stock. Of course, generally he must pay more and get various breeds, but that is overcome by the eggs and the greater profits made occasionally. He aims to make one dollar each on the hens and can show that profit, and occasionally more, on his books. Now that may seem a little matter, but he is nearing seventy, and the two or three hundred dollars each spring when garden work brings in nothing, comes in handy for him and his wife. It is not hard work and there is a little return from the fertilizer that he does not count. As soon as the hens begin to fall off in egg production by being confined they go to the market and often he gets

more than he paid because they have increased in size and the market is better.

It might not pay the average farmer to follow this plan, but for the small farmer or the lone woman it is a good thing. A woman with a small farm who rents out her little fields keeps hundreds of chickens during the course of the year but never raises one. She is up in years and feels that the work of caring for little chicks is too much for her, but she buys from various sources hens which she fattens and sells to private customers, dressed or alive, mostly the former. She aims to make from fifty to seventy-five cents on live chickens, with the eggs to pay for the feed, and more on dressed fowls. She rarely keeps them longer than six weeks to fatten, unless somebody wishes to pick out a small town flock at a good price. Anyone wanting to buy six or eight hens for pets for a child is willing to give a fancy price for good stock. Her best market is in the spring when farmers will not sell laying hens, and when in the fall the spring chicken or broilers are bringing fancy prices. She has people on her list who have chicken of some sort every Sunday of their lives and often on week days, and they are well-to-do enough to demand and get fine, healthy fat hens.

Our own experience with buying hens in the spring is that we have found them quite as cheap, if not cheaper, than we could have raised them, so often we replenish the flock by watching the town markets. Never at farm sales have we seen chickens go at anything but a high rate, so we have learned not to expect anything from them, but from dealers one can often get them when the market is off, at very reasonable rates.—H. R.

ing, and retard the color on fruits on lower branches. These upright limbs or water sprouts should be cut off when they first appear.

5. Cut out the limbs growing downward from the secondary branch, deepening the shade.

6. Cut out the limb closely parallel to its neighbor. The extra limb makes the top too close. Sometimes there are two or three limbs hindering a third limb; cut them out and give the best one a chance.

7. Cut out the limb that starts at an angle so narrow it does not form a healthy crotch, but just presses against the parent limb. In such a narrow angle the bark squeezes so closely between the two limbs dies and becomes rotten, and thus disease enters. The younger these narrow crotches are cut out the better.

8. In cutting back a branch, always make the cut just above a side branch.

9. Make all cuts sloping, so water will drain off, and paint all wounds an inch in diameter or larger, with white lead, to which has been added a little corrosive sublimate to check disease.

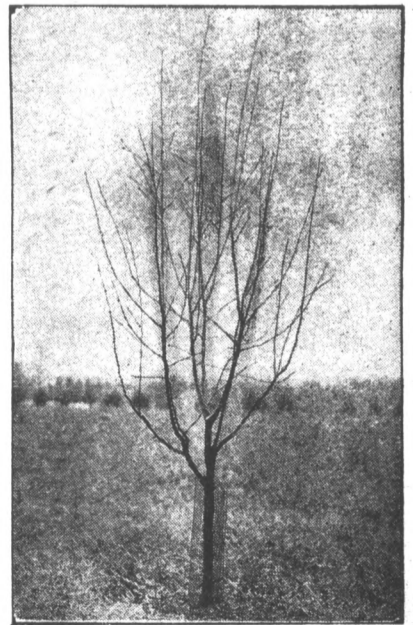
10. In sawing off a big limb, make a cut an inch deep on the under side of the limb first, then saw in from the top and remove the limb. The under cut prevents splitting down into the trunk or main branch.

11. Make all cuts smooth and close; do not leave stubs. Use a swivel blade saw with one cutting edge for large cuts; a pair of long handled pruning shears will help on small branches a half inch or so thick. Be sure the shears do not crush the limb or peel off the bark. If they do, better use a saw, even though it takes longer.

12. Don't butcher the tree; if you don't get enough out this year, take more out next year. It is easier to cut out an extra limb later than to put one back after it is out.

Training Instead of Pruning.

If young trees are handled right, heavy pruning will not be needed later. By heading back a small branch here and removing another there, the tree can be kept open and shapely with little trouble.



Shaded Portions Show What Should be Left After Pruning.

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CURRENT COMMENT

A
Date To
Keep

There are a few matters which we ought not to forget. Those having a vital significance to us we should make a special effort to firmly anchor in our memory. One important item that may be used for memory training is the date for Farmers' Week at the Agricultural College at East Lansing, the greatest week in all the year for Michigan farmers. The dates are from February 2 to February 6. Read these dates to every member of the family, including the hired man, and then at breakfast time tomorrow, see how many can accurately recall them.

Our reasons for giving unreserved commendation to this annual event are that the college program committee has made good on previous engagements, and that unusual efforts are being put forth to make the 1925 session the best yet planned for East Lansing. If there is a class of farmers in Michigan to whom the program has no appeal, we feel certain that the class is a very small one, and that the attention of the program committee has never been called to it.

The profits from next month's session at the college will go to the people who attend. Therefore, do not forget the date—February 2-6.

Coolidge
On Co-
operation

While in Washington attending the third annual conference of cooperative marketing organizations, delegates had the pleasure of listening to some wholesome thoughts upon cooperation by President Coolidge.

The President said he wanted to make it plain that he is no blind believer in any magical attributes of the cooperative proceeding. "A good deal that is mischievous has been put about in this regard. There is a school of cooperators who seem to believe that the program can be started at the top and built downward. They want the government, or the banks, or philanthropists, or Providence to lay out a scheme big enough to cover the country, set its machinery moving, guarantee it all needed capital, and then invite the farmers to sit in the places reserved for them and proceed to garner their profits. Let me say that I offer no such Aladdin-like project. I want society as a whole to help; but I want the farmers to do their share,

and I warn them that this will be the lion's share. Cooperation must start from the soil. It must have its beginnings in small units. It must train the people who are to use it to think cooperatively."

It was the President's belief that the cooperative association which establishes grades and standards, encourages the good, and eliminates the poor varieties, increases the efficiency of production, provides a unified product adapted to its market, organizes its distribution, creates confidence in its products and its methods—that kind of an association is doing the best that cooperation can do. It will serve both the seller and buyer. Under wise leadership, it will succeed. More than anything else, he believes we need a generation of farmers trained to cooperation; and to get that we need able, courageous, determined leadership, and most of all leadership that will not desert the farmer but will stay by him.

To all of which we wish simply to say, "Amen," and "Amen."

The
Country
Doctor

The country doctor is almost a thing of the past. At the present time the M. D. who lives with the rural people and serves them is very rare. The doctors have drifted cityward, as have other people. They have gone to the city because of the prospects of more money, more easily made than in the country. They have no long drives, and besides have the convenience of hospitals and laboratories which they do not have in the country.

Statistics show that in the cities there is one doctor to every 529 people, while in the country the ratio is only one to every 1,020 people. In some of the range states a doctor has to cover a territory of two thousand square miles.

Where the farming sections are dotted with small towns the situation is not bad. In such localities the telephone and the automobile bring the town doctor in close touch with the surrounding rural territory. But where small towns do not prevail the people are simply "out of luck."

There the situation offers real difficulties. After a student has spent six years or more at a school in city environment, and with all conveniences for the study of medicine, he is not usually inclined to look with favor upon the pioneering ways of the country doctor.

Here the only hope for improvement lies in the country folks themselves studying health so that they will have less need of a doctor. The medical profession profits much through the ignorance of the masses regarding right living. It is of fundamental importance for the individual himself, and the community at large, that each person learn how to live right. Right living means good health, and good health needs no doctor.

The
Twelve In
A Bushel

It has been difficult for Michigan growers of fruit to accept stringent restrictions regarding grading because high quality fruit has not been necessary to get some sort of price for the products of their orchards.

This trend of thought was indicated at the recent annual horticultural meeting. Many there contended that Michigan should pack the common grades rather than the extra fancies because the workingman cannot afford the better product. However, marketing experience does not indicate that this is true. The workingman prefers quality products because the choicest meats and the better grades of fruits are in demand at the stores which cater to the workingman. The workingman usually thinks more of "good eats" than the office worker, because his physical activities give him a better appetite.

During the discussion at the horticultural meeting, a prominent restaurant man said that Michigan growers would get as much for twelve good apples picked from a bushel of ordinary apples, as they would for the whole bushel. And they would still have the rest of the bushel left, which could be disposed of in various ways so as not to hurt the regular market.

In Java they are educating the natives to tea drinking in order to make a home market for the lower grades of tea. Their purpose is to use the lower grades at home and export only the better quality product in order that the reputation of Java tea may be kept up.

We, in Michigan, might take the hint from Java and keep at home the poor quality products of our farms. We ought to keep our grades up and our inspection stringent in order that the world may know about the twelve good apples, but not of the rest of the bushel. This may seem a hardship at first, but it has paid out with others and there is every reason that it should with us.

It's In
The
Air

SOME of our psychologists, professional and amateur, have made the statement that thoughts are transmitted, even though they are not expressed, and are received by those in tune with them.

We ordinary individuals are not entirely convinced as to the truth of these assertions, but one thing we are entirely convinced of is that there are a lot of thoughts flying through the air these days. All we have to do is to tune in and we can get jazz thoughts, serious thoughts, thoughts which educate, and thoughts which inspire, in fact, thoughts on most any phase of life.

The radio is making it less excusable for any of us to be ignorant, and it makes it more possible for all of us to be more broadly educated. And, as we become better informed we will become more democratic. Class selfishness is never due to knowledge, but rather to ignorance. As we become more broadly educated, we come to a greater realization of the brotherhood of man. The radio will, therefore, be another factor in the advancement of civilization toward the ideal.

There are several things about the radio which indicate that the thought of the average man is sound. One of the best is that jazz music is not as popular as the classic and semi-classic. The radio, it seems, is bringing a wider appreciation of good music, and is making high-class concerts better attended. Another indication of sound thought is that scientific subjects are listened to with great interest by the radio public.

It is also interesting to know that the radio is popular on the farm. Recent census figures show that one farm home out of sixteen has a radio. And, in these days of radio agricultural courses, the ratio of sixteen to one will be rapidly narrowed down. We do not believe that it is far fetched to say that the radio will soon be considered one of the necessities of the home and farm, as the auto, washing machine, and other things now are.

The
Peaceful
Village

THE poets have waxed enthusiastic about the quietude of the village, the humorists have commented upon its scandal-mongering, and from it the stage has derived its "types and characters."

The village may be described geographically as a settlement of people surrounded by farm land. It is a trading post for those who work out in the open. It is the resting place for those who have tired of, or retired from, the stress and strain of city life, as well as those who have relinquished their magic wand of hard work which

makes human food spring from the ground.

The village, as we know it, is distinctly American. It is probably the chief means of preserving the original Yankee type to posterity. The village is stable, not static. It grows but only one third as fast as the country as a whole. Many of its people live in contentment, enjoying the simple things of life.

The village is a poor place for a woman seeking a husband, for women are in the majority and over one-third of the men are over forty-five years of age. Restless youth does not stay in the village, it goes where there is something doing and, then, when the forces of life have been spent, or life's work has been accomplished, comes back to retire.

Village people are not rusting out. Their standard of education is high and there is less illiteracy among them than in the cities. These people are interested in the good things of life, but in a quiet and calm way, which perhaps brings the greatest enjoyment.

Doze Days

AIN'T life funny? We're just like dogs, cats, etc., 'cause they're life, too. Only most o' us think we're better'n dogs and cats, and maybe they're right. Only I'd like ta know what dogs and cats think about it. Anyhow, there's some dogs and cats I know that I like better'n some folkses I know.

But anyhow, dogs and cats and the rest o' us skip and scamper around a hull lot when we're young, but we slow up considerabul when we get older. Youth is the time for lots o' moshun and little thinkin'; middul age is when thinkin' and actshun is supposed ta coordinate, like the perfessor says. But

old age is when there's lots o' thinkin' and little actshun. Age is the time fer thinkin' about all the mistakes you've made 'cause you didn't think before. And most o' us is made enuf mistakes ta give us plenty ta think about.

Now, if I was one o' them effichuncy experts, I'd have life planned more logical like. Fer inst., I'd have youth the time fer thinkin' and age the time fer actshun. In that way you could think before you act, and make your actshuns worth while. Then most o' us wouldn't be wantin' ta have our lives ta live over again.

But Jim Hudson says the young don't think, 'cause they ain't been livin' long enuf ta have anything ta think about. You gotta know somethin' about somethin' before you kin think about it, and that's why experiance is the greatest teacher. Maybe that's why so many o' the young go after all the experiance they kin get.

Well, anyhow, my conclushuns is that life is like a year. Youth is the spring (I'll say my kids is got a lot o' spring in 'em), summer is the age o' productshun, fall is when the hairs get gray and rhumatics is unpleasant company, and winter is when the hearse takes the remains and the undertaker his profits.

Spring, summer and fall is the do days o' farmin', while winter is the doze days o' it. And while I ain't in the doze days o' life, I've been dozin' considerabul lately by the fire, and between naps I've been thinkin' about mistakes I've made last year. Them mistakes is so disagreeabul ta think about that I just gotta go ta sleep again.

HY SYCKLE.

Government has been a fossil; it should be a plant.—Emerson.

It is easy to see, hard to foresee.—Franklin.

Harvesting the Ice Crop

A Most Satisfactory Crop that Makes No Demand Upon the Soil

By Earle W. Gage

THE ice crop is the only one the farmer harvests that does not rob his soil of fertility and, considering the advantages of a good home supply of ice, no improvement is more satisfactory than a good stock of ice.

"Keep cool" is exceptionally good advice to the political spellbinder; it is even better to the farm family on hot summer days when the glass registers around ninety in the shade and the folks wish to preserve fruit and vegetables, and when cool drinks are so delicious. Then there is the milk and cream to be cooled and kept cold until ready for market.

Eighty per cent of the dairy products of the farm require artificial cooling before they are ready for market or home use, while thirty per cent of the value of dairy products is lost through the failure or inability to cool quickly to a low temperature. Abundant testimony can be given by the manager of the milk plant, cheese factory of creamery, as well as buyers of cream and eggs.

Ice on the farm is not a luxury. It is a money saver and at the same time adds to the comfort of the living during at least three months of the year. Six months is a long time to look ahead and these winter days do not suggest the added heat of June, July and August. But now is the time to "can next summer's cold."

When Jack Frost snaps away in January or February, it's a sign for the farmers to prepare for next summer's heat and the ice season is at hand. There is no crop that is produced so cheaply and brings higher re-

turns than the ice crop. Instead of depleting the pocketbook it enriches the farmer and makes life more attractive to his family, because it supplies a wider variety of high-grade foods in summer.

Cooperation in ice harvesting is more important perhaps, than the common community get-together at threshing time. It is best that the ice be cut out and hauled to the storage house as soon as possible to permit the ice to form while it is yet cold, and of preventing waste if freezing weather is passing. Then, too, the work can be done much more efficiently when there are enough men and teams to do all the operations at the same time.

To harvest ice efficiently a few ice

tools will be needed. A steel scraper is desirable; some types of road scrapers can be used for this work, or a very good home-made scraper may be fashioned of wood and faced with an old crosscut saw. An ice-plow is almost essential if any great quantity of ice is to be harvested. This facilitates the removal of the porous surface ice and greatly simplifies cutting into blocks. Half a dozen pike poles, bearing vertical points and horizontal hooks, are needed in floating the ice to the loading platform. An ice saw may be useful or an ordinary crosscut saw may be used by removing one handle.

Three Squads Work Best.

Ice cutting is best conducted by three squads of men, each with a

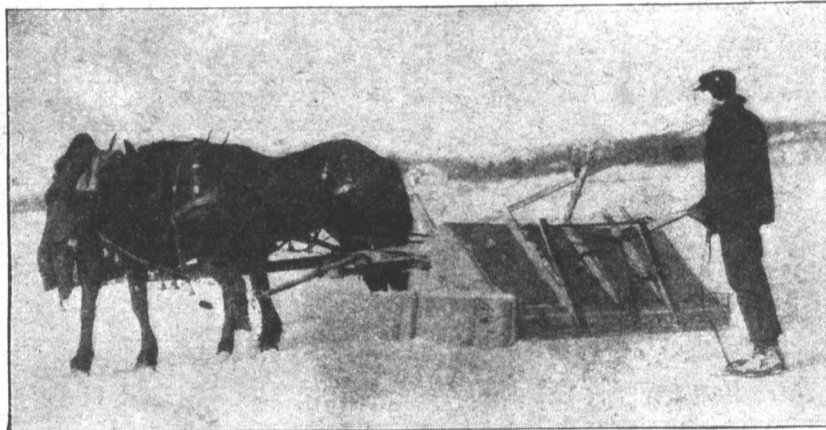
team. The first squad removes the snow or spongy ice from the surface of the field and plows, saws and cuts the ice into blocks of a size most convenient to handle. If the ice is more than twelve inches thick blocks two feet square on the surface would be most convenient; if it is thinner than this, blocks three feet square can be packed conveniently into the house. But thick ice should be cut in proper blocks so as not to call for undue lifting.

The second squad of men cut loose the blocks and float them to the side of the open water where they are ready to be loaded on the sleigh or wagon. Here a tramway with a pair of hooks attached to a rope will make loading a relatively easy task. Let the ropes extend across the load from the tramway; hitch a horse to it and drag the blocks from the water onto the load.

The third gang of men should be at the ice house to place each load in position and pack sawdust around it as rapidly as possible. Eight men with three teams can work rapidly in harvesting a crop of ice by this cooperative method.

Where the ice is not quite thick enough to meet the need the snow should be scraped off the surface the day before the cutting is started, if indications are that the night will be severely cold. The snow acts as an insulation and retards freezing, and when it is removed not only is the entire mass of ice better frozen, but a few inches in thickness is added.

On small ponds the snow may be
(Continued on page 67).



Scraping the Snow Off Before Cutting.

The Pioneer Spirit In 1924

A Personal Message from the President of the Michigan State Farm Bureau

By M. L. Noon

AMONG the many educational exhibits at the Michigan State Fair at Detroit last fall, there was one which impressed me in an unusual way. It was the display of ancient stage coaches, covered wagons, buggies, phaetons, and all types of vehicles of ancient vintage. These relics of the past had been gathered together and placed on display by Henry Ford. To some who saw them they were no doubt merely objects to excite curiosity or provoke mild amusement, but to me they were the cause of a train of thought which I have been unable to get entirely out of my mind since that time.

In my imagination I could trace the struggle of mankind to conquer the physical things of this world and make them contribute to his own comfort and convenience. As I saw these early and crude conveyances I realized anew that everything which we possess today is the result of a development from something which went before and is the product of the struggle and achievement which someone else has made.

A few weeks after the Detroit fair, while these ideas were still fresh in my mind, I saw that great educational and inspirational movie, "The Covered Wagon." This film depicted in a most thrilling and graphic way the adventures of those heroic pioneers who left the comparative peace and plenty of the more settled portions of our country and struck west across the uncharted plains, endured hardships, ran risks of attack from hostile Indians, forded turbulent and unbridged rivers, and finally opened up the great western coast of this republic to American civilization.

The achievements of these brave

men and women of 1848 were, indeed, a triumph of hope and faith and the spirit of adventure which, when rightly directed, is characteristic of the best in American life.

As I thought of the experiences of these hardy pioneers and realized how easy it would have been for them to have taken the wrong turn and to have been misled into dangers and deserts, I was reminded of that exceedingly wise remark by my good friend, N. P. Hull, who so often declares, "It's mighty easy to go down the wrong road, but it will never get us where we want to go."

These nation builders of 1848 had no extravagant idea of sudden wealth, but merely sought an opportunity to build homes and communities for themselves in a new and fertile land.

We today are inclined not to give full credit for all we owe to these men who opened up the unknown assets and territories of this great nation, but because of their pioneer work how different are our conditions today! If we desire to go to the Pacific Coast it is no dangerous adventure. We can board a great trans-continental train and in much less than a week reach our destination. The passenger on such a train has no cause for worry. The engineer must use his head a little more, but even he has well-known lights and signals by which he guides the monster locomotive and its train of cars along the glistening rails of steel which cross the plains, tunnel through the mountains, and bridge the mightiest rivers.

Or, if one wishes to be more independent as he takes this trip which

required such heroism in 1848, he can take his automobile and follow well-marked and splendidly conditioned trunk-line highways across the continent. If all of these means of travel prove too slow, then there is the aeroplane by which our flyers have raced the sun from the Atlantic to the Pacific.

Does not all of this early history of our country contain a marvelous message for us who are engaged in farm organization work today? Is there not yet much pioneer work to be done which requires foresight, vision and courage equal to that of the pioneers of 1848? Is there not need today of more successfully, efficiently, and cheaply bridging the gap between the producer and the consumer? Are there not new trails to be blazed in shortening the distance and lessening the handling charges which accumulate on our produce between our farms and the city kitchens or eating places?

In these great problems not only of marketing, but of transportation, legislation and taxation which confront us farmers today, is there not need of that same spirit of team-work and cooperation which characterized those bands of pioneers who pooled their earthly possessions and welfare and set out across the unknown miles separating them from the lands of their dreams? As we realize that there is thus much pioneer work to be done, does it not challenge the heroic quality in each of us?

Pioneering which is done solely for selfish motives often leads to heartaches and disappointments. It was so with those gold seekers of 1849. Just

so in our farm organization work, some grasping individuals have debased the cooperative principle by engaging in speculative transactions which have many times led to disappointment. But year by year it is being proved that those cooperative institutions which are founded on sound business principles and have able and honest leadership are succeeding and giving splendid service and satisfaction to their members.

Already here in Michigan we are reaping the benefits of such an endeavor. With some 720 local cooperative buying and selling associations banded together in five great statewide commodity exchanges which are all affiliated with the Michigan State Farm Bureau, it may truthfully be said that no state surpasses Michigan for the variety and effectiveness of its agricultural organization.

Through the State Farm Bureau and its several departments, the combined power and influence, not only of the individual members of this central organization, but of the members of all of the affiliated commodity exchanges, is headed up and made effective for the solution of our great problems of marketing, legislation, transportation, taxation, seed service and the central purchasing of farm supplies.

Nor should we overlook the real contribution to agricultural progress which is being made by the subordinate, Pomona and State Granges, the Gleaners and the Farmers' Clubs, all of which train leadership, develop community spirit and lay the foundation for successful cooperative endeavors. Thus much pioneer work has been done, but certainly much remains yet to be achieved. Let each person do his part.

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News from the State Capitol

By Our Lansing Correspondent

WITH outward harmony, but with perhaps a seething volcano of friction, bitterness, misunderstanding and disagreement masked somewhere beneath the apparently peaceful surface, the fifty-third session of the Michigan State Legislature convened at Lansing, Wednesday, January 7. Organization and reception of the governor's regular biennial message were the chief accomplishments of the first week. A recess was taken from Thursday afternoon until Tuesday afternoon, January 13, to allow the newly elected speaker of the house an opportunity to make committee appointments.

CONFRONTED with many perplexing problems of more than usual importance, the assembled law-makers can find time or thought for little except the discussion of highway finance legislation. The withholding of the 1925 auto license plates has brought this matter to a focus. Among house members, the feeling of bitterness which still lingers because of the veto of the gas tax two years ago is an added factor to be reckoned with.

Senator Howard F. Baxter, of Grand Rapids, has already introduced a two-cent gas bill in the senate, but it is included as a companion bill to a weight tax proposal and is not looked upon with any great degree of favor by leaders of the gas tax bloc in the house. Representative Joseph Warner, of Ypsilanti, will introduce a gas tax bill in the house early in the second week. Representative Ate Dykstra, of Grand Rapids, is reported to be working on another gas tax bill to be introduced in the near future.

THE election of Representative Fred B. Wells, of Cassopolis, as speaker by a vote of sixty-two to thirty-three was regarded as the first victory for the rural members. Mr. Wells is a practical farmer and throughout the past five sessions he has stood consistently for constructive legislation in the interests of the rural districts. In his race for the speakership, Representative Wells had the solid support of the strongest gas tax supporters. All the Wayne county delegation voted for the other candidate, Representative George Watson, of Capac.

Because of his fairness, the election of Mr. Wells to preside over the destinies of the lower house is looked upon as being a harmonizing factor. The necessity for harmony and application to duty was the keynote in Mr. Wells' speech accepting the speakership.

THERE is no question but that the most unpopular recommendation of the entire message was the implication that the auto weight tax should first be passed and then the question of a gasoline tax be considered, if it should still be regarded as necessary or desirable.

Many of the most influential representatives, and not a few of the senators are convinced that the reverse order should be followed. They announce that they are ready to fight to the last ditch for a gas tax first and then later take up the matter of such reduced license rates as should be deemed advisable.

THE high spot in popular interest in the short week's legislative progress was reached when on Thursday afternoon the senate and house convened in joint convention and in the presence of the state officials and supreme court justices received the third biennial message delivered personally by Governor Groesbeck. The capacity of the house of representatives Hall was taxed to the limit by the legislative observers.

The major portion of the governor's speech was given over to a discussion of highway construction and financing

matters. Much space was devoted to the advocacy of the desirability of a weight tax. One short paragraph side-stepped the fundamental arguments in favor of a gas tax.

Important subjects treated by the governor in addition to highway finance concerned trunk line re-routing, conservation, apportionment, public utilities, finance corporations, building and loan associations, state finances, new buildings and codification of the highway, election and criminal laws.

THERE are at least two unique and noteworthy features about the present legislature. In the first place, both branches are 100 per cent republican. A second, and probably much more interesting feature is that for the first time in history the house of representatives is graced by having a lady member. This pioneer in feminine participation in the legislative councils of her commonwealth is Mrs. Cora Reynolds Anderson, of L'Anse, in the Upper Peninsula. The Honorable Mrs. Anderson has withstood well the somewhat trying ordeal of almost continual interviews with inquiring reporters and inquisitive and interested

fellow members. From all present indications she seems destined to prove an honor to her sex and to establish a precedent which will no doubt prove dangerous to the future political careers of some of the masculine law-makers.

THE fact that the senate had its committee appointed made it possible for them to commence the introduction of bills. Ten measures were dropped into the senate hopper during the first week's sessions.

Second, only in popular interest to Senator Baxter's weight and gas tax bills is the reapportionment measure introduced by Senator Arthur E. Wood of Detroit. This bill would double the number of senators from Wayne county and make corresponding reductions in the representation from the rural districts.

THE process of organization is easier and simpler in the senate than in the house. The membership is only one-third as large, a much higher percentage of the members have had previous legislative experience and then, too, they have their presiding officer, the lieutenant-governor, selected for them before they arrive, so there is no delay in getting under motion. Lieutenant-Governor George Walsh announced his committee appointments on the first day of the session.



COOPERATIVE MARKETING ON INCREASE.

COOPERATIVE community marketing has made definite progress during the past year. More farmers are tied up in commodity cooperative associations than ever before. There has been an increase in the volume of business. The public mind has a better understanding of cooperative marketing fundamentals. And progress has been made in efficiency. Some associations are operating at from thirty-five to forty-one per cent less per unit of product handled than two years ago. This was the good news that Carl Williams, of Oklahoma, brought to the third annual conference of the Marketing Associations at the New National Association of Cooperative Willard Hotel, Washington, on January 5-8.

THE SURPLUS DELUSION.

EX-GOVERNOR LOWDEN, of Illinois, has come to the conclusion that the so-called surplus exists mainly in the minds of those whose interest it is to depress prices. The hundred million pounds of butter would supply the American people about two and a half weeks. Last summer a cargo of butter imported from Denmark was used to break the price of butter in the United States several cents per pound, yet there was not enough butter in this cargo to supply the breakfast tables of New York City for a single day. Supposing the dairy industry was sufficiently organized. The organization would have permitted the New York City people to enjoy their foreign butter for breakfast, but would have withheld their own butter from the market and maintained their price.

SHOULD ADJUST AGRICULTURE TO HOME NEEDS.

AGRICULTURE should be so readjusted as to produce our own food supply, said Secretary of Commerce Hoover. At present we are exporting farm products equal to the food requirements of 25,000,000 people, and importing food products sufficient to support 19,000,000 people. If production were properly balanced, the prod-

ucts of our farms would supply the food and fabric requirements of our country, with little if any surpluses to bear down prices.

FACT-FINDING COMMITTEE MEETS.

THE President's agricultural fact-finding commission resumed its sessions January 5 at the department of agriculture. It is the plan of the commission to make recommendations within a week or ten days for relief of the cattle industry, after which a short recess will be taken to make further outside studies, after which the subject of cooperative marketing will be given consideration. It is the plan of the commission to complete its investigations by February 1, in time to afford congress opportunity to act on its recommendations by March 4.

Northwestern congressional delegations are urging the appointment of Dr. John Lee Coulter, president of the North Dakota Agricultural College, as secretary of agriculture, to succeed Howard N. Gore, who will retire from the cabinet March 4. The President has given no hint or indication as to who of the many candidates for the position he intends to appoint.

BRITISH BAR AMERICAN SPUDS.

IN spite of the action of the American government the British embargo on our potatoes is not only continued, but has been extended to Ireland. The Britishers claim that this action was taken to prevent the introduction into the British Isles of the potato bug.

INCOME TAX RETURNS LESS.

THE income and profits taxes, and also the customs revenues collected in 1924 fell considerably below those of 1923. The income taxes amounted to \$1,773,509,732, or \$21,000,000 less than in 1923, and the customs revenues were \$504,912,472 as compared with \$565,030,000 in 1923.

Secretary Hoover believes that agriculture and industry should maintain a balance that would make us independent of foreign countries for food products.

Shelter Keeps Tools Fit

By Frank A. Meckel

A STORY recently filtered in of an auction sale when a grain drill which had been in use for thirty years sold for \$41. A neighbor of the family holding the sale bought the drill. He had used it and knew that it was still in perfect condition, and well worth the money.

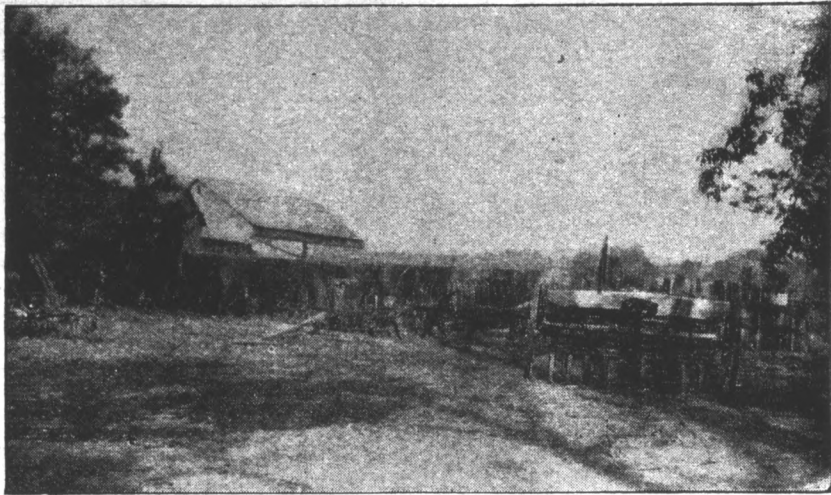
That machine had never been allowed to stand around in the field or in the barnyard. It had always been kept under cover.

At the same sale, which was held by the widow of the late Charles Stein, a twenty-four-year-old corn binder sold for \$99; a two-bottom gang plow which had seen fifteen years of service brought \$45; a nineteen-year-old farm wagon brought \$80; a sixteen-year-old fanning mill sold for \$26; a twenty-five-year-old side delivery hay

ers, completely out of the way.

Wagons which are not going to be used during the winter months can be just as readily stored by dissembling. The boxes can be swung up overhead in the barn and the removal of a bolt or two will take the running gears all apart. It's just a nice rainy day job to take a wagon apart, grease the skeins and put the parts away, and it will be well worth the time, for many wagons which would be stored away in a dry place if taken apart are left out in the weather all winter long simply because there isn't space for them under a roof.

It is much easier to keep bolts and nuts drawn up tight if the implements are taken apart occasionally, for in this way one will encounter the loose bolts, whereas, if the machines are



Weather Wears Tools Quicker Than Use. Tool Shelters Pay for Themselves in Tool Conservation.

rake sold for \$50; a twenty-seven-year-old hay loader sold for \$37, and the old family car which had been in use for nine years brought \$100.

It is significant that some of this machinery brought more at public auction and after many years of use, than it cost Stein in the beginning. Most of the machinery was purchased by neighbors who knew what they were buying. They knew that Stein always took the best kind of care of all his equipment, and the principal care he gave his farm machinery was shelter and plenty of oil.

In these days of high-priced building material it might not be advisable to rush headlong into the construction of an elaborate implement shed, although it might very well prove a profitable investment if there is very much machinery to be housed. But there are a great many places where farm machinery can be sheltered if just a little thought and consideration is given to the problem.

Very few barns are so designed that there is absolutely no waste space. Much of this waste space might be utilized for machinery storage. A little work in preparing the machinery for storage may be necessary, but much can be done along this line.

Aisles and alleyways in barns and granaries are often used for storing a grain drill or a mowing machine. Perhaps only one machine is stored in a space which might well accommodate three to four if they were properly stored. It isn't much of a job to remove the tongue from a mower or a grain drill and then move them up closely together. The space taken up by the tongue of a mower will very easily accommodate a grain drill and a hay rake. The bolts for holding the tongues in place can be replaced in their respective places, the nuts turned on loosely and a tag, labeling from which machine the tongue has been taken slipped over a bolt-head. The tongues may then be placed against the wall or stored up among the raft-

ers, never given an inspection, bolts will drop out completely and become lost and sooner or later make their lack known by a serious smash-up.

I recall a visit I made to a farmer in Boone county, Missouri, at one time. This man had no real implement shed, but he took nearly all of his machinery apart every winter and gave it a thorough overhauling and a coat of paint. He found it much easier to paint the various parts than to paint the machine intact, and he was using old machinery which his father had used years before.

He took all of his wagons apart once a year and soaked the felloes and hubs in hot linseed oil for several hours. He painted the tongues and double-trees with hot oil and stored them among the rafters in his shop. His equipment was like new. The wagon boxes were given an annual scrubbing and a coat of varnish, and one old wagon that he had used for nineteen years still bore the name of the wagon and the dealer from whom he had purchased it. That wagon would have brought considerably more than he gave for it nineteen years before. It was worth more, and just a little care and shelter had made that possible. And the shelter had been nothing more than a utilization of waste space in several of the farm buildings.

Let us use more of this space on which we are paying interest and rent. We pay for the space whether we use it or not, and that space can be made to return good dividends in longer life and more efficiency in our farm equipment. Few of us ever get out of a farm implement, all of the value that the manufacturer builds into it. We can easily get fifty per cent more with just about two per cent extra effort. That's certainly worth while.

Uncle Oziah Filkins has invented a hair tonic. Last night he spilled some on his kitchen linoleum. Next morning it was a rug.—Sunshine Hollow.



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Which Costs More?

RAY WHEELER decided to put the South meadow into Alfalfa last year. He was feeling economical when he went to town to buy his seed. Johnson's store had some nice Alfalfa — purity 99%, germination 96% — but the price was \$12.75 a bushel. Over at the Hay and Feed depot they had another brand — purity 95%, germination 91% — for only \$11.75. Ray thought that was a pretty big difference in price when both brands tested better than 90%, so he "saved" \$8.00 on 8 bushels.

But the first cutting had a lot of weeds in it and Ray began to wonder. He got busy with a pencil and made a surprising discovery. He found that the cheaper seed was actually the more expensive and instead of saving \$8.00 on the 8 bushels, he actually lost \$1.36. Moreover, Ray says now, "I don't know how much I lost on the crop, and there was about 5% weeds in that cheap Alfalfa which it will probably take me several years to get rid of."

Free Book If you want to know just how Ray Wheeler figured the real cost of his Alfalfa seed, write for the booklet "7 Lessons in Judging Seed." It tells how to play safe in buying seeds and is worth dollars and cents to every farmer. Send postcard today.

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TRESPASS.

Have I a right to go over land that is not enclosed and cut down trees? Land is owned by other parties.

Have I a right to take white marl from the roadside where I can get it without digging deep holes?

Have I a right to go into swamps that are not enclosed and gather dead and down material for wood?—G. L. H.

Each of the acts mentioned is an actionable trespass for which the owner of the land may maintain suit for damages and the cutting of trees on the land of another is also made a misdemeanor by statute. The absence of the fence is of no consequence.—Rood.

MERCHANTABLE TITLES.

A. is about to sell a piece of land on contract, has secured an abstract, but it is found that one parcel of land gives only a tax title. Is that a merchantable title? On the other forty-five acres, about 100 years ago, a man whose heirs deeded the next record, "is not proved dead." Is there any way of making this a true title without chancery proceedings? The deeds given by these heirs are straight.—C. O.

A tax title would be a merchantable title if all the proceedings were regular and foreclosure has been completed. Possession by the purchaser under such title for five years cures all defects. Merchantable title to the other parcel appears to be made by adverse possession, but title of record could be obtained only by proceedings in chancery.—Rood.

LICENSE FOR TAKING ORDERS.

Do I have to have a license to sell shirts in the country and small towns? I live in the country and have chance to be a salesman for a concern to sell shirts for them? Customers pay me a deposit and I send order to company, and they send shirt to customer and customer pays postoffice.—C. D.

There are several statutes providing for licenses to hucksters and peddlers, but none of these have relation to orders taken for goods to be shipped from places beyond the state line direct to the customer.—Rood.

COMPOUNDING A BALANCED RATION.

We have been feeding our cows on corn silage and corn fodder, and soy-bean hay at noon, and a mixture of ground oats and oil meal. Corn fodder was silo corn with ears on. We wish to feed husked cornstalks and soy-bean hay and corn silage as much as they will eat. For concentrates we wish to feed one part barley and two parts oats and some oil meal. In what proportion ought we to feed this to get a balanced ration?—J. D. H.

The following combination of these different feeding-stuffs is suggested:

Ten pounds of corn stover provides .14 pounds of digestible protein; five pounds of soy-bean hay provides .53 pounds of digestible protein; thirty pounds of silage provides .42 pounds of digestible protein, or a total of 1.09 pounds of digestible protein in the roughage, but the standard is 2.5 pounds for a cow giving a fair flow of milk per 1,000 pounds of live weight. Hence 1.4 pounds must be provided in the concentrates.

If you mix barley and oats in the proportion of two pounds of oats to one of barley it will furnish you a grain mixture containing nine and one-half per cent protein, and ten pounds which is a pretty liberal grain ration, would only provide .95 pounds of protein, yet it is still lacking nearly .5 pounds of protein to come up to the standard.

If you will feed two pounds of oil meal per day, furnishing .63 pounds of protein and then feed enough of the oat and barley mixture to give one pound of grain for every three pounds

of four and one-half to five per cent milk, and one pound for every four pounds of three to three and one-half per cent milk, you will have a very well-balanced ration.

If you can get your cows to eat more roughage than the amount given above do so and cut down on the amount of grain. Every pound you can cut off of the grain ration by increasing the amount of roughage will add to your profits.

A RATION WITH TIMOTHY HAY.

Will you please tell me how to make a balanced ration for dairy cows out of the following grains? We have oats, barley and rye, good corn silage, mixed hay (mostly timothy), bean straw and oat straw. Bran will cost \$1.90 per cwt.; cottonseed \$2.65 per cwt.—A. H. S.

You have poor roughage foods as a foundation for an economical ration. Good timothy hay is a good filler but being so poor in protein it does not furnish a good foundation for a milk ration. Costly protein feeds must be purchased to supply the necessary protein, for a cow can not produce a protein product like milk without the protein food in the ration.

The following ration is suggested:

For roughage, thirty pounds of corn silage, ten pounds of timothy hay, five pounds of oat straw and five pounds of bean straw. This will furnish .94 pounds of protein.

For concentrates, mix oats, barley, rye and bran in equal parts by weight and feed eight pounds per day. This will furnish .81 pounds of protein, making with the roughage, a total of 1.75 pounds, but the cow must have at least 2.5 pounds.

Two pounds of cottonseed meal will furnish .74 pounds, making a total of 2.49 pounds, or practically the necessary amount.

If you had clover hay you could cut out some of the grain which is more expensive.

CROPS ON SHARES.

I would like to ask two questions. 1. Is there any tenant rules in this state? I rented a field for corn, I to get two-thirds of the crop. I furnished seed, labor and everything. I cut and shocked the corn. Did I have to husk and haul in landlord's corn and fodder?—B. E. K.

A farm lease is an agreement between two or more parties involving the duties and obligations of the tenant and landlord. The basis of agreement is founded on common practices in the various regions.

In your particular case you have contracted to perform certain services. A crop half taken care of certainly wouldn't be completing the job. Much will depend on the agreement at the outset.

CHANGING CONTRACT.

Nine years ago I bought eighty acres of wild land on a contract. I bought it on ten years' time at six per cent interest, and the bankers drew it up for five years instead of ten years. I wanted to renew the contract when the first five years were up, but the man I bought of said we should let it go as it is until the next five years are up. I have one year yet, and he wants to make out a new contract for the year and get seven per cent interest. Can he raise the seven per cent on one year, or will I have to make out a new contract? I have paid the interest and taxes.—O. M.

Neither party can vary the contract without the consent of the other after it has been operated on for such a long period. It appears by the contract as written, that the entire amount is due, and any additional time that can be obtained is only at the grace of the seller.—Rood.

HARVESTING THE ICE CROP.

(Continued from page 63). removed to the shore, but on large fields, especially if the snow is deep, it is impracticable to scrape the snow entirely off the field. It becomes necessary, therefore, to pile it in wind-rows.

Keep the Cakes Uniform.

After the snow is off the field is ready to be marked for cutting. The marking must be done carefully so that all cakes will be rectangular, which aids in economical handling and packing in the ice house. If the proper start is made in marking off the field no trouble will be experienced, but if not, subsequent cuttings will be difficult.

Success in marking depends largely on getting the first line straight, which may be done by placing a stake at each end of the proposed line to serve as a guide.

A straight-edge, consisting of an ordinary board about fourteen feet long, is then aligned with the two stakes and the cutting tool or hand plow run along its edge, after which the board is pushed forward and again aligned with the stakes. This is continued until the entire distance between the stakes has been covered. Another way



Cutting the Ice Into Blocks After "Plowing."

is to stretch a line between the stakes and do the marking with a hand-plow, though this is not so satisfactory, as the hand-plow can not be operated in so straight a line with the board. After the first line has been cut it can be used as a guide for the horse marker, if this implement is used.

After the ice field has been lined off in one direction, the cross-lines should be made. Care should be taken to have these at right angles to those first drawn, which is accomplished by use of a square. A suitable square may be made easily by first nailing the ends of two boards together with a single nail. Measure a distance of eight feet on the outer edge of one board and six feet on the outer edge of the other board, then nail a third board diagonally across the two, adjusting it until the two marks are exactly ten feet apart on a straight line. Nail the boards together securely, forming the desired square. If the first cross is drawn with care it is easy to draw the remaining lines parallel.

How to Estimate Quantity Needed.

To calculate the amount of ice needed on a dairy farm, take the number of cows kept as the basis. If the average cow produces 3,500 pounds of 3.7 per cent milk per year, which is equal to 431 pounds of thirty per cent cream, it will require 431 times 1.16 pounds, or about 500 pounds of ice, to cool the cream produced by each cow and keep it in good, sweet condition until delivered to market. In addition it is best to store 500 pounds additional ice, or a total of 1,000 pounds per cow. This is sufficient to cool the cream needed for household uses and allow for reasonable waste. Therefore, the twenty-cow dairy should have 100 tons of ice stored. These figures are for cream, and if the milk is to be

Why More Days Wear?

6 different answers and all of them right

You know that you get longer service from "Ball-Band" Footwear. But, do you know why? Six men in our factory will each give a different answer.

1 The Designer:
This man has been with the company for over 25 years creating shapes and planning styles. He is responsible for the fit and the comfort that you always find in "Ball-Band" Footwear. He will tell you that a boot that fits right will outwear one that wrinkles and slips. He is right. His part in More Days Wear is an important one.

2 The Mixer:
If you have been wearing "Ball-Band" you know that they are made of good rubber. We wish you could talk to the man who is kneading the raw rubber, mixing it with the proper amount of sulphur and other materials to make it tough, live and strong. He would tell you that the proper mixture is what makes quality, which is most important in More Days Wear.

3 The man who prepares the cotton linings:
This man is proud of the fact that the cloth is so thoroughly impregnated with rubber that it shows through between every thread. Look at your own "Ball-Band" Boots and see this for yourself. He will tell you that many boots start to wear out at the linings, and that "Ball-Band" linings cannot wrinkle or separate from the rubber. This means More Days Wear. Yes, he is right, too.

4 The Bootmaker:
He has before him a hollow aluminum last and a pile of rubber sheets cut into

pattern pieces. He lays these pieces of rubber on the last and builds up the boot, piece by piece. Layer after layer of these soft elastic sheets are laid on in exactly the right places and cemented with pure rubber cement. They must not be drawn too tight or allowed to wrinkle or a weak spot will develop. This is good workmanship and that also means More Days Wear.

5 The Vulcanizer:
While still on the hollow aluminum last, the boots are put on a rack, each last connected to an iron pipe and rolled into an immense oven.

Then the vacuum pump is started drawing the air out of the lasts. The rubber and fabric of the boot are sucked down to the last under great pressure while the heat performs the miracle of vulcanizing.

This is the Vacuum Process and was first used in the "Ball-Band" plant. It is one more reason for More Days Wear.

6 The Inspector:
"Good enough will not do—it must be the best."

If a boot or shoe does not measure up to our best it is thrown out. The inspector is the last one to look over the work and he knows that he is responsible for the quality which means More Days Wear.

So you see it is not any one feature that makes "Ball-Band" Rubber Footwear so good. It is because every step of the making is done as well as we can.

We make nothing but footwear and we know how

MISHAWAKA RUBBER & WOOLEN MFG. CO.
328 Water Street Mishawaka, Indiana

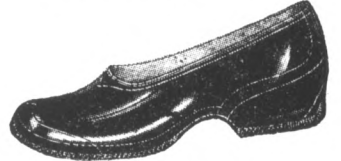
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When the winds blow raw and chill and rheumatism starts to tingle in your joints and muscles, get out your good friend Musterole.

Rub this soothing white ointment gently over the sore spot. As Musterole penetrates the skin and goes down to the seat of trouble, you feel a gentle, healing warmth; then comes cooling, welcome relief from Old Man Pain.

Better by far than the old-fashioned mustard plaster, Musterole does the work without the burn and blister Grandma knew so well.

For croupy colds, sore throat, rheumatism and congestion of all kinds, just rub on Musterole.

Don't wait for trouble; keep a jar or tube on the bathroom shelf.

To Mothers: Musterole is also made in milder form for babies and small children. Ask for Children's Musterole.

35c and 65c jars and tubes; hospital size, \$3. The Musterole Co., Cleveland, Ohio



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Brings you any size New Butterfly Cream Separator direct from factory. Machine earns its own cost and more before you pay. We quote Lowest Prices and payments as low as **ONLY \$3.50 PER MONTH**. No interest—no extras. Every machine guaranteed a lifetime against defects in material and workmanship.

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HAYES PUMP & PLANTER CO.
Dept. 61, Galva, Ill.

cooled, it will take between two and three times as much ice, or about thirty tons for the fifteen-cow dairy.

It is necessary to store more ice than is seemingly needed, as there is sure to be a waste, even in the best houses. Sometimes this averages twenty-five per cent of the whole amount of ice put up.

The number of square feet of ice required per ton of ice in blocks twenty-two inches square, and of various thickness, is shown in the following table:

Inches Thick.	Cakes For Ton.	Sq. Ft. Per Ton.
4.	31.3	105.4
6.	20.9	70.2
8.	15.6	52.8
10.	12.5	42.1
12.	10.4	35.1
14.	8.9	30.1
16.	7.8	26.3
18.	6.9	23.4
20.	6.3	21.1

Not only will you save much space, but ice as well, by properly packing the ice in the house. You can get only

thirty-five or forty pounds of ice in a cubic foot of space when the ice is thrown in at random, while about fifty pounds can be packed in the same space with a little care. This means also that the air cannot circulate through the ice and melt it, so pack carefully.

About a foot of sawdust should be placed on the floor of the ice house, with less in the center to permit the cakes to lean inward. The sides of the ice should be smooth. Any projecting pieces should be trimmed off before insulation is put on. If sawdust or mill shavings are used a space of at least twelve inches should be left between the outer walls and the ice stack.

It is easy to calculate how much ice the house will hold. Allowing forty-five cubic feet per ton, an uninsulated house 18x12x20 feet high, with one foot around for insulation, will hold about thirty-eight tons, while the same sized house, if insulated, will hold about forty-three tons.

NEWS FROM CLOVERLAND

STUDY FORESTRY PROBLEMS.

THE forestry department of the Michigan Agricultural College has a considerable number of forest demonstration plots in the Upper Peninsula. Two or more varieties of trees are planted and these receive attention from the forestry department and the county agent. Such plots exist at Crystal Falls, Ewen, Newberry, Watersmeet, Marquette and Manistique.

ORE BY THE MILLIONS.

DURING the year just closed, unofficial figures recently tabulated show that the Upper Peninsula of Michigan produced 128,000,000 pounds of copper and approximately 11,500,000 tons of iron ore on its three ranges.

TESTING ASSOCIATIONS MULTIPLY RAPIDLY.

DURING the past year the number of cow testing associations in the peninsula has increased from two to eleven. It is estimated that the number of cows on test have increased from about 600 to about 3,000. The herds on test now amount to 279. The associations are named as follows: Chippewa, Schoolcraft, Mackinac, Marquette-Alger, North Delta, South Delta, North Menominee, South Menominee, Dickinson, Iron, Ontonagon, Gogebic. It is stated that the average association cow produces from 100 to 150 pounds more of butter-fat than cows outside the association, attributed to better care and feeding, for the farmer knows where he is at and hopes to get to. Unprofitable cows are discovered and eliminated. Thus last year in Gogebic county, forty-two cows were got rid of after tests in the association showed they were not worth keeping. In Delta county fifty-five cows were disposed of from the same cause. In all, 13.9 per cent of the cows in the associations were sold as unprofitable.

ONTONAGON AGRICULTURE IMPROVES.

DURING the past season, few new farms have been opened up in Ontonagon county, reports County Agent W. M. Clark, but the farmers on the land have made notable advances in spite of the falling market for those products that are chiefly depended on for cash—dairy products, hay, potatoes and beef cattle.

The farmers already there have cleared much new land—156,000 pounds of war-salvaged explosives being consumed there for that purpose.

This is said to be a larger quantity than was consumed in any other Michigan county, and much larger on a per capita basis.

Twenty-five farmers in Ontonagon county have been raising pedigreed Scotch green peas under the supervision of the Michigan Crop Improvement Association, and twice this county has taken first place in this crop at the International Hay and Grain Show. Considerable pedigreed barley, oats and wheat are likewise being raised for seed purposes under the same supervision.

The number of registered pure-bred dairy sires has been doubled during the past year in this county, and these are from dams having a high record. All cattle in the county have received their second test for tuberculosis, showing only 1.1 per cent of reactors. The cows in the County Cow Testing Association averaged for the year 246 pounds of butter-fat per cow.

An Ontonagon county boy was calf-club champion at the Chatham roundup, last August. Ontonagon county apples at the Grand Rapids exhibition in December took thirteen first places and eleven second places—one sweet-stakes—and in all, twenty-seven prizes. So if new farms are not to be opened up in Ontonagon county to any great extent the farmers already there have done much of which they can be proud, and the whole county is ultimately the gainer thereby.

POTATOES ROT.

FARMERS and dealers have encountered some trouble this winter with rotting potatoes. This is attributed to the conditions under which potatoes were grown last season, which was cold and backward. Much of the trouble is attributed by one county agent to black-leg, while immaturity and frost may also be responsible to some extent. Farmers are advised not to select seed from present stock which shows a tendency to rot, but to go out and get clean seed, preferably certified.

SHOULD GROW MORE FORAGE.

UPPER Peninsula farmers who produced too little forage and grain, last season, and too many potatoes, are said to be having difficulty in wintering their stock. The report comes from Delta county, but this condition may exist elsewhere. County agents are said to be attempting to arrange a stock diet consisting of skim-milk and potatoes, of which there is a surplus. How general this situation is, does not appear at the present writing.

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This Strap was Short-Snubbed

To prove my claim that Wear-More is the strongest harness made, let me send you any style you select for 30 days' free service on your own team. Test it in every way, I take your word for it if not then convinced. Simply return it at my expense. Write today for big, free book, with new reduced prices. See how I've done away with rubbing and see-sawing between leather and metal. Doubled wear right here! Learn how short-snubbing of leather under buckle edge or around narrow metal units coats you money in break-downs and repairs. See how I've overcome this—how I learned this priceless harness secret from a pail handle. I believe you owe it to your pocketbook to investigate, at once, this marvelous advance in harness-making and harness value.

JOHN C. NICHOLS, Pres. See strap above—how old 1888 Erie Ave., Sheboygan, Wis. was squeezed out, fibers John C. Nichols Co., Also Original packed and strap-cracked stores and Masters of Fizzell Collars. Est. 1909. ready to break in two. Like carrying pail with wire handle. None of this in Wear-More Harness! Patented protecting buckles let leather pull against big, broad surface, just as well protects your hand around the large, comfortable wooden handle on a pail bail.

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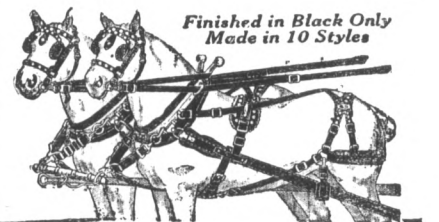
NOTICE

TO THE MEMBERS OF THE MICHIGAN MUTUAL WINDSTORM INSURANCE COMPANY, HOME OFFICE, HASTINGS, MICHIGAN.

You are hereby notified that the Amendment of Article III of the Charter of the above named Company as adopted and approved by the Board of Directors, Dec. 23, 1924, will be voted on by the membership at the Annual Meeting to be held on Jan. 21, 1925.

That said proposed Amendment is for the purpose of creating an Emergency Fund.

Michigan Mutual Windstorm Insurance Company,
E. A. Parker, Secretary-Treasurer.



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McINTOSH AND SPY FAVORITE VARIETIES.

IN the recent public contest at the apple show to determine what would be the best carry-home package, there did not seem to be any definite trend in the choice of package. The smaller, or less than peck-size, package, did not appeal as was expected. There was a distinct preference, though, for the McIntosh and Spy varieties. About 1,000 consumers voted in this contest.

CANNERY INSPECTION HELPS.

THE Michigan growers, as well as the consumers, are benefiting by the compulsory inspection of the canneries in the state, according to Wm. McEwing, president of the Michigan Canners' Association.

Mr. McEwing says that the better quality product which is being put on the market as the result of this inspection, is bringing Michigan canned goods a reputation for quality, and higher prices are resulting. When the canner gets better prices for quality goods he is willing to pay higher prices for good fruit to can.

MAKING A GOOD CHEAP HOT-BED.

I HAVE always wanted my hot-bed for early plants, and one year I made a three-sash hot-bed and planted it very early to radishes and sold enough to pay for it before I needed it for tomato plants, planting the French Breakfast radish and selling them at ten cents a dozen, with a demand that never let them get larger than big gooseberries. I make the hot-beds without extra expense—digging a pit eighteen inches to two feet deep, filling it with stable manure, fresh, piled and moistened and pitched over a few times to get to heating evenly. The manure is well packed in the pit, for success depends much on this. Deep beds heat slowly and last long; shallow heat fast and hot and are soon done. Cover the manure with six inches of good garden soil and plant in this. The bed should be a little larger than the frame, which is set on top and banked up around.—A. H.

KEEP OR MAKE A WOOD-LOT.

I HAVE traveled about a bit in the Lake States. This thing has impressed itself upon my mind: That in the northern counties of Michigan, for instance, there is a less per cent of the farm land given over to forests than of the farms in the more fully settled districts of the southern counties. This one finds to be true in the older parts of the country.

For some reason, we want a piece of wood growing on our farm. It seems to be a part of our nature, to be more satisfied with our land ownership when at least a small wood-lot breaks the horizon of our acres. This pull, or whatever one chooses to call it, had been so strong in a few farmers that they have gone to the trouble of planting trees; and, we are pleased to note that, this number is increasing. It is a very sane tendency. Such a desire has back of it sound business sense. More attention to the growing of wood, which is bound to be in greater demand throughout the life of generations yet unborn, will naturally decrease the acreage devoted to other crops, of which there is an over-production, to the best interests of farmers. I am firmly convinced that farmers in a state like Michigan can turn their attention to the growing of a larger and larger number of trees on their farms.—R. D. Heslop.

CELERY, lettuce and grape grades are to be revised by the bureau of agricultural economics for use during the coming crop season. The changes are to be made as a result of a conference of bureau officials with state department of agriculture representatives.

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Both electric light and engine power from one plant at one cost. Engine power is available at belt pulley while battery is being charged. Engine power alone or electric light alone at any time. Double utility at one low cost.

Prices
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Over 400,000 farmers use this engine because it is low in first cost, low in operating cost, and is absolutely dependable.



It is simple, sturdy and powerful. Has high tension battery or magneto ignition; suction fuel feed; positive lubrication; renewable die-cast bearings; parts subject to wear are hardened and ground; crankshaft, connecting rod and camshaft are drop forgings. More drop forgings and specially heat treated parts are used than in any other engine of this type. Highest quality obtainable—at the lowest price possible!

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120 gallons per hour capacity pump, 60-cycle motor, 8 gal. galv'd tank, complete. \$84.75
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Also larger sizes, for engine or electric drive, correspondingly low priced.

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Grind grain mixtures as well as any single grain. When grinding plates are worn on one side they can be turned and used again. Non-bridging hopper, safety flywheel, cutting knife adjustable from outside—extreme simplicity assures long life.

Prices
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All parts are completely enclosed and run in oil. Cut pinion and worm gear eliminate many parts. Crankshaft is drop forged. All working parts machined to close



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- "B" Feed Grinders
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- Steel Eclipse Windmills
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MARKET GARDENERS recognize three requisites necessary to profitable crops—an early start, quick growth and early maturity.

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IT PAYS TO USE NITRATE OF SODA 200 Pounds Per Acre

on all garden crops in addition to their usual fertilizers. That Nitrate of Soda is a valuable asset to the gardener in doing these three things is proven by hundreds of trials where actual dates and figures were carefully kept of the increased profit due to the Nitrate of Soda.

If your local fertilizer dealer cannot supply you with Nitrate, or if you wish specific advice as to its use, write our nearest office. In writing please identify this advertisement by the number 1520

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R. H. SHUNWAY, Rockford, Ill.

only \$5.35 feeds two calves for six weeks!



This is the cost of 100-pound bag.

Compare this cost with feeding cow's milk for the same period—figure what you save with No-Milk Calf Food. Produces fine, healthy calves without using any whole milk. Begin using when calves are three days old, and simply mix with water. It is not a calf meal—Has been used successfully since 1885.

At your dealer's to-day you can get No-Milk Calf Food. Try one bag. You'll be surprised with it. Look for the Red and Green bags. Put up in 25-lb., 50-lb. and 100-lb. bags. Call on your dealer to-day and get a bag.

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Saves Labor In the Home

Well Finished Walls and Floors Help the Women Folks

If the average farm kitchen is fifteen by eighteen square feet it contains a surface of 270 square feet, which requires about thirty minutes scrubbing every week. This means that one woman spends twenty-six hours a year scrubbing one floor. There are over 6,000,000 women in the United States doing housework on farms, which brings the total number of hours spent scrubbing kitchen floors well over 156,000,000. It has been estimated that the saving in time alone cleaning floors which have been painted or varnished, and over which a mop slides easily, is twenty-five per cent. This would mean a saving in hours alone of 39,000,000 hours for more important matters.

The hours of drudgery thus saved give no hint of the improvement in health the saving of such labor would

are very tiring to use. A mop slides quickly and easily over a painted or varnished floor, leaving a clean surface behind it, whereas, a rough floor requires the hardest kind of scrubbing and never shows the effort expended on it.

Shabby spots, the outcome of time and wear, creep unnoticed into the house. Their presence means extra labor. They make cleaning harder. A housewife feels irritation when after cleaning she sees the scratched spots on the baseboard, the worn spots in the doorway, or the mark on the window-sill where potted plants have stood. Such things reflect on her zeal and ability as a housekeeper. The cure for these marring spots may be found in a paint can. Furthermore, in well painted surroundings there is not the tendency to allow cast-offs and rubbish to collect. Fresh paint is an incentive to keep surroundings clean.

Painted ceilings and walls are clean because they are washable. They can be quickly wiped down with a moist cloth. Painted or varnished woodwork and furniture can be kept glistening with a dustcloth. A pot of paint transforms a shabby, hard-to-keep house into a bright and cheerful one.

ONE WAY TO SAVE ENERGY.

FOR a number of years I used the strong-arm method of keeping Canada thistles in check. The old plan of keeping their heads under ground until their bodies shriveled up, was followed. It worked, but demanded more energy than one was in a position often to give, especially when thistles were thriving most.

Now, I conserve this energy for more productive uses. This I am able to do through the use of alfalfa. Canada thistles and alfalfa are not congenial companions. The former cannot continue under the treatment required of the alfalfa crop. They give up in despair. What with the root activity of the alfalfa, the dense shade of the leaves and the frequent cutting, the poor thistles have no show. So while the hoe hangs in the woodshed with the blade rusting, the Canada thistles are having even less of a chance to get a foothold on my farm than they did when I sweat and worried my temper into repeating words we do not like the children to hear.—R. J. Smith.

KEEP THE DRILL IN GOOD ORDER.

HOW many times while motoring through the country do you see a field of grain where the drill went wrong? Each time I see this, I am impressed that the owner of that farm is careless.

These observations have led me to a practice which may not be justified, but which has gotten to be a sort of habit. To make sure that the drill or the corn planter is doing its work as we expect it to, each winter I jack them up on the barn floor so the wheels can be turned easily. Then I can note just how the adjustments are working, and how each hole is delivering its portion of the seed. The plates in the planter can also be studied so that when I go into the field next spring with these implements I am pretty certain that they will do the thing I want them to do.—S. A. Pratt.

LETTERS from the following are awarded prizes in our last contest: Henry Gretz, Ransom Smith, George Brown, Arthur Sinclair, and Greely Everitt.



Here's the Book that will help Cure him—it's FREE

THE first move thousands of horse owners make when a horse goes lame is to turn to Save-The-Horse Book. In its 96 pages they find the exact condition described, what to do and how to do it. Don't miss getting a copy—it costs you nothing.

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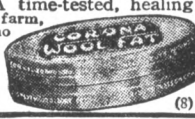
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Guaranteed to Grow Seeds, 3-4 ft. Apple Trees 25c. 3-ft. Peach Trees 20c each Postpaid. Growers of Fruit Trees, Berry Plants, Shrubbery and Grape Vines. Send for 1925 Catalog today. ALLEN'S NURSERIES & SEED HOUSE, Geneva, O.

NEW LAMP BURNS 94% AIR

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, J. O. Johnson, 609 W. Lake St., Chicago, Ill., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make \$250 to \$500 per month.

Machinery Week

THE week of February 23 to 28 has been designated as machinery repair and replacement week. Before or during that week every farmer should inspect his tools and farm machines to learn what repairs are needed and what new machinery may be required to carry on the farm work during 1925, most economically.

To help in this movement we want short letters from our readers telling about their methods of getting the farm equipment in shape for a summer's campaign. The letters should tell when, how and why you proceed to do this work. To the writer of each of the five best letters we shall send one dollar. Address them to the Handy Man, Michigan Farmer, Detroit, not later than January 20.

mean. And further, there is the added attractiveness and the sanitary conditions, which paint and varnish bring, to be taken into account.

Considering the fact that every housewife must take into account the cleaning of walls and ceilings as well as floors, and that there is a total inside surface of 39,659,940,492 square feet in farm houses in the United States, a fair idea may be gained of the hours wasted cleaning rough, badly finished surfaces.

Paint and varnish are among the foremost in the ranks of man's labor-saving inventions. A great many people think of paint and varnish solely in terms of beauty. They consider them luxuries, not necessities. While paint and varnish are beautifiers of great importance, they save more than they cost in preventing repairs and in safe-guarding the health. They do even more. They reduce house cleaning labor. Freshly painted surfaces—walls, floors, woodwork—are easily cleaned. They show that they have been cleaned and are a source of satisfaction to the housewife.

Farm women are finding how much easier it is to clean painted or varnished floors than carpets. Only a comparatively small proportion of farms are equipped with electricity, so that electric vacuum cleaners are of no use. Hand-vacuum cleaners and the good old carpet sweeper are helpful, but not so thorough, and they



Pure Breed Records

By W. A. Freehoff

AFTER being under partial eclipse for several years, the pure-bred live stock business is again emerging into the full view of the sun. At some recent public sales, many fair and some very good averages were made, and bidding on the whole was brisk, with buyers showing a tendency to pay live and let live prices.

One of the things which has discouraged farmers from engaging more freely in the business of breeding pure-bred live stock is the record "nuisance." If they buy an animal from some breeder it may take many months to obtain the proper pedigree record and transfer sheet. Whenever there

is a tendency of being slack in his methods, he loses many sales he might otherwise have made.

Whenever you get a transfer paper be sure and compare the sketch of the animal with the animal itself. Otherwise in case you lose the registration certificate, and apply for a duplicate, you may find it impossible to do so, because the sketch of the animal you submit in order to obtain that duplicate does not check with the sketch on file in the office of the recording club. When making sketches with your registration applications, be careful to get the drawing accurate, or later the whole pedigree may be called into question.

Nearly every recording association has bound duplicate books for making these various reports and applications, and in the end a man is money ahead by buying them and using them, as they are especially designed to help keep the records straight.

HANDLING YOUNG CALVES.

THE dairyman who plans to have his cows freshen during the fall and early winter months finds himself confronted with the problem of stabling a number of young calves. The common practice among dairymen is to stable a number of calves in one (Continued on page 84).



This Tester Resorts to the Old Cutter when Snow Becomes Too Deep.

is a long delay, there is always the possibility that in the end the seller will not be able to supply papers.

It remained for several mid-western railway companies to give an impetus to keeping better records. They are giving reduced rates for pure-bred live stock when shipped by freight in less than carload lots provided the proper papers are attached to bill of lading. The saving is large enough to spur the seller into getting the papers into shape.

There is only one safe policy to follow when engaged in the breeding business, and that is to keep prompt and accurate records. A herd register is almost indispensable, where breeding dates and birth reports may be entered. All these entries should be made at once, as delay means guesswork later, and guesswork is never safe.

I talk from experience here, as I have been both careless myself, and suffered from the carelessness of others. But experience is a good teacher and after a man has been stung once or twice, he tightens up on his methods. I like the system used by some of the cattle clubs, which permit birth reports to be sent in, to be kept on file. When this is done registration may be delayed. Then if the calf dies or proves a cull, or if for any reason it is thought best not to register, no money has been wasted and the herd books of the club are not burdened with a useless record. By getting a duplicate birth report book, a duplicate sketch and duplicate data is always at hand in convenient form, and registration papers may be secured at short notice.

The most successful breeders make it a point to apply for the transfer papers the minute an animal is sold, and to rush it to the buyer. That is service of a kind the buyer appreciates, and will encourage him to come again. Once a breeder gets the general rep-



You wouldn't stand for this One Minute

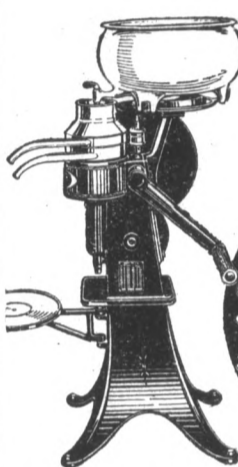
If some one scraped the butter left over from your table into the garbage can after each meal you certainly would put a stop to it immediately.

Left-over butter must be saved for another meal, but how about the "left-over" butter-fat which your present separator leaves in the skim-milk? It isn't at all unusual for a new De Laval to increase the yield of butter-fat from the milk of just a few cows by a quarter to a pound or more a day. Think what this would mean to you in the course of a year.

Trade Allowance

Old centrifugal cream separators of any age or make accepted as partial payment on new De Laval. Sold on easy terms from

The new De Laval is the best cream separator ever made—skims cleaner, runs easier and lasts longer. Among other new features and refinements it has a self-centering bowl which eliminates vibration, causing it to run smoother and easier. It gives you a rich, smooth, high-testing cream, and skims cleaner under all conditions of use.



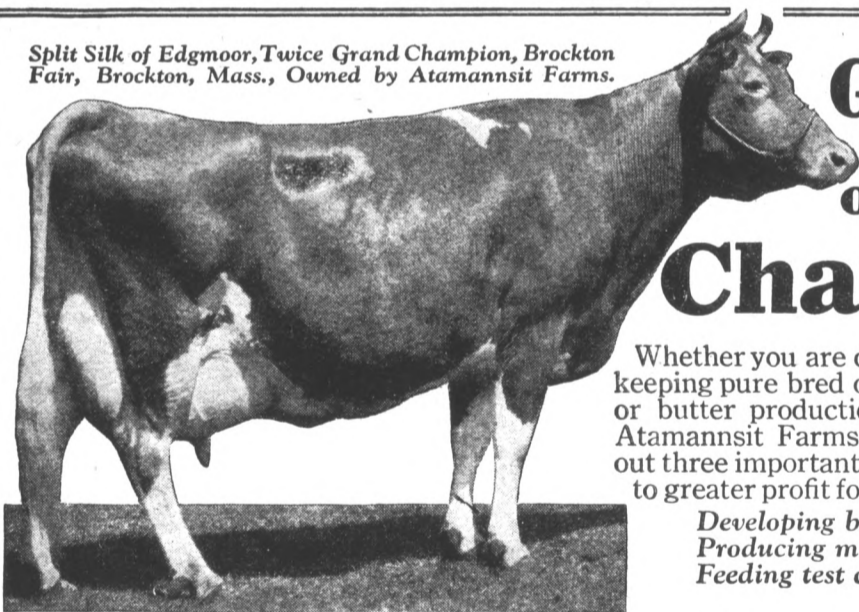
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New York, 165 B'way; Chicago, 29 E. Madison St.
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No. Cows.....

Split Silk of Edgmoor, Twice Grand Champion, Brockton Fair, Brockton, Mass., Owned by Atamansit Farms.



Grade Cows or Grand Champions

Whether you are developing Grand Champions, keeping pure bred or grade cows for milk, cream or butter production, the following letter from Atamansit Farms will interest you. It brings out three important points in dairying all tending to greater profit for the man who keeps cows, i. e.

Developing better young stock—
Producing more milk—
Feeding test cows for higher records.

Atamansit Farms, East Falmouth, Mass.

The Quaker Oats Co., Chicago, Ill.

November 15, 1924

Dear Sirs—In regard to the Sugared Schumacher I must say the results from its use are very gratifying. I admire its remarkable palatability. In a herd as large as Atamansit there would usually be several animals that do not care for a feed but I have yet to see one that is not keen for Sugared Schumacher. We have 30 yearly heifers, which due to the very dry weather, came in from pasture quite thin this fall. We have fed them Sugared Schumacher alone with silage and clover hay and the way they have picked up is a splendid testimonial to your feed—much better than I could write.

We have used Sugared Schumacher according to your directions for our milking herd and it has proven to be more satisfactory than any other feed we have used. It is the last three months on a test cow's record that count. They are pretty well filled up then and they must relish their feed or they will not keep going. For that reason I think Sugared Schumacher is the ideal carbohydrate basis for the test ration as it keeps the cows at maximum production right to the end of the test period.

—Yours very truly, HORACE M. CLARK, Herdsman in charge.

There are Many Good Reasons Why Sugared Schumacher Feed Produces Such Gratifying Results. Mr. Clark Touches on Three of Them:

FIRST the way the 30 heifers "picked up" in flesh and vigor—a result of the right kind of carbohydrates which puts animals in tip top condition.

SECOND the way the "milking herd" proved it to be "more satisfactory than any other we have used" — showing that it meets the need of the milch cow ideally and helps her to produce MORE MILK.

THIRD its great PALATABILITY as proved on their test cows by keeping them EATING with relish and up to maximum production right to the end of the test period.

Surely these ARE sufficient reasons for any owner of cows—grade or grand champions to decide to try Sugared Schumacher Feed. But these are not all. It keeps cows healthy—satisfied and in good flesh. It is an ideal maintenance ration and when fed with **Boss Dairy Ration** with its 24% protein content, or any other good protein concentrate, you have a ration which day in and year out is the most economical and profitable from every standpoint. Also fine for hogs, horses, sheep and cattle. A hint to the wise—try it. Your dealer can supply you, if not, write us.

The Quaker Oats Company

Dept. 1658
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What Uncle Sam Says About Fertilizer Quality



"The difference between a good brand of fertilizer and a poor one lies not so much in the difference that may exist in the total amount of plant food contained in it as in the quality of the materials of which it is made." [U. S. Dept. of Agriculture]

After all you buy better fertilizer to grow better crops.

The "Fertilizer Leaders of America" know their goods make more bushels of grain or more tons of hay per acre. They make more potatoes, truck crops or celery. In other words, they make more money for you.

The "Fertilizer Leaders of America" have spent 40 years studying fertilizer and what to put into it, and they know what Uncle Sam means when he says "there is a difference."

This difference in quality is known to thousands of farmers who demand fertilizer rich in available phosphoric acid, graduated nitrogen and soluble organic potash. They will use nothing but goods made by the "Fertilizer Leaders of America," for they have tried these fertilizers and found them good.

Get their fertilizer from your dealer or write direct for information.

THE FERTILIZER LEADERS OF AMERICA



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We own 73,000 acres in diversified farms, in tracts from 20 acres up. Stock ranches, grain, fruit and alfalfa farms, fully equipped dairies. The Manager of these farms will give you reliable information. Highest references. No agents. For appointment kindly write to RICHARD MEYER, Portage Hotel, AKRON, OHIO.

Man Wanted (city or country) old established company will supply capital and start you in your own permanent business selling necessities people must buy every day. Experience unnecessary. Write McCANNON & CO., Factory M-76, Winona, Minn.

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Planet Jr. Garden Seeders and Wheel Hoes are making thousands of dollars for farmers every year who used to buy the food their farms now raise. Their first small cost is a fraction of what they pay in a single season, and they last for years and years. Look for Planet Jr. Tools at good hardware and implement dealers. Ask your dealer or write us for catalog.

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Sweet Clover Makes Good

How One Farmer Learned Its Value

IN the spring of 1922, I had a field of nineteen acres fitted for alfalfa.

I put 1,000 pounds of hydrated lime per acre, worked the ground good till the first of June. I had bought \$42 worth of alfalfa seed from a local store in Keeler. I drilled in the seed in good condition and it came up nicely and looked very thrifty. The next spring, 1923, it started growing and soon I noticed some plants darker in color and much more thrifty and four to six inches taller. I had the county agent come to take a look at the field. As soon as he saw it, he said it was over half sweet clover. The white blossom sweet clover is the best.

This field made me forty-seven acres of alfalfa. I cut it when it was in blossom, and it was a field of blossoms and a sight to see, from four to six feet tall. The honey bees were so thick that when I was riding the mower I was afraid of the bees at times. I tried to sell some of this out of the field for \$10.00 per ton, but could not. I hired the use of a barn to put the sweet clover hay in. Early last fall, people began looking for hay, and I offered it to the first at \$12.00, then \$13.00 and \$14.00, but could not sell it. The last week in December a man from the fruit belt came for the second time. I sold him thirty-five tons of alfalfa at the barn, bailed, at \$25.00; and twenty tons of sweet clover, bailed, at \$24.00. On December 26 I started bailing, and commenced on the sweet clover, as I wanted him to take

that first. He had paid me only \$5.00. He came with his truck the day I commenced bailing, and when he saw the sweet clover bailed, he gave an excuse of wanting alfalfa first. He never came again. The sweet clover looked too coarse for him.

Then I had some bills printed and posted them in the fruit belt near Benton Harbor. The first load I sold was three tons of sweet clover to a Russian Jew, delivered, at \$26.00. He said he knew the feeding value of sweet clover. I told him I would give him fifty cents per ton for all he could sell of either kind. Some came after alfalfa and took from four to ten bales of sweet clover to try. The next load they got was sweet clover, as their stock liked it so well. Soon the sweet clover was gone. I received several phone calls for sweet clover after it was gone, and when I still had four tons of the alfalfa left.

This seed I bought was mixed by some dealer for the profit he made in the price of the sweet clover seed. This is one of the ways we learn what to use on our soil. There is just one farmer in this locality who has grown sweet clover for pasture, and he tells me that it is the best of any for cow pasture and a soil builder. I do believe it is the incoming clover for hay, pasture, seed ten bushels per acre, and soil builder. Inoculate the seed and use plenty of lime and the result will be a sure catch and a soil builder. —William Klett.

Advice on the Corn-Borer

By R. H. Pettit

THE corn-borer is spreading gradually in Michigan and has already reached Sanilac county. It seems to spread along the waterways and I would expect to find it in Huron county soon. That is, next year or perhaps the year after.

It is a small naked caterpillar that bores in all parts of the corn plant and in many other crops, weeds, etc. When it first appears in a district the damage is comparatively slight for several years, although the damage with each successful year becomes greater until finally it develops to a point where most of the profit in corn growing disappears.

On farms where the owner is careless, it may come to a point where corn is grown at a loss. The creature is capable of being carried in ears of corn, both in green corn and in seed corn on the ear. It can also, undoubtedly, be transported in the sacks in which green corn is shipped.

Several other crops such as celery, beets and cut flowers are also likely to conceal larvae when shipped or transported from infested districts.

The writer would urge on everyone in districts near regions where the pest is known to exist, to cut the corn as low as possible—to put as much as possible of the corn in the silo and to run the rest through a shredder. All cornstalks that are not used up by the first of June should be burned or otherwise effectively disposed of. Fall plowing is helpful if the plants and parts of plants are buried evenly and deeply. Such plowing should be done in Michigan from the middle of November on until the ground freezes. Plowing done before this date, or that done in the spring, is not effective, since larvae may find their way to the surface and establish themselves if the plowing is done too early.

Furthermore, get behind the quarantine and boost all you can. Every year that the coming of the pest is put off, is just so much money in the pocket of the farmer. Furthermore, bear in mind that the corn-borer can work

in any plant or weed, having a fleshy stalk that is not too hard to tunnel in.

Weeds are nearly as good breeding places as are crops, and the destruction of weeds along fence corners, along roadsides, and in fact, anywhere weeds exist, is good insurance. It is also good practice, after the pests become established in a district.

The danger from this insect is real and in no sense a myth. To be sure, we will have it sooner or later all over the state, and probably in time over most of the country, but every year we can put off its coming, is just so much gain in ability to raise corn and some other crops at a profit rather than at a loss.

DISCOVERS THAT CORN DOES NOT GROW.

KNOWING that corn matured poorly last fall, we started early to learn if ours would grow. So we got out the "rag doll" and tested it. Well, we were disappointed. It certainly would have made a most hopeless stand, had we gone on and planted it without knowing its germination capacity. There were scarcely one seed in four that gave us any kind of a sprout. The result is that we must go elsewhere for our seed.

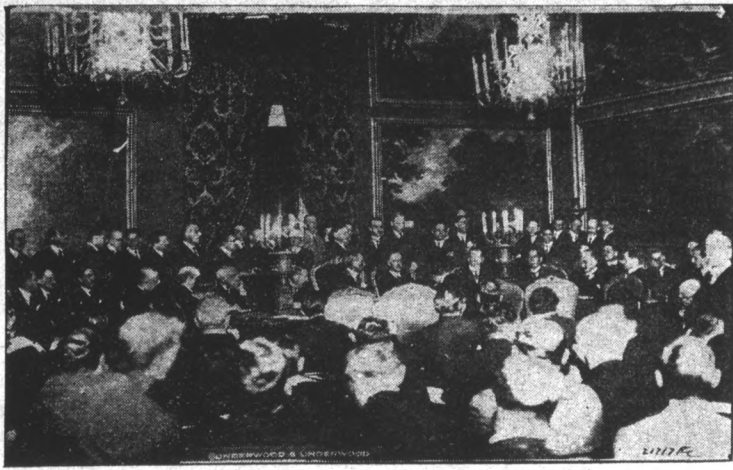
As I said, we are disappointed in our corn, for we had an idea that it might do fairly well. But, in another way, we are glad that we took the precaution early to find out what it is worth. If good corn seed corn is available, we may have a real good crop next year just because we took the trouble to inspect the seed; whereas, if this had not been done, we surely would have suffered a heavy loss, since our corn acreage will run about thirty acres.—S. D. Waters.

Edgar Holly, who has just moved to Detroit, writes back he is surprised how tight they are with the cream at the serve-self lunches.—Sunshine Hollow.

WORLD EVENTS IN PICTURES



A convict in Eastern Penitentiary painted an oil portrait of Governor Pinchot.



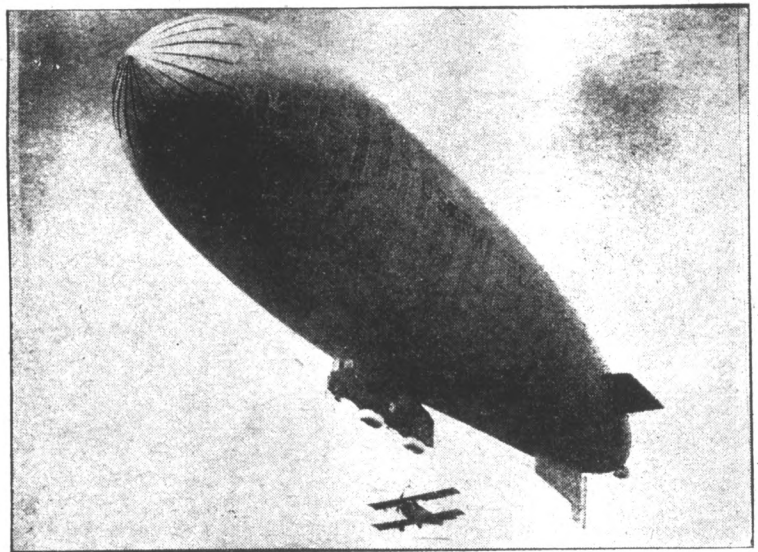
The December meeting of the League of Nations has attracted world wide attention. This League came into existence under the Treaty of Versailles, January 10, 1920. The Council, Assembly and Secretariat constitute the League. The Council consists of France, Great Britain, Italy and Japan as permanent members, with Belgium, Brazil, China and Spain as non-permanent.



Phil Taylor has introduced this novelty of stilt skating in St. Moritz, Switzerland.



The recent sleet storm tore down cables and poles in Springfield, Illinois, and did damage to the amount of four million dollars within a radius of forty miles.



For the first time in the history of aviation, an airplane was successfully launched from a balloon while in the air. Here the Messenger is about to launch from U. S. Dirigible T. C. 5.



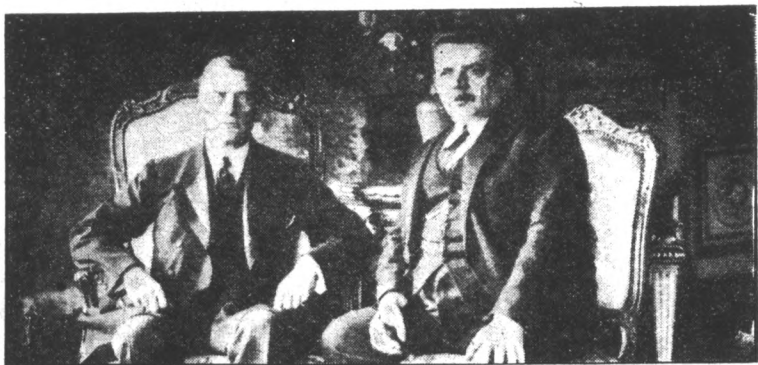
Victor Joseph Jansson, the Belgian medalist, carved this remarkable head of the Prince of Wales from solid ivory.



Mrs. Alma Miller England, of Oklahoma, mother of six children, enters Chicago law school.



Viscount Cecil of Chelwood, and Lady Cecil, arrive in New York to receive the award of \$25,000 of the Woodrow Wilson foundation.



Austen Chamberlain, British foreign secretary, and Premier Herriot, of France, held important conference in Paris before Chamberlain attended the League of Nations.



When Betty Bronson, who played the title role in "Peter Pan," arrived in New York, she was greeted at the train by all the characters from the play.

SELINA had spoken to Jakob Hoog-endunk about a shelf for books and photographs. He had put up a rough bit of board, very crude and ugly, but it had served. She had come home one snowy afternoon to find this shelf gone and in its place a smooth and polished one, with brackets intricately carved. Roelf had cut, planed, polished, and carved it in many hours of work in the cold little shed off the kitchen. He had there a workshop of sorts, fitted with such tools and implements as he could devise. He did man's work on the farm, yet often at night Selina could faintly hear the rasp of his handsaw after she had gone to bed. He had built a doll's house for Geertje and Jozina that was the black envy of every pigtail in High Prairie. This sort of thing was looked upon by Klaas Pool as foolishness. Roelf's real work in the shed was the making and mending of coldframes and hot-beds for the early spring plants. Whenever possible Roelf neglected this dull work for some fancy of his own. To this Klaas Pool objected as being "dumb." For that matter, High Prairie considered Pool's boy "dumb like." He said such things. When the new Dutch Reformed Church was completed after gigantic effort—red brick, and the first brick church in High Prairie—bright yellow painted pews—a red and yellow glass window, most handsome—the Reverend Vaarwerk brought from New Haarlem to preach the first sermon—Pool's Roelf was heard to hint darkly to a group of High Prairie boys that some night he was going to burn the church down. It was ugly. It hurt you to look at it, just.

Certainly, the boy was different. Selina, none too knowledgeable herself, still recognized that here was something rare, something precious to be fostered, shielded, encouraged.

"Roelf, stop that foolishness, get your ma once some wood. Carving on that box again instead finishing them coldframes. Some day, by golly, I show you. I break every stick . . . dumb as a Groningen . . ."

Roelf did not sulk. He seemed not to mind, particularly, but he came back to the carved box as soon as chance presented itself. Maartje and Klaas Pool were not cruel people, nor unkind. They were a little bewildered by this odd creature that they, inexplicably enough, had produced. It was not a family given to demonstration of affection. Life was too grim for the flowering of this softer side. Then, too, they had sprung from a phlegmatic and unemotional people. Klaas toiled like a slave in the fields and barn; Maartje's day was a treadmill of cooking, scrubbing, washing, mending from the moment she arose (four in the summer, five in the winter) until she dropped with a groan in her bed often long after the others were asleep. Selina had never seen her kiss Geertje or Jozina. But once she had been a little startled to see Maartje, on one of her countless trips between stove and table, run her hand through the boy's shock of black hair, down the side of his face to his chin which she tipped up with an indescribably

SO BIG--By Edna Ferber

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tender gesture as she looked down into his eyes. It was a movement fleeting, vague, yet infinitely compassionate. Sometimes she even remonstrated when Klaas berated Roelf. "Leave the boy be, then Klaas. Leave him be, once."

"She loves him best," Selina thought. "She'd even try to understand him if she had time."

He was reading her books with such hunger as to cause her to wonder if her stock would last him the winter. Sometimes, after supper, when he was hammering and sawing away in the

"Oh, Roelf!"

"Sure. Already I have gone five times with Pop. Pretty soon, when I am seventeen or eighteen, I can go alone. At five in the afternoon you start and at nine you are in the Haymarket. There all night you sleep on the wagon. There are gas lights. The men play dice and cards. At four in the morning you are ready when they come, the commission men and the pedlers and the grocery men. Oh, it's fine, I tell you!"

"Roelf!" She was bitterly disappointed.

THROUGH WINTER DAYS

By Martha S. Lippincott

It is not spring, the air is cold,
And winter winds today
Will scatter snowflakes through the air

To block the traveller's way.
It's beautiful to look upon;
But nicer to be home,
And cuddled round the cosy hearth,
Than in the world to roam.

Love whispers there its sweet content,
And dreads to go outside,
Where on some icy walk you might
Be taking a bad slide.

So, in the cosy, little home
We'll gladly rest today,
And wait till balmy springtime comes
Before we go away.

We'll find no comfort anywhere
Like in home's paradise.
There's warmth and sunshine always
there,

No matter how the skies,
Just so the hearts are tuned to love
And its sweet melodies.
There is no other place on earth
That can, the heart, so please.

little shed, Selina would snatch Maartje's old shawl off the hook, and swathed in this against draughty chinks, she would read aloud to him while he carved, or talk to him above the noise of his tools. Selina was a gay and volatile person. She loved to make this boy laugh. His dark face would flash into almost dazzling animation. Sometimes Maartje, hearing their young laughter, would come to the shed door and stand there a moment, hugging her arms in her rolled apron and smiling at them, uncomprehending but companionable.

"You make fun, h'm?"
"Come in, Mrs. Pool. Sit down on my box and make fun, too. Here, you may have half the shawl."

"Og Heden! I got no time to sit down." She was off.

Roelf slid his plane slowly, more slowly, over the surface of a satin-smooth oak board. He stopped, twined a curl of shaving about his finger. "When I am a man, and earning, I am going to buy my mother a silk dress like I saw in a store in Chicago and she should put it on every day, not only for Sunday; and sit in a chair and make little fine stitches like Widow Paartenberg."

"What else are you going to do when you grow up?" She waited, certain that he would say something delightful.

"Drive the team to town alone to market."

"Here. Look." He rummaged around in a dusty box in a corner and, suddenly shy again, laid before her a torn sheet of coarse brown paper on which he had sketched crudely, effectively, a melee of great-haunched horses; wagons piled high with garden truck; men in overalls and corduroys; flaring gas torches. He had drawn it with a stub of pencil exactly as it looked to him. The result was as startling as that achieved by the present-day disciple of the impressionistic school.

Selina was enchanted.

Many of her evenings during November were spent thus. The family life was lived in a kitchen blue with pipe smoke, heavy with the smell of cooking. Sometimes—though rarely—a fire was lighted in the parlor stove. Often she had school papers to correct—grubby sheaves of arithmetic, grammar, or spelling lessons. Often she longed to read; wanted to sew. Her bedroom was too cold. The men sat in the kitchen or tramped in and out. Geertje and Jozina scuffled and played. Maartje scuttled about like a harried animal, heavy-footed but incredibly swift. The floor was always gritty with the sandy loam tracked in by the men's heavy boots.

Once, early in December, Selina went into town. The trip was born of sudden revolt against her surroundings and a great wave of nostalgia for the dirt and clamor and crowds of Chicago. Early Saturday morning Klaas

drove her to the railway station five miles distant. She was to stay until Sunday. A letter had been written Julie Hempel ten days before, but there had been no answer. Once in town she went straight to the Hempel house. Mrs. Hempel, thin-lipped, met her in the hall and said that Julie was out of town. She was visiting her friend Miss Arnold, in Kansas City. Selina was not asked to stay to dinner. She was not asked to sit down. When she left the house her great fine eyes seemed larger and more deep-set than ever, and her jaw-line was set hard against the invasion of tears. Suddenly she hated this Chicago that wanted none of her; that brushed past her, bumping her elbow and offering no apology; that clanged, and shrieked, and whistled, and roared in her ears now grown accustomed to the prairie silence.

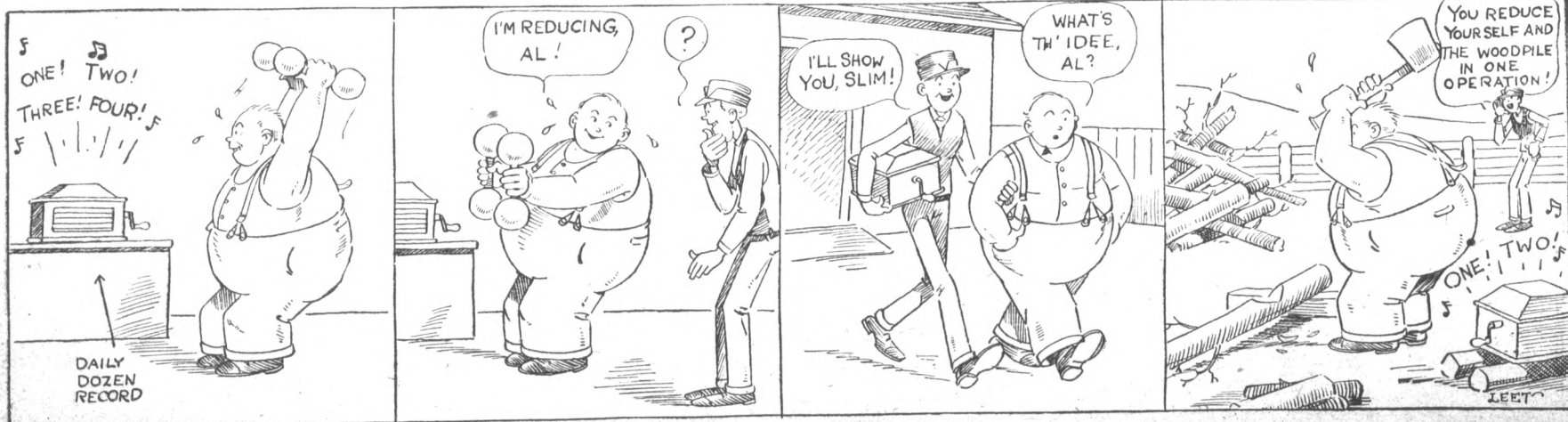
"I don't care," she said, which meant she did. "I don't care. Just you wait. Some day I'm going to be—oh, terribly important. And people will say, 'Do you know that wonderful Selina Peake? Well, they say she used to be a country school teacher and slept in an ice-cold room and ate pork three times a . . . There! I know what I'm going to do. I'm going to have luncheon and I'll order the most delicious things. I think I'll go to the Palmer House where Father and I . . . no, I couldn't stand that. I'll go to the Auditorium Hotel restaurant and have ice cream; and chicken broth in a silver cup; and cream puffs, and all kinds of vegetables and little lamb chops in paper panties. And orange pekoe tea."

She actually did order all these things and had a group of amazed waiters hovering about her table waiting to see her devour this meal, much as a similar group had stared at David Copperfield when he was innocent of having bolted the huge dinner ordered in the inn on his way to London.

She ate the ice cream and drank the orange pekoe (mainly because she loved the sound of its name; it made her think of chrysanthemums and cherry blossoms, spices, fans, and slant-eyed maidens). She devoured a crisp salad with the avidity of a canary pecking at a lettuce leaf. She flirted with the lamb chops. She remembered the size of her father's generous tips and left a sum on the table that temporarily dulled the edge of the waiter's hatred of women diners. But the luncheon could not be said to have been a success. She thought of dinner, and her spirit quailed. She spent the time between one and three buying portable presents for the entire Pool household—including bananas for Geertje and Jozina, for whom that farinaceous fruit had the fascination always held for the farm child. She caught a train at four thirty-five and actually trudged the five miles from the station to the farm, arriving half-frozen, weary, with aching arms and nipped toes, to a great welcome of the squeals, grunts, barks, and gutturals that formed the expression of the Pool household. She was astonished to find

AL ACRES—Al Makes Reduction Useful

By Frank R. Leet



how happy she was to return to the kitchen stove, to the smell of frying pork, to her own room with the walnut bed and the book shelf. Even the grim drum had taken on the dear and comforting aspect of the accustomed.

High Prairie swains failed to find Selina alluring. She was too small, too pale and fragile for their robust taste. Naturally, her coming had been an event in this isolated community. She would have been surprised to know with what eagerness and curiosity High Prairie gathered crumbs of news about her; her appearance, her manner, her dress. Was she stuck up? Was she new fangled? She failed to notice the agitation of the parlor curtains behind the glittering windows of the farm-houses she passed on her way to school. With no visible means of communication, news of her leaped from farm to farm as flame leaps the gaps in a forest fire. She would have been aghast to learn that High Prairie, inexplicably enough, knew all about her, from the color of the ribbon that threaded her neat little white corset covers to the number of books on her shelf. She thought cabbage fields beautiful; she read books to that dumb-acting Roelf Pool; she was making over a dress for Maartje after the pattern of the stylish brown lady's-cloth she wore (foolishly) to school. Now and then she encountered a team on the road. "She would call a good-day. Sometimes the driver answered, tardily, as though surprised. Sometimes he only stared. She almost never saw the High Prairie farm women, busy in their kitchens.

On her fifth Sunday in the district she accompanied the Pools to the morning service at the Dutch Reformed Church. Maartje seldom had the time for such frivolity. But on this morning Klaas hitched up the big farm wagon with the double seat and took the family complete—Maartje, Selina, Roelf, and the pigtales. Maartje, out of her kitchen calico and dressed in her best black, with a funereal bonnet made sadder by a sparse and drooping feather whose listless fronds emerged surprisingly from a faded red cotton rose, wore a new strange aspect to Selina's eyes, as did Klaas in his clumsy sabbaticals. Roelf had rebelled against going, had been cuffed for it, and had sat very still through the service, gazing at the red and yellow glass church window. Later he confided to Selina that the sunlight filtering through the crude yellow panes had imparted a bilious look to the unfortunates seated within its range, affording him much secret satisfaction.

Selina's appearance had made quite a stir, of which she was entirely unaware. As the congregation entered by twos and threes she thought they resembled startlingly a woodcut in an old illustrated book she once had seen. The men's Sunday trousers and coats had a square, stiff angularity, as though chopped out of a block. The women, in shawls and bonnets of rusty black, were incredibly cut in the same pattern. The unmarried girls, though, were plump, redcheeked, and not uncomely, with high round cheek-bones on which sat a spot of brick-red which imparted no glow to the face. Their foreheads were prominent and meaningless.

In the midst of this drab assemblage there entered late and rustingly a tall, slow-moving woman in a city-bought cloak and a bonnet quite unlike the vintage millinery of High Prairie. As she came down the aisle Selina thought she was like a full-sailed frigate. An ample woman, with a fine fair skin and ripe red mouth; a high firm bosom and great thighs that moved rhythmically, slowly. She had thick, insolent eyelids. Her hands, as she turned the leaves of her hymn book, were smooth and white. As she entered there was a little rustle throughout the congregation; a craning of necks. Though she was hustled and flounced and panniered, you thought, curiously enough, of those lolling white-fleshed

and unconventional ladies whom the sixteenth century painters were always portraying as having their toe nails cut with nothing on.

"Who's that?" whispered Selina to Maartje.

"Widow Paarlberg. She is rich like anything."

"Yes?" Selina was fascinated.

"Look once how she makes eyes at him."

"At him? Who? Who?"

"Pervus DeJong. By Gerrit Pon he is sitting with the blue shirt and sad looking so."

Selina craned, peered. "The—oh—he is very good looking, isn't he?"

"Sure. Widow Paarlberg is stuck on him. See how she—Sh-sh-sh!—Reverend Dekker looks at us. I tell you after."

Selina decided she'd come to church oftener. The service went on, dull, heavy. It was in English and Dutch. She heard scarcely a word of it. The Widow Paarlberg and this Pervus DeJong occupied her thoughts. She decided, without malice, that the widow resembled one of the sleekest of the pink porkers rooting in Klaas Pool's barnyard, waiting to be cut into Christmas meat.

The Widow Paarlberg turned and smiled. Her eyes were slippery (Selina's term). Her mouth became loose and wide with one corner sliding down a trifle into something very like a leer.

With one surge the Dutch Reformed congregation leaned forward to see how Pervus DeJong would respond to this public mark of favor. His gaze was stern, unsmiling. His eyes were fixed on that extremely dull gentleman, the Reverend Dekker.

"He's annoyed," thought Selina, and was pleased at the thought. "Well, I may not be a widow, but I'm sure that is not the way." And then: "Now I wonder what it's like when he smiles?"

According to fiction as Selina had found in the Fireside Companion and elsewhere, he should have turned at this moment, irresistibly drawn by the magnetism of her gaze, and smiled a rare sweet smile that lighted up his stern young face. But he did not. He yawned suddenly and capaciously. The Reformed Dutch congregation leaned back feeling cheated. Handsome, certainly, Selina reflected. But then, probably Klaas Pool, too, had been handsome a few years ago.

The service ended, there was much talk of the weather, seedlings, stock, the approaching holiday season. Maartje, her Sunday dinner heavy on her mind, was elbowing her way up the aisle. Here and there she introduced Selina to a woman friend. "Mrs. Vander Sijde, meet school teacher."

"Aggie's mother?" Selina would begin, primly, only to be swept along by Maartje on her way to the door. "Mrs. Von Mijnen, meet school teacher. Is Mrs. Von Mijnen." They regarded her with a grim gaze. Selina would smile and nod rather nervously, feeling young, frivolous, and somehow guilty.

When, with Maartje, she reached the church porch Pervus De Jong was unhitching the dejected horse that was harnessed to his battered and lopsided cart. The animal stood with four feet bunched together in a drooping and pathetic attitude and seemed inevitably meant for mating up with this decrepit vehicle. DeJong untied the reins quickly, and was about to step into the sagging conveyance when the Widow Paarlberg sailed down the church steps with admirable speed for one so amply proportioned. She made straight for him, skirts billowing, flounces flying, plumes waiving. Maartje clutched Selina's arm. "Look how she makes! She asks him to eat Sunday dinner I bet you! See once how he makes with his head no."

(Continued next week).

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The Last Supper

Our Weekly Sermon—By N. A. McCune

THE Last Supper was held probably on Thursday night of Passion Week, the day before the passover feast. The word passover bulked very large in the vocabulary of the Jew. For it was an annual festival recalling the deliverance of the Hebrew people out of the hands of the Egyptian king, in the time of Moses. The last of the plagues inflicted on the stubborn monarch was the one in which the angel of death passed through the land, taking the life of the first born of every Egyptian family, and the first born of all kinds of live stock. But the homes of the Hebrews were passed over, and none were touched. Hence the meaning and sacredness of the feast. People came from all parts of the ancient world. It



has been estimated that as high as a million visitors came to Jerusalem during passover week. It was just before this feast was celebrated in the year 30 A. D., that the Savior held the Last Supper. The place was some upper room in Jerusalem, and may have been in the home of a man named Mark, the father of John Mark, afterward the writer of the second gospel. It is supposed that it was he who was seized at the arrest of Christ, and who got away. The Mark family, to all appearances at least, from what we know in the New Testament, was a family of some means. In Acts it is stated that "Many were gathered together praying," at the home of Mark's mother, and besides that she had a maid whose duty it was to answer the doorbell, so that it must have been a home of some spaciousness.

CHRIST said that he greatly desired to hold the Last Supper. Very likely He had looked forward to that quiet time with His disciples, when He could speak to them out of His heart in an unhurried atmosphere. The main steps in the passover feast were: 1, each drinks a cup of wine, over which the master of the house pronounces a blessing. 2, hands are washed and a table is carried in on which are bitter herbs, unleavened bread, and the paschal lamb. 3, the father dips a morsel of bread and bitter herbs in the charoseth (a dish of dates, raisins and vinegar), eats it with a benediction, and distributes a similar morsel or "sop" to those present. 4, a second cup of wine is poured out, and the youngest person asks the meaning of the service, which is answered by the father. 5, parts of two psalms were sung. 6, grace is said, and the bitter herbs and unleavened bread are passed, dipped in the charoseth. 7, the paschal lamb is eaten, and a third cup of wine is handed around. 8, another thanksgiving and a fourth of wine is drunk, called the cup of joy. 9, the remainder of psalms 115-118, or selections from them, is sung.

It was a feast such as this, which our Lord observed and which has been called the Last Supper. "For I say unto you, I shall drink henceforth of the fruit of the vine until the kingdom of God shall come." When He distributed the bread He said, "This do in remembrance of Me," thus instituting a new kind of service with a new meaning, which Christians were asked to observe. When passing the cup He said of it that it was a new covenant.

be a happy custom if the service were more commonly called by that name. In the early church the Eucharist meant brotherhood. And it was a genuine brotherhood. Each Sunday morning (at that time called the first day), the believers in Christ in the community met together for a common breakfast. Each brought whatever he could afford—meat, milk, vegetables, honey, fruit, bread and the like. The richest shared alike with the poorest. All sat down together and, after a blessing, ate the common meal. At the close of the breakfast, a prayer was said over the bread and the wine, which was then partaken of, in memory of the Savior, in obedience to His command, "This do in memory of Me." Later, abuses crept in and the poor were discriminated against, while the well-to-do ate their fill. Paul wrote some vigorous words concerning this, in I Corinthians.

Nothing was said about the exact manner of celebrating the Eucharist, or the frequency of it. Some churches celebrate it every week, some monthly, some quarterly. Some receive the elements sitting, some kneeling. The great significance of it to the modern believer is, that he thereby shows that he believes in the Savior, and he again consecrates himself to live a life of brotherly kindness, of charity toward all. The idea of fraternity is still dormant, and of a common acknowledgement of Christ as Lord and Master. It is well to remember that He made a particular request that this should be done in His memory. Thus it has the stamp of the solemn request of a dying man.

But let us turn back for a moment, to the Last Supper itself. He said He would not drink again until the kingdom of God should come. One coming of the kingdom was at the resurrection, another at the outpouring of the Spirit of Pentecost, and in this case He probably meant the "marriage supper of the lamb," celebrated at the great festival of the redeemed.

HE also said something about this being a "new covenant." If this was a new covenant, what was the old one? It was the promise made to Abraham and renewed to Moses that the Israelites should have possession of the land of Palestine so long as they observed the Ten Commandments. But the new covenant is not external but inner, an inner obedience. The old was necessarily more or less temporary. The new was permanent and would not pass away. It was broad also, and reached out to all nations and races, while the old referred more particularly to one people, the Hebrews.

Another aspect of the Last Supper was the humility it enjoined. Christ, so John's gospel states, humbled Himself to the point of doing the work of a slave, and washed the disciples' feet. He then dried them with a towel. But while this was going on, the Twelve were discussing who of them was to be the leader. The Master showed them that the path to power was the path of humility. The commonest duties of life have thus their noble, even their sublime side. As Sir G. A. Smith puts it, "It is not merely the devotion of your heart which He wants today. He wants your common life, in its sin, its hunger, and its duties, that He may show you how His grace is its daily food, and how His Example is its highest standard."

SUNDAY SCHOOL LESSON FOR JANUARY 18.

SUBJECT:—The Lord's Supper. Luke 22:14 to 23.
GOLDEN TEXT:—This is my body which is given for you; this do in remembrance of Me. Luke 22:19.

IT is, therefore, not surprising that Christians of all communions have always been particular to observe the Last Supper. It came early to be called the Eucharist, a Greek word meaning the giving of thanks. It would

Rural Health

By Dr. C. H. Lerrigo

IT IS NEVER TOO LATE TO MEND.

A YOUNG farmer with an arm which through early accident had lost its "carrying angle," has just received a pleasant surprise. The arm was by no means useless. He had learned in twelve years of effort to make it do many things, and the function of the hand was quite normal. But by no means could he work the arm into the proper angle for lifting a good load, and he had resigned himself to a lifetime of making the best of it. Going to the hospital for a minor operation, the surgeon suggested that the arm should also receive attention. Examination under the X-Ray suggested a plan of work which gave a perfect result, and the young man's working capacity is now increased fifty per cent.

It is well to bear in mind that bone surgery has made wonderful developments since the introduction and general use of the X-Ray. There is little excuse now for a crooked, useless limb on a person otherwise in good health. The surgeon takes a radiograph that shows him the real condition, he prepares his tools to execute his plan of operation, he cuts right down to the deformity, corrects it, and holds the fragments in place by certain methods that are as certain as the work of the carpenter in using screws and nails; in fact, for a time the surgeon actually did use them, though he now has a better way. Thus accurate results are secured even in an injury of long standing. Repair that was quite impossible ten years ago is now a

matter of everyday occurrence.

Nowadays we are losing our fear of surgery. We are more ready to take advantage of its marvels, and in many cases it is practically the difference between life and death.

MAKING EXAMINATION OF EYES.

I am told that some doctors dilate the pupil to make an eye examination and others do not. Is it necessary? What kind of doctors do the work? Does dilating leave any bad after-effect?—B. B.

Dilating the pupil is temporary and unless done very badly has no permanent effect at all. It gives the oculist a chance to make a better examination. Get your family doctor to refer you to a really first-class man. Beware of the traveling specialist.

PROBABLY BUNIONS.

What can I do for a bunch below the big toe? Am a young girl. Will it grow larger? It started a few days ago.—M. W.

I suspect that this is a bunion. It is very important that you check its growth at once. Remove all pressure from the joint at once. If due to tight shoes it will pay you to give the shoes away, for a bunion will cost the price of many pairs of shoes if allowed to develop. In a young person the joint may get back to normal by the simple matter of removing the irritation. A bunion protector or "reducer" is advisable, however. You can buy one at any good shoe store for seventy-five cents. If any difficulty, send me a stamped, addressed envelope.



Doings in Woodland

The Hunt for Cabbage

THE snow was very deep in Woodland and there was not a cabbage leaf left uncovered. In fact, everything was covered with a thick white blanket of snow. Only now and then could any of the Woodland Rabbit family find a green bite. Sometimes it was a tiny bud and sometimes the Merry West Wind would uncover some plants on the ground. But these were frozen and the Rabbit family didn't like them so well.

Every Rabbit in Woodland longed for some cabbage leaves, for that was what they liked better than anything. One day Rolly Rabbit and little Jackie Rabbit started out to find some



Jackie and Rolly Rabbit Thought it Was the Weather Cock.

cabbages. "Perhaps Farmer Brown has some by his house. He lives at the edge of Woodland," said Rolly.

So off hopped Rolly and Jackie through the woods. By and by they could see Farmer Brown's house as they peeked through the bushes.

"Bow, wow, wow!" echoed to them

from near the farmer's house.

"Oh, me! oh, my! Farmer Brown has a dog!" said Rolly. "We must be very sly." But he did not intend to go back without a good feed of cabbages and some in his pockets beside.

"We'll wait here until it is dark and Farmer Brown and his dog are asleep. When the Big Man in the Moon comes out to light the way, we will go for cabbages," said Rolly Rabbit.

So they frisked about in the snow until the Big Man in the Moon showed his face above the tree tops. When all was quiet, they hopped up out across the snow, close to Farmer Brown's house.

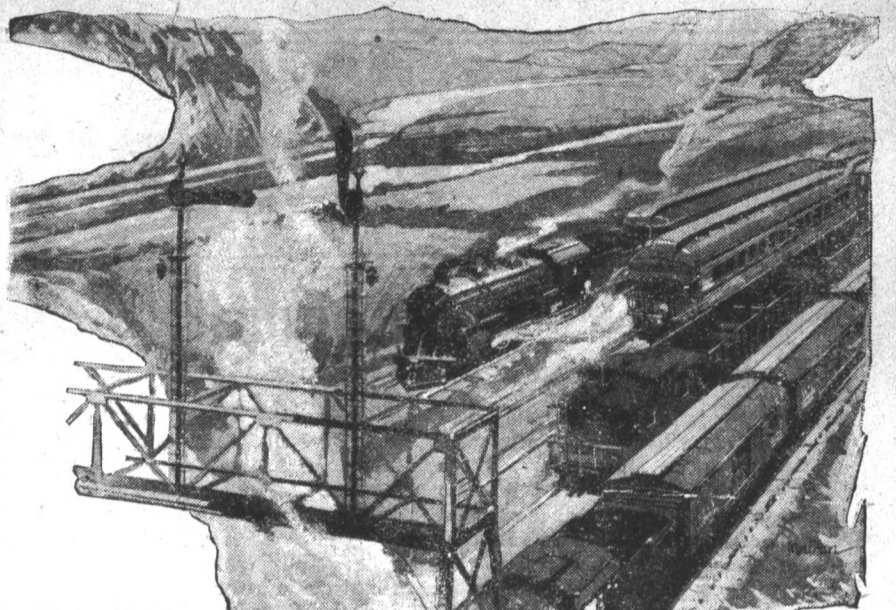
"The cabbages are in this barn," said Rolly Rabbit after he had sniffed around the door of the barn. "A big cock sits on the peak, but he is so still I think he is asleep, too. We'll just tip-toe up to the front, there is a little hole in the door. Quiet now, don't wake the dog or the cock, or there will be no cabbages tonight," he cautioned Jackie.

When they were ready to hop into the little hole, "Cock-a-doodle-do!"

"Pitty pat!" went Rolly's heart, and Jackie's, too, as away they ran.

It was really the cock in the hen coop nearby crowing because he thought the big round moon was the sun and that it was time for the hen family to be up and about.

But Rolly and Jackie thought the weather cock on the peak of the barn had spied them and wanted to awaken Farmer Brown's dog. Any way, they ran to hide themselves in the brambles by the edge of Woodland.



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Woman's Interests



Are We Asleep?

This Farmwife Gives Careful Thought to Political Matters

ARE we interested in the vital problems which affect our well-being as we should be? Were you thoroughly acquainted with the income tax amendment as proposed last fall? Do you believe in taxation in accordance with ability to pay?

A state income tax is inevitable in Michigan. Be posted on all sides of the question so that, when called on to vote regarding it, you may do so intelligently. I firmly believe we did more than our share to kill the amendment through ignorance of the facts. The word "tax" holds terror for us, but this tax would go a great way to remove the terror.

A great woman has said: "Our handicaps are the problems of the three I's—indifference, ignorance and inefficiency. And the greatest of these is ignorance."

Are we familiar with the facts concerning re-apportionment? It is a problem soon to be settled. Why not agriculturists stand solidly behind the federal plan or a similar one? The fed-

EXPERIENCE teacheth us that resolution is a sole help in need.—Shakespeare.

eral plan provides on senator or representative for every county and the other representatives apportioned according to the ratio of registered voters with an educational qualification for citizenship. These principles should be used when reapportionment comes.

What do you know of the child labor amendment which will be transmitted to our legislature this coming winter from congress? Who is backing the amendment? Mrs. Stockman, a member of the State Board of Agriculture says:

1. Consider what it will mean to the club work of the girls and boys of the nation.
2. Consider the cost of machinery for enforcement.
3. Consider what ideals you are giving your children.

What do you know of the "Winslow Home Bill" and the "Jones bill" and the "Capper-Williams Bill?" Are you backing Congressman Ketcham with his bill?

At the present time industry is asking for more taxes on agriculture. This in face of the fact that real estate is already paying eighty per cent of the taxes, with 35 per cent of wealth.

We farmers must familiarize ourselves with facts and learn to express ourselves in language strong enough to be heard where it will accomplish something for us.

Let us be stepping stones instead of stumbling blocks in the path of agriculture. These few lines are apt. I have forgotten the author.

"Isn't it strange that Princes and Kings
And clowns, that caper in sawdust rings,
And common folk like you and me,
Are builders for Eternity?"

"To each is given a bag of tools,
A shapeless mass and a book of rules;
And each must make, e're life is flown,
A stumbling block or stepping stone."
—A Farmer's Wife.

SEX EDUCATION IS A SUBJECT FOR HOME.

FOR much of the well intended but nevertheless sentimental slop

known as sex education I have a decided distaste. The only satisfactory form of sex education I have ever encountered for the boy is a fine, normal, natural relationship with his father or some older man whom he likes, respects and trusts. Social hygiene should come after puberty and not before," says Dr. Borden S. Veeder, professor of clinical pediatrics at Washington University, St. Louis, Missouri.

"The gist of sex education," said Dr. Veeder, "is a happy, normal relationship between parents and children which must have its beginnings long before puberty. The most important thing for parents to understand in regard to adolescence is that their child is undergoing far-reaching fundamental physical changes and that there is a physical basis back of all of the peculiar and usually irritating changes in temperament, disposition and attitude toward the family and life which is so prone to develop at this time.

"Growing boys need nearly half again as much food as a farmer working in the fields. "In studies made at one of the eastern preparatory schools it was found that boys of thirteen to sixteen years actually took approximately five thousand calories of food daily and apparently required this amount. This amount is nearly half as much again as a farmer at his daily work requires."

"The picture of the ungainly awkward adolescent child so familiar to all of us is the result of failure of control

and coordination to keep pace with the rapid muscular growth combined with the tendency of the muscles to grow in length more rapidly than the bones. For this reason muscular exercises and training are essential."

MAKE PARLOR IN OLD-FASHIONED HOME SERVE A PURPOSE.

IF you have never tried using the largest, pleasantest room in the house for the family bedroom, you don't know how much more you will enjoy it in that capacity, than as a parlor, used only occasionally.

I live in one of those old-fashioned houses in which a parlor was added to an already larger number of rooms than is needed by the average family. This company room was the largest room in the house, and so pleasant, airy and sunny with its south and west

HOME.

BY ARTHUR WALLACE PEACH.
Heaps of faith in one another
O'er the years what'er they bring,
Memories and not one bitter;
Each for all in everything!

windows and the sash door opening to the east upon the end of a south porch. So delightfully situated it was a shame to use it so little. Such an abundance of sunshine went to waste in it and the finest view we had was from its seldom-used windows.

I tried using it as a living-room, but it was too remote from the kitchen and dining-room, and an air of made-to-be-used-only-on-state-occasions clung to it so persistently that the man in-

variably stopped in the "middle" room to lounge and read, leaving my cherished living-room to the isolation that the habits of years had banished it.

I reflected one day what an attractive bed-room it would make, and how convenient the smaller room opening from it would be as a nursery. The idea so captivated me that I promptly planned to rearrange it for that purpose and soon had my erstwhile useless parlor fitted up as a bedroom and private sitting-room.

A fair-sized bedroom opened from the middle room which was also a large room, and both having a south exposure. I had a very wide doorway cut between the two rooms, nearly eliminating the partition, and so combined them into one delightfully long, sunny living-room. It was so enjoyable to have the piano and books and all the most useful articles of furniture out where we would use them every day. Our living-room became one, in a sense that no other room ever had, while my parlor never afforded me the pleasure and satisfaction that my big, sunny bedroom does with its accommodation for a fire in the winter and plenty of fresh air and sunshine during the summer.—Mrs. E. C. M.

PAINT MAKES OLD FURNITURE NEW.

IN speaking of the possibilities in a can of paint in redecorating furniture, Miss Susan Z. Wilder, home economics extension specialist at State College says that the furniture to be painted should have the following essentials: Good wood, well built, simple lines, and plain design. Cheap furniture, poorly built and thinly veneered is not worth redecorating.

"The furniture must be thoroughly cleaned before painting," she adds. "Paint will not stick on greasy wood. A thorough washing with soap and water, followed by a good rinsing and drying is one method of preparing the furniture for painting. Another is to wash with gasoline but care must be exercised in handling the gasoline. It should not be used in a room where there is a fire.

"It is not always necessary to remove the old paint or enamel but the old finish must be sufficiently broken up so that the new finish will penetrate the wood. Sometimes a sandpapering will be sufficient, but if there is more than one coat, the old finish will have to be removed entirely. Sand paper, lye solution or chemical varnish may be used for this purpose.

"The room where the painting is done should be clean and free from dust and should be heated to a temperature of about seventy degrees. Painting, enameling and varnishing are next to impossible in a cold room. If the materials have been stored where it is cold, they should be allowed to stand in a warm room until they are of the right temperature to flow easily."

Directions should be carefully followed, Miss Wilder insists, because every manufacturer of paint has certain rules which should be followed to get the best results. If the paints are home-mixed, it is necessary to experiment a number of times to get the proper effect.

Proper drying is very essential, the specialist adds. Chairs will require four or five days in a warm room. Other pieces of furniture may be used somewhat sooner.

Some men never think to see if they need gasoline until the car won't go any more.

Jazzing Up The Ironing

Come Join The Contest!

THE radio is fast becoming a permanent fixture in the rural home. As one passes through the country, here and there one sees the antennae that links the rural family with the farthestmost parts of the country. There is no need for rural folks to drive to town for an evening's entertainment. The very air we breathe is full of music, grand opera, dramas, lectures, market reports and reaps of other things worth listening to. It is there for the "tuning in."



I am wondering to just what use you, as a housewife, put your radio. Do you utilize it as the housewife at the left is doing? Do you do your mending and sewing to the tune of modern music? Do you go to church at Detroit, Pittsburgh, New York or elsewhere when zero weather or snow banks keep you from attending your own church on Sunday? Tell about these and the individual benefits you and your family have received from the radio.

Wireless Waves From the Air Shorten Ironing Hours.

To the writers of the five best letters we will send handy rubber kitchen aprons. Send your letters to Martha Cole, Michigan Farmer, Detroit, Michigan, before January 23.



Use this department to help solve your household problems. Address your letters to Martha Cole, Michigan Farmer, Detroit, Mich.

BEEFSTEAK FOR SUMMER USE.

Please tell me how to fry down beefsteak and pack in a jar for summer use. With what do you cover it to keep out the air?—L. S.

You may fry down beefsteak as for serving at the table, and pack in earthen crocks and cover with hot fresh lard. Cover with a plate and weight down with a small weight. The steak may also be packed in glass jars after it is fried and the jar filled with hot water. Process these jars in a hot water bath for three hours. Seal and store in a dry, cool place. When beefsteak is packed in glass jars it is best to only sear the outside in the hot frying pan. Pour the hot water into the pan and use this pan gravy for filling the jars.

OXFORDS LOSE POLISH.

I have a pair of calf-skin, expensive oxfords. The first time they were worn I stepped into the snow and the brilliant shine went away. What can I do to regain it?—M. W.

It would be best to have your shoe dealer supply you with a clear polish, or one for your special color of shoes. So many different chemicals are used in dyes that it is difficult to determine how they react to simple remedies.

BRIGHTEN UP THE OLD WALNUT BUREAU.

Please tell me how to do over an old walnut bureau, how to take off the old stain, and what to put on after that is accomplished.—Mrs. F. H.

It is necessary to first remove the old finish to get the best results. Two

parts ammonia and one part turpentine makes a good varnish remover. Rub the furniture well with this mixture and then with a stiff brush. Sandpaper the surface until smooth, and apply a varnish stain of the color you desire. Two or three coats may be necessary to give a good finish. Sandpaper each down before applying the second.

KEEP THE STEEL TOPPED STOVE SHINING.

What can be used on a steel top range to keep it polished? What will take that coating off of baby-bottle nipples when soap and scrubbing do not?—Mrs. R. W. A.

If you will sprinkle a soft cloth with melted vaseline and leave it rolled up tightly for a day and polish the steel top of your stove while hot with this, it will leave it bright and shiny.

Rubbing the baby's bottle nipples with a cloth dipped in alcohol may remove the coating, but may also injure the rubber.

HOME-SPUN HINTS.

Charity, the sweet kind, that comes direct from the heart, is not so rare as some of us may think. However, it is such a kindly thing, and there is not the least danger of ever being an over-supply.

If the hands become chapped and tender during the cold weather, a little melted tallow rubbed in while warm will make the "chaps" heal almost over-night and leave the hands delightfully smooth.

Wool blankets should be rinsed in a clean warm suds else they will not be soft and fluffy when dry.

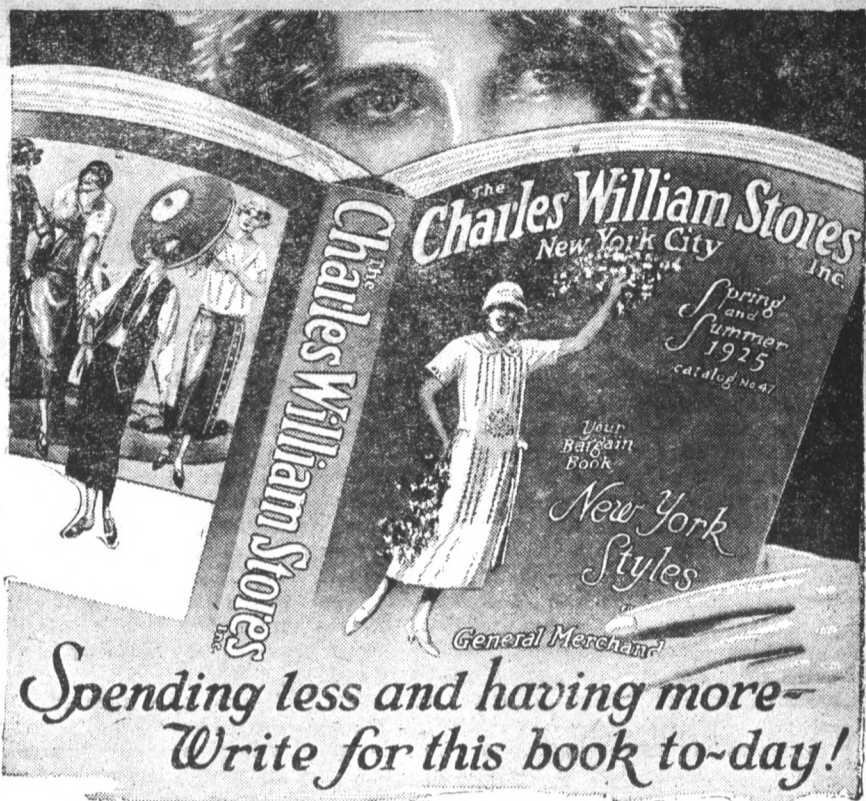
The more rattle the less speed. This pertains to housework as well as to flivvers.—G. S.

Preparing the School Lunch

MISS RUTH T. LEHMAN, nutrition expert, has made a table for the use of members who prepare school lunches for their children. The school lunch must be certain to include the "factors of safety in the

diet" (milk and fruit or vegetables) and must not be monotonous, Miss Lehman declares in her January article in Hygeia, popular health magazine from which the following table was taken:

Choose	Milk
	As a beverage In cocoa In cream soups In puddings (See desserts)
and Sandwiches	or Bread and Butter and Such Foods as
Bread	Fillings
White	Butter
Oatmeal	Egg
Graham	Peanut butter
Raisin	Nut pastes
Prune	Salmon
	Baked beans
	Cheese
	Chopped raisins or dates
	Jam or jelly
	Meat (sliced or chopped)
and Fruits or Vegetables	and Simple Sweets.
Raw fruit	Gingerbread
Apples	Peanut cookies
Oranges	Date cookies
Plums, etc.	Oatmeal cookies
Fruit sauce (fresh or dried fruit)	Sponge cake
Stuffed prunes or dates	Custard
Celery	Fruit tapioca pudding
Lettuce	Cornstarch pudding
Tomato	Bread pudding
	Creamy rice pudding
	Fruit



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OUR BOYS AND GIRLS

Handicaps to Ambition

Dear Uncle Frank:

I have never written to you and the Merry Circles before but I have been a constant reader of your page for some time. I have seen many corners in papers reserved for young people; but never a corner so full of fun and good-fellowship as the Merry Circle is.

I enjoyed "White Amaranth's" letter very much. As "White Amaranth" says, one ought not to ignore the silent call which everyone at some time experiences; nor had we ought to be ashamed to state these ambitions to others.

What is my secret ambition? Oh! yes! I have one, but to me the end seems impossible, for my parents are poor people and as yet we cannot face the expenses which my ambition would call for. They are putting me through high school and are sacrificing many

things now for which I can never repay them.

To return to my subject; I would like to be a successful singer. I love to sing and am either humming or singing snatches of songs most of the time. When I hear music, good music, it makes me fairly tremble. There is something so fascinating about it that it seems to hold me in a tight grip. I believe that music is one thing that keeps peace and harmony in this world.

Oh! if I could only succeed. I am going to work hard towards that end. To start with I have only the compliments of my friends as encouragement, who say I have a good voice if it could be developed.

I, too, wish to join the Unknown and here take the liberty to wish "White Amaranth" success.—"Just Peggy."

because a discussion would get us nowhere. I agree with you on the radio. No, bobbed hair has nothing to do with badness. It's what is inside that makes a difference between goodness and badness.

Dear Uncle Frank:

My cousins and you will think I am never going to write, but the trouble is I don't like to write letters, and I guess that is because I am a "lazy bird."

You see, I was in the hospital for two months of last year, and had to have an operation for plural pneumonia and could not go to school, but my specialist says I had better stay home again this year, as he doesn't want me to get pneumonia again. Now, to make this long letter short, staying home with nothing to do except roam around outside in the fresh air accounts for me being a "lazy bird."—Winifred Seeley, Farmington, Mich.

You have a good reason for being lazy. I hope those lungs of yours will get back to normal soon. You ought to be a good student of nature, being outdoors so much.

Dear Uncle Frank:

Say, Uncle Frank, where did crossword puzzles come from, China? I



Ella Engelhard Showing Her First Year's Club Work.

was up all night (just like Slim) trying to get that puzzle. But I didn't get it anyway.

Well, I have some pin-money coming in, since I am a correspondent for The Cheboygan Tribune, our town paper.

That poem of Miss Laura Swartz's is pretty good, so the author of it must be ditto.

Well, here's hopin' W. B. doesn't get this letter.—I remain, your nephew, Joseph Schramm, M. C., Cheboygan.

No, China cannot get the credit for the cross word puzzle. I understand that it was originated by a New York newspaper man. Too bad you lost sleep over that puzzle.

Dear Uncle Frank:

I am not an M. C., but I thought I would write you a line.

I do not agree with Alida Westers in two ways. One, that I do not think girls work any more or harder than boys. Boys have to do chores morning and night, and do other things, while a girl helps her mother mornings, then reads or plays the rest of the time.

As to girls being brighter than the boys is just trying to make us believe they are bright. Some girls are bright, but they are very rare. If girls put on knickers and go out and harrow all day, at night they will want to quit playing boy.

Well, I guess I will stop before I run out of paper.—Your nephew, Arthur, R. 1, Quincy, Mich.

Here is the other side of the question. I am glad, Arthur, that you expressed your opinion. Of course, there are two sides to every question. We'll probably hear some more from the other side.



OUR LETTER BOX

Dear Uncle Frank:

I wonder if some of the M. C. members would send me a list of sewing club names. Last year our club's name was "Needle Pierce," but this year we haven't any yet.

Uncle Frank, did you ever play basket ball? It sure is fun, especially when there is hair pulling. Ha! Ha! I am taking up English Literature this year and I sure like it. We have to make ten book reports, and I have eight done. Adam Bede is a good book, written by Eliot. Most of Eliot's books are good, anyway.

Oh, yes, I wonder how many M. C. members have had the experience I had Friday in our school. I took charge of the primary department for half an hour, and had one great time. How many M. C.'s are going to be teachers? I am either going to be a nurse or a teacher.—Edna E. Richerd, McMillan, Mich.

Yes, I have played basket ball, but I never knew that hair pulling was part of it. George Eliot's books are all good. I am glad you liked the teaching. It indicates that you will probably make a good teacher.

Dear Uncle Frank:

Say, Uncle Frank, we smaller boys and girls don't have such a good chance to win a prize as H. C. and other big boys.

I think it would be nice if we could have a contest for littler boys, and then for the bigger. Don't you think that would be nice, M. C.'s? I do.—Harold Campbell.

I would like to follow your suggestions, but I haven't time nor space to

do so. The way it is now, the smaller boys will get a chance later when they get older, while the bigger ones will get too old to try. Even as it is, the younger ones sometimes win.

Dear Uncle Frank:

Edna Federspill wrote a good letter. Her suggestion to celebrate was a good one.

If I may, I am going to make a suggestion. I know it's been discussed before; but here it is. Can, or may, the Merry Circles elect a president and vice-president? I think any club ought to have them. Don't you? And the M. C. is a club. Uncle Frank could pick out about six of the most popular M. C.'s and print their names in the Michigan Farmer and also put in a ballot to be cut out and the name of the M. C. each wants to vote for, and send it to Uncle Frank. Uncle Frank makes a good secretary-treasurer. I hope someone thinks of a good way to celebrate.

I read Alida Wester's letter. Yes, girls work hard. But, I don't think they work any harder than boys. Of course, there are some boys who do not do much, and there are also some girls.

I would like to know where she got the idea that girls are brighter than boys. I have gone through the tenth grade, and I haven't seen that girls are brighter than boys. I'll say it is about fifty-fifty. Don't you, Uncle Frank? Why, Alida, did you know that some boys are so bright their mothers call them "son" or "sonny"? Ha! Ha! You never heard of a girl being called "son" did you?—Your nephew, Reginald Hodges, M. C., Wyandotte, Mich.

We've discussed the election of officers and it seems that we cannot gain much by doing so, and it will make a lot of work besides. We can't celebrate the starting of the Merry Circle, because it is past time now. January 6 was the date. Maybe next year.

Dear Uncle Frank:

I have bobbed hair, but I don't wear knickers, and I don't think it makes me bad because I have bobbed hair. I think we ought to talk of something useful, such as the K. K. K., or "Is the radio beneficial?" instead of "bobbed hair," and "Are boys rude to girls?" I think the radio is beneficial, first because it affords enjoyment for the family, second because it broadcasts educational speeches and other things that are useful.

Well, I must close to leave room for the rest. Hoping to receive a prize, I remain, Violet Stables, M. C., Traverse City, Mich., R. 4.

Yes, we can discuss the radio, but the K. K. K. will be left undiscussed,



Are Boys Rude to Girls? Asks Florence Ryder.

The Golden Circle

Special Honors Awarded Some Merry Circles

THE Golden Circle, announced a few weeks ago, is a special honor conferred upon Merry Circles who have done especially good work.

This honor pin, which is a regular Merry Circle pin with a real gold circle around it, and has a nice pin clasp on the back of it, is given to reward special effort in original thought, or excellence of work in prose, poetry, drawing or anything else connected with Merry Circle activities. It will not be given as a prize in any contest, but will be awarded whenever I believe a Merry Circler is due this special honor.

I believe it is due those who have done good work in the past to confer this honor upon them. So I announce the following who are to receive it:

Rex Ellis, Reed City, Mich., for his poetry, thoughtful letters, and Merry Circle song.

Harold Coles, Montgomery, Mich., for starting the bobbed hair and knicker discussion and being the most talked of Merry Circler.

Myrtle Walker, Woodland, Mich., for her thoughtful letters on school and education.

Wilma Fry, Ithaca, Mich., for her interesting letter of friendly criticism.

Caroline Cooks, Tecumseh, Mich., for her letter on young folks and church going.

Myrtle Feltis, of Sault Ste. Marie, Mich., for her Merry Circle song.

Doris Truex, Cornell, Mich., for her Merry Circle song.

Alfred Alfredson, Whitehall, Mich., for his excellent work in drawing.

Margaret Gravelle, Rapid River, Mich., for her thoughtful letter on the modern girl.

The following will also get the Golden Circle honor if they will send in their names and addresses:

"White Amaranth," whose excellent letter on "Burning Ambition" appeared a short time ago.

"A Silent Reader (heretofore)," for her interesting letter on teaching.

"Just Peggy," for her letter in this issue.

I hope that many other Merry Circles will be able to work their way into the Golden Circle in the future. It is open to all who do worth-while work.



John Hartman and "Charlie." John is Two Years Old. How Old is "Charlie?"

Bigger Yield Bigger Profits with EMLONG'S Strawberry Plants

\$1500 per Acre Yield
Mrs. F. Maitland received \$1500 from an acre of Emlong's Blue Ribbon Strawberries last year. 100 Emlong Plants brought E. W. Moele, of Minn., \$65. \$1000 per acre is usual for growers who keep to our plants. You can do as well! Plants we send you will be of same strain as those above.

Every Plant Guaranteed to LIVE and GROW
Long, sturdy roots developed by Emlong's exclusive cultural methods in ideal virgin soil assure you quick, sturdy plant growth and heavy yield of big berries, the easy kind to sell. Our plants thrive under severest conditions. Emlong's plants are all certain. You take no risk. Every plant shipped is guaranteed to live, to grow, to produce. Be sure of results. Profit by our 51 years experience.

BARGAIN PRICES Why pay big prices for strawberries? Grow them yourself. Special Garden Collections of finest varieties at big savings. \$100 in cash prizes for best yields. FREE catalog tells all about it.

FREE Book tells about MASTODON

Biggest, sweetest, most productive of all Everbearers. **18 Fill** Alfred New coreless Black-berry, tremendous cropper, bears second year. Berries 2 inches long, and sweet as honey. Get facts from our 1925 Catalog. Contains valuable, reliable information on preparing ground, care of plants, etc. Advanced correct guide to success in raising Strawberries, Raspberries, Blackberries, Grapes, Roses, Gladiolus, Hedge plants and Shrubs. Based on 51 years of developing superior strains. You need this book. Write for it at once. **NOW—it is FREE!**
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Strawberries

Yield Big Crops and Big Profits
Send for Free Book written by the Strawberry King, telling how to easily make even unprofitable land yield \$500 to \$1200 per acre when planted the Kellogg Way with big, fancy, delicious Kellogg long-season berries. Seven Special Kellogg Strawberry Gardens fit every need and purse. Find out today. The book is FREE.
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Michigan-Grown
Order early. Protect yourself against extreme seed shortage domestic and foreign. Beware of imported clover seed not adapted to your soil and climate. Use only Isbell's Bell Brand Clover—red or alike—all Michigan-grown, pure, true to strain, hardy and big-yielding—record producers for 46 years.
FREE Samples of any field seeds to show Isbell's 1925 Seed Annual. Big savings on sterling quality direct-from-grower seeds. Write today.
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This Year Try Stahelin's Big Yield Strawberry Plants

Splendid variety, adaptable to any soil. Grow Stahelin's Strawberries this year—they will make Big Money—up to \$1200 per acre; the new varieties: The EATON, DELICIOUS, PREMIER, COOPER and the MASTODON—world's greatest ever-bearing strawberry; are all robust, healthy, well-rooted plants; readily adaptable to your soil. Thousands of our customers are coining big money. **START THIS YEAR!**
GRAPE Concord variety, at special price, per thousand, \$18 and up.
Fruit Trees Apple, Peach, Pear, Plum, Quince, all hardy northern grown stock.
Big Free Catalog of Strawberries, Raspberries, Blackberries, Apples, Peaches, ORNAMENTALS. Also money saving bargains.
FREE! A package of flower seed with catalog. Write today. F. C. Stahelin & Son, Proprietors of BRIDGMAN NURSERY CO., Box 45 Bridgman, Mich.

Read and Win

WITH cross word puzzles and the other new contests we have had the old reliable Read-and-Win contests have been pushed into the background. But I believe it is still popular and will produce as good results as the newer contests, so we'll have one again.

As we have not run a Read-and-Win for some time, I will explain it, especially for the young folks who are newly interested in this department.

Below are ten questions. The answers to these questions can be found in the reading columns of this paper. After you have found the answers, write them in as short form as possible to make sense. Number the answer the same as the question is numbered, and put the number of the page on which you found the answer right after it. Do not rewrite the question. Put your name and address in the upper left hand corner of your paper. If you are a Merry Circler, put M. C. after your name.

Send your papers to Uncle Frank, Michigan Farmer, Detroit, Michigan, before January 23, as the contest closes then.

All the neat and correct papers will be put into a basket and ten prize winners pulled out. The first two prizes will be handsome fountain pens; the next three, handy pocket knives, and the next five cute little boxes of candy.

- The questions follow:
1. Who supplies green food to his hens by feeding roots?
 2. Who says the radio is beneficial because it furnishes enjoyment and broadcasts educational speeches and other useful things?
 3. What is charoseth?
 4. Who sold a nineteen-year-old farm wagon for \$80?
 5. How should one cut off a branch?
 6. Does it pay to buy pullets in the fall and then sell them before confinement tells on them?
 7. Who said, "It's mighty easy to go down the wrong road, but it will never get us where we want to go?"
 8. What crop does not rob the farmer's soil of fertility?
 9. How much ice should a twenty-cow dairy store?
 10. What effect does feeding too much soy-beans to cows have on the butter?

THE WORK-TO-WINNERS.

NEARLY a thousand boys and girls worked to win by making words from the letters in the words in the Merry Circle motto, "Work-to-Win." But I guess the most of them did not work hard enough, for the average number of words made from those letters was only around thirty. Quite a few had over fifty words, and to those we are sending Merry Circle pins and cards if they are not now members.

Those papers which had between seventy and eighty words were looked over for prize purposes. A great many of these had obsolete words, those not in use now, and other errors so that after making the necessary cut-downs, we got seventy-three as the highest actual number of words.

- Following are the prize winners and the number of words they got:
- Fountain Pens.
Helen York, Portland, Mich., 73.
Helen Welch, Marlette, Mich., 72.
Ann Mulder, R. 6, Grand Rapids, Mich., 65.
Florence Brown, R. 1, Hillsdale, Mich., 65.
- Flashlights.
Joe Jutzie, R. 1, Pigeon, Mich., 71.
Laurine Jarvis, R. 8, Caro, Mich., 70.
Olive Harris, 49 West Eleventh St., Holland, Mich., 68.
- Candy.
Bernice Herald, R. 1, Middleton, Mich., 67.
Richard Carpenter, Sparta, Mich., 66.
Louise Steimin, R. 8, Owosso, Michigan, 66.

LIMERICK CONTEST.

We all have an uncle named Frank, To the boys and girls he's a crank; He keeps us a-guessing, With puzzles distressing; This uncle we all call Frank.

Happiness is the natural flower of duty.—Brooks.

Sweeney Trains Men To Make Big Money!

—You've long wanted to come to this Million Dollar School. The World's Largest Automotive and Electrical School at Kansas City, Mo. NOW IT WILL BE EASY, because of my big reduction in cost of tuition. I've raised the salaries of thousands of other fellows—I can do it for you, and if you decide now to come here, spend a few weeks in actual "Learn by Doing" training, there's a good job paying big money ready for you, or a chance to go into business for yourself. But, you'll have to decide NOW to be sure of the big saving in cost of training.
E. J. SWEENEY, President.



Auto Mechanics \$50 Week and Up.

Learn a Good Trade One that will pay you \$200 to \$500 a month and more. Get in the biggest business in the world—the Automotive Business. I want to prove that you can do what thousands of men just in your position have done as a result of "SWEENEY TRAINING." I say, take up the AUTO BUSINESS—NOW. Learn it at SWEENEY'S, Kansas City, Mo. Start now while you can get the big saving in tuition.

GET THE BEST FOR LESS MONEY The SWEENEY AUTO SCHOOL offers you the greatest opportunity you ever had. A big reduction in tuition—a Million Dollar building—10 stories high—over 12 acres of floor space devoted to the "Sweeney System of Practical Instruction" under expert instructors. Just across the plaza from the Union Station—a short distance from the beautiful new Two Million Dollar Memorial Building.

BUT, REMEMBER THERE'S ONLY ONE SWEENEY AUTO SCHOOL—THERE'S ONLY ONE SWEENEY SYSTEM and you can only get this system at Kansas City, Mo. You positively cannot get it anywhere.



LEARN A TRADE Sweeney AUTOMOTIVE & ELECTRICAL SCHOOL 133 SWEENEY BLDG. KANSAS CITY, MO.

AND NOW 1/2 SO YOU CAN Cuts The Tuition Start Your Training at Once
Only One Sweeney Auto School It's at Kansas City, Mo.

COME RIGHT NOW This is the most amazing offer ever made. If you are mechanically inclined, if you like to work with tools, you will learn under the "Sweeney System," by actually doing the work, everything about all kinds of automobiles, oxy-acetylene welding, vulcanizing, battery work, electrical work, building and repairing Radio sets. No experience or education needed. No books are used. You work on most complete gas engine and electrical equipment in any school in the world. Over \$200,000 invested. \$50,000 Radio Station, WHB. You'll get dirty and greasy, but you'll learn by the "Sweeney System" that fits you for the big pay jobs at \$50 a week and up, waiting for Sweeney trained men.

Sweeney System of Practical Instruction There's only one place where you can get this training—it's at the world famous Sweeney Automotive and Electric School at Kansas City. There's only one Sweeney School—the largest in the world. There's only one "Sweeney System." No other school offers or can give you this training that not only trains you to fill big paying jobs, but saves you time and money. This training is making big money for 60,000 Sweeney Graduates. I estimate 20,000 of them own a good paying business.



Battery Experts \$200 Month and Up.

MY FREE BOOK TELLS YOU How to get a good mechanical job. How to be a chauffeur or truck driver. How to repair any make of car. How to make batteries and auto tires. How to weld. How to run a garage anywhere. Shows you hundreds of actual photographs of men at work in my big shops. Shows how 60,000 men got their start. Shows how easy it is to learn several good trades: how much fun you have during recreation hours, swimming pool, entertainment, band and orchestra, radio broadcasting station W. H. B. Answers every question.

WRITE ME TODAY or wire me when you'll be right now. Sweeney trained men in demand everywhere. \$200 to \$500 a month and more. You must decide now if you want to be sure of getting the big reduction in tuition. Write for my Big FREE 64-page book or wire me you are coming. No colored students accepted.
E. J. SWEENEY, Pres.

There's Only One Sweeney School It's at Kansas City, Mo.

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Reliable and Full of Life **SPECIAL OFFER**
Made to build New Business. A trial will make you our permanent customer.
PRIZE COLLECTION Radish, 17 worth 15c; Lettuce, 12 kinds, worth 15c; Tomatoes, 11 the finest, worth 20c; Turnip, 7 splendid, worth 10c; Onion, 8 best varieties, worth 15c; 10 Spring Flowering Balbs, worth 25c. 65 varieties in all; worth \$1.
GUARANTEED TO PLEASE Write today; mention this paper.
SEND 10 CENTS to cover postage and packing and receive this valuable collection of seeds, postpaid, together with my big instructive, beautiful Seed and Plant Book, tells all about Buckbee's "Full of Life" Seeds, Plants, etc.
H.W. BUCKBEE
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How to know good seed

SCOTT'S Seed Guide is a real text-book on seed and seed selection. It contains valuable information on all the clovers, soy beans, sweet clover, alfalfa, etc., etc. It points the way to better crops and greater income. 1925 edition now ready. It's free. Write for it.
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New Berry Book—Free
Pages of Pictures of wonderful new varieties of Strawberries, Raspberries and other Small Fruits. Tells about Keith's vigorous New-Land plants grown in virgin soil. True Guide to best varieties for Garden or Field. Send today for this valuable Free Book. It's FREE.
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38 Years of Reliability
Alfalfa, "The Farmer's Best Bet for 1925." High-testing certified seed, Grimm and Common. Dakota, Montana and Idaho grown. Also Sweet Clover, Red and Alsike, Timothy. Samples free.
Fire Dried Seed Corn, large stock, Wisconsin grown. Golden Glow, Murdock, Silver King.
Pedigreed Oats, barley, wheat, soy beans.
38th Annual Catalog Now ready. Lists reliable Field, Garden and Flower Seeds of all kinds. Best varieties. Also tools and supplies. Write for copy today.
L. L. Olds Seed Company
Drawer 36 Madison, Wis.

Golden Champlain Cantaloupe

Paid good profits in 1924; others failed entirely. This sure-crop melon leads in combination of earliness, hardness, quality and yield. Free illustrated folder gives proofs by growers from all states. Our methods take the risk from melon growing; let us help you as we have thousands of others. Write, mentioning this paper, to the Originators of the earliest (57 day) cantaloupe.
H. J. WALRATH & SONS, R. 1, Conneaut, Ohio.

STRAWBERRY PLANTS \$3.95 & UP

Grape Vines At Lowest Prices Buy direct from the grower and save money. Heavy yielding, big rooted, healthy, Northern grown Strawberry, Raspberry, and Blackberry plants, Fruit Trees and Ornamental Shrubbery, at reduced prices. All stock graded to highest standard. Free from diseases. Guaranteed. Will thrive anywhere. Write for our catalog before you buy.
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SAVE MONEY IN CLOVER

Our prices are \$2.00 to \$3.00 lower than most dealers. Write us today for free samples of Highest Grade Home Grown Seed. Our price is surprisingly low. Get our samples and prices on Alfalfa, Sweet Clover, Timothy and all Seeds. We can save you big money on your seed bill. Write for free samples, special prices and 62 page catalog.
American Field Seed Co., Dept. 131 Chicago, Ill.



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Superior pure-bred baby chicks purchased for a few cents a piece grow quickly into steady dollar producing birds. Before you know it the cockerels are ready for market and the pullets have started to lay.

They are bred to pay from such famous prize winning and egg-laying strains as Tom Barron and Hollywood White Leghorns. Hatched in largest hatchery in Michigan.

Write for Catalog and special low prices. Satisfaction guaranteed. Book your orders now for early deliveries. Write TODAY.

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SUPERIOR POULTRY FARMS
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ZEELAND, MICH.
Superior Pure Bred Baby Chicks

Auto Poultry Coop
"A Farmer's Necessity"

JUST the thing for carrying poultry to market. Safe, clean and convenient. Fits on running-board of any automobile. Built from heavy galvanized steel wire electrically welded, except bottom, which is wood. With ordinary care will last for years. No farmer raising poultry should be without one.

We Ship Direct Price only \$2.75

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Battle Creek, Mich. DEPT. S Atchison, Kans.

64 BREEDS Most Profitable chickens, ducks, turkeys and geese. Choice, pure-bred northern raised. Fowls, eggs and incubators at low prices. America's great poultry farm. At 32 yrs. Valuable 100-page book and catalog free.

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Detroit-Alliance INCUBATOR 140-EGG CAPACITY

Has all the features that insure big hatches—double walls, copper tank, complete nursery, perfect heat control through automatic trip burner, "Tycos" thermometer hold so chicks can't break it when hatching. Detroit Brooders, too. Write for low combination price today!

Detroit-Alliance Incubator Co., Dept. 11 Alliance, Ohio

The Extra Eggs

SOON PAY FOR THESE Self-Heating Sanitary Poultry Fountains and Heaters

Price Complete \$1.85 2 Gal. Size

Over Quarter Million in Use

Keeps water at right temperature day and night in coldest weather. Requires less than a quart of oil a week. Made of heavy galvanized steel. A long felt want supplied. Every hen-house needs one. Hens cannot wet themselves or waste water. Sanitary Fountain and Heater complete, only \$1.85 for 2 gallon size. Also made in 3 and 4 gallon sizes. Order today or send for circulars and testimonials. Agents wanted.

C. A. S. FORGE WORKS, Box 604, SARANAC, MICH.

10 Hens Lay 10 Eggs

Winter doesn't stop Mr. Henry's hens

Readers whose hens are not laying well during these days of high egg prices, will find much of interest in the following letter from C. D. Henry, Alverton, Pa. He says:

"I placed 10 pullets by themselves, and fed them Don Sung. The third day, my eggs increased from 3 to 9 a day. They have had Don Sung ever since and have laid continuously. Yesterday I got 10 eggs from them and am willing to make affidavit to it. Don Sung certainly gets the eggs. It has paid for itself many times over."

Don Sung, the Chinese egg laying tablets which Mr. Henry used, are opening the eyes of chicken raisers all over America. The tablets can be obtained from the Burrell-Dugger Co., 867 Allen Street, Indianapolis, Ind. Poultry raisers whose hens are not laying well, should send 50 cents for a trial package (or \$1 for the extra large size, holding three times as much). Don Sung is positively guaranteed to do the work or money promptly refunded, so it costs nothing to try. Right now is the time to start giving Don Sung to your hens, so you will have a good supply of fresh eggs all winter.

Poultry

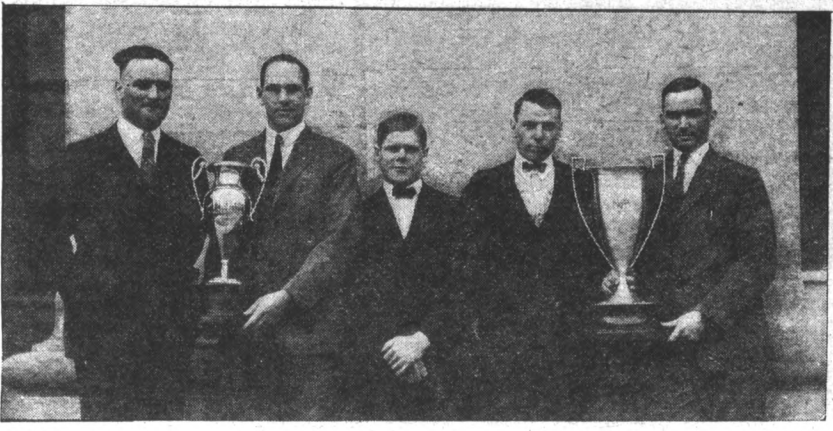
FARM POULTRY PAYS.

FOR the past three years at Forest Grove Farm we have been gradually increasing our laying flock of hens. To accommodate our flock which this fall numbers 120 well-grown pullets I have remodeled our poultry house, making it 14x50 feet. I put in a cement floor. To insure dryness I raised the floor about ten inches above the outside surface.

We are not what some would call poultry crazy, yet for several years we have been giving a little more atten-

tion to poultry each year, finding that well-bred and well-fed hens pay. We find also that it takes a great deal less work to care for poultry than cows and they both go together splendidly.

Taking care of the poultry on our farm falls upon the writer. I buy day-old chicks in the spring, put them in little colony brooder houses that are warm and dry, supply them with feed in a self-feeder, grit and water, and I have splendid success in rearing a fine bunch of pullets each year. Of course, they must have regular and good care, but I do not find it a difficult task to raise young stock in this manner.



Michigan Team—Left to Right, Richard Weine, Ralph Meek, Frank Williamson, Clyde Norton and C. G. Card, Coach.

This fall I have a fine bunch of pullets, all comfortably housed, and getting ready for winter work. When the farmer can sell eggs for fifty-five cents per dozen upon the local market he has a splendid source of farm income.

I do not crowd my laying stock for large egg yields, but I feed them well on a well-balanced ration compounded mostly of farm-grown grains, beef-scrap and skim-milk. I supply green feed by feeding roots. I keep plenty of grit and oyster shells before the hens. I thoroughly believe in making the hens work, so keep a deep dry litter under-foot.—Leo C. Reynolds.

Barred Rock pullets, and White Leghorn cock birds.

These birds were picked from the show room and represented in every case, very warm competition, as was indicated by score. A 1,500 score was possible, and Ames, Iowa, placed first with 1,060; M. A. C. second with 1,045; Oklahoma third, with 1,030, and Illinois fourth, with 1,020.

In the examination, first place was won by the Ames Team, with a 986 score out of a possible 1,000. High honors in this section of the contest went to Rosenbaum, of the Purdue Team, who wrote a perfect paper.

Individual honors went to J. D. Springer, of Ames, Iowa, who made 1,146 points out of a possible 1,333; second place to L. Stark, of Missouri, with 1,145; third to Frank Williamson, of Michigan, with 1,125.

In production judging, first place went to Clyde Norton, of Michigan, with a 458 score out of a possible 500; second place to Ralph Meek, of Michigan, with 470. In exhibition judging, J. D. Springer, of Ames, placed first with a score of 390.

The Michigan Team received the large cup donated by the mid-west poultry and egg shippers, for best all-around team. This is not a permanent cup, but must be won by some college three times before becoming its property. This cup was won in 1920 by Missouri; 1921, Oklahoma; 1922, Iowa; 1923, Missouri, and 1924, Michigan Agricultural College.

Michigan also won the large cup for best all around production judging. In addition, each Michigan man won two medals as a reward for individual standings.

All who took part in the contest feel that many thanks are due Mr. Charles G. Page, president, and Mr. Theodore Hewes, secretary and treasurer of the Coliseum show, for their splendid cooperation, as they made the contestants feel at all times that they were immensely interested.—C. G. C.

MICHIGAN POULTRY TEAM WINS.

THE poultry judging team from the Michigan Agricultural College carried off first honors at the mid-west poultry show, held December 9-14, at the Coliseum, Chicago, in competition with teams from nine mid-west states. The team, composed of Clyde Norton, of East Lansing; Frank Williamson, of Pontiac; Ralph Meek, Montrose, and Richard Weine, of Alpena, as alternate, was coached by C. G. Card, of the M. A. C. Poultry Department.

Team standings were as follows, with a possible 4,000 points:

Michigan Agricultural College	3,336.7
Ames, Iowa	3,276.7
Illinois	3,205.0
Purdue	3,260.
Missouri	3,199.0
Oklahoma	3,040.0
Kansas	3,022.5
Nebraska	2,887.0
Ohio	2,871.0

The contest consisted of three parts: production and exhibition classes for judging, and a written examination of

twenty-five questions. The production class was made up of Rhode Island Red, White Leghorn, White Wyandotte, White Rock and Barred Rock hens, with trap nest records. These birds were furnished by several of the colleges. In this part of the contest, with a 1,500 point score possible, M. A. C. placed first with a score of 1,410.

Purdue second 1,320
Missouri third 1,290
Illinois fourth 1,230
Iowa fifth 1,230

The exhibition class was made up of Rhode Island Red cockerels, R. I. Red pullets, White Wyandotte pullets,

DAMP POULTRY HOUSE.

I have built a chicken coop 52x14x8, but find that it is very wet inside. Could you give me any information as to what I could do to prevent this?—E. P.

Dampness in a poultry house may be caused by overcrowding, which pro-

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 Champion Belle City \$21.95

140 Egg Incubator 230 Egg 80 Egg Incubator \$11.95; Hot-Water Copper Tanks—Self-Regulated Safety Lamps—Thermometer & Holder—Egg Tester. \$6.95 buys 80-Chick; \$7.95 buys 140-Chick; \$9.95 buys 230-Chick Hot-Water Double Walled Brooder. Save \$1.95. Order both. 140 Size Incubator and Brooder, Only \$19.95 230 Size Incubator and Brooder, Only \$29.95 80 Size Incubator and Brooder, Only \$15.95

Express Prepaid
East of Rockies & allowed West. **Low Prices on Coal and Oil Canopy Brooders** come with catalog. With this **Guaranteed Hatching Outfit** and my Guide Book you can make a big income, also share in my **Special Offer**—Save time. Order now or write today for my Free book "Hatching Facts." It tells everything.—Jim Rohan, Pres. Belle City Incubator Co. Box 14 Racine, Wis.

140 Egg Incubator \$13.25 30 Days Trial

Freight Paid east of the Rockies. Hot water, copper tanks—double walls—drip air space—double glass doors—a real bargain at \$13.25. Shipped complete, set up ready to use.

140 Egg Incubator and Brooder - \$17.75
180 Egg Incubator Alone - 15.75
180 Egg Incubator and Brooder - 22.00
250 Egg Incubator Alone - 22.75
250 Egg Incubator and Brooder - 31.00
340 Egg Incubator Alone - 30.75

Made of California Redwood. Order direct from this ad. 30 days trial—money back if not pleased. If not ready to order now, don't buy until you get our 1925 catalog which shows larger sizes up to 1000 eggs. (3)

WISCONSIN INCUBATOR CO. Dept. 114 Racine, Wis.

Per Chick Hatched "SUCCESSFUL" Is Cheapest To Buy

Mail a postal—Get our offer. Poultry lessons free to every buyer. Eastern customers will be served quickly from our Eastern Warehouse. Catalog FREE. Make green, egg-making feed in "SUCCESSFUL" Grain Sprouters.

32 Years of Big Success

Des Moines Incubator Co., 368 Second St., Des Moines, Iowa

140 EGG Incubator

FREIGHT PREPAID \$13.85

Made of California Redwood, covered with galvanized iron, double walls, air space between, built to last for years; deep chick nursery, hot water heat, copper tanks.

Shipped complete, set up, ready to run. Freight paid East of Rockies.

140 EGG INCUBATOR WITH BROODER \$19.75
260 EGG INCUBATOR, ALONE, ONLY 23.50
260 EGG INCUBATOR, WITH BROODER 32.90
30 days' trial—money back if not O. K.—FREE Catalog Ironclad Incubator Co., Box 83 Racine, Wis.

WOLVERINE HATCHERY

15 Years of Breeding to Lay

White Leghorns exclusively. Foundation stock is **Tancred's Best** Backed by five generations of 300-egg hens.

Three Great Matings

Send for free catalog which gives full particulars.

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GUARANTY
100% Live Delivery
100% Good Condition.

NABOB'S JUST-RITE Pedigree, Exhibition, Utility Matings

Baby Chicks

20 popular breeds, high power layers, 20 rare breeds, 4 breeds ducklings. Nabob Quality, none better at any price. 97% live arrival guaranteed. Postage Paid. Free Feed with each order. Catalogue free, stamps appreciated. Member International Baby Chick Association.

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More Eggs—More Money

The Big, Illustrated POULTRY MAGAZINE

3 Months Tells what you must know to succeed with poultry. Facts based upon experience. Send 10c dime today for Special trial offer. Poultry Book Catalog Free!

The Poultry Item, Box M Sellersville, Pa.

BOWERS Colony Brooder

Burns any fuel—costs less

This brooder raises more and better chicks at lowest cost. Stove is sturdy, safe, air-tight, self-regulating—best in world to hold fire. Burns coal better than any other brooder. Also burns hard coal, wood, etc. Automatic regulator maintains uniform heat night and day. Canopy spreads heat evenly over chicks—plenty of air and room. Backed by 8 years' success.

1000 Chick Brooder, \$21.00
\$3 stovepipe outfit sent FREE with brooder. Express paid E. of Rockies. Order Now. Money-back guarantee.

F. M. Bowers & Sons 1423 W. Wash. St. Indianapolis, Ind.

duces more poultry manure than the litter can absorb. The breathing of the birds also adds moisture to the air. Too much glass and not enough open front will make a damp house. The sun through the glass heats up the house during the day and the moisture condenses on the walls during the cold night.

A square foot of glass for each sixteen square feet of floor space is a general rule for open-front houses. Then have twice as much open front as glass. This open front can be covered with fine mesh hardware cloth with drop curtains for use in severe storms.

Sometimes a concrete floor is too low and the soil moisture comes up into the litter. Covering the floor with asphalt paint helps to improve this condition. Building the concrete floor on a foot or more of sand, field stone or cinders is a help in making a dry floor.

HOME-MADE HIVES.

What are the dimensions of a standard eight or ten-frame bee hive, as I would like to make some? Which is the best, an eight or ten for comb honey?—E. J. B.

For the production of comb honey, I would urge you to use the regular ten-frame hive with Hoffman frames. The hive body should be made of three-quarter or seven-eighth-inch white pine or cypress and should be made of the following dimensions: Width, 16 1/4 inches; length, 18 5/16 inches; depth, 9 5/8 inches.

The above dimensions are for seven-eighth-inch lumber. If three-quarter-inch lumber is used, the dimensions should be one-quarter-inch less for length and width. However, before making a hive body, I would urge you to secure a standard factory made hive as a pattern. You will be well repaid for making this expenditure as there are grooves to be made for holding the frames that it would be very hard to explain by letter.

When you have made your equipment, I would advise you to paint the joints with white lead before nailing it together and nail up while the paint is still wet. This should be followed by two coats of paint on all outside surfaces.—B. F. Kindig.

ENLARGED LIVER.

I have lost two cockerels within the last week. Their combs are red, and they eat about a normal amount of mixed feed. I am feeding wheat once per day, and shelled corn once a day, with dry mash in the hopper all the time, also charcoal, oyster shells, gravel etc. I found on examination that the liver was about four or five times the normal size. The roosters did not show any signs of disease until two or three hours before they died.—L. C. R.

Chickens may have inflammation of the liver because poisonous materials are absorbed from the intestines. Rupture of the liver sometimes occurs when the organ is congested with blood, or very fat. This might occur to male birds after severe fighting.

Liver troubles in fowls cannot be treated as they are discovered too late but they can usually be prevented by keeping the birds exercising in deep litter for their scratch feed, and also feeding plenty of green feed to balance the more concentrated materials in the ration. Poultry are, of course, subject to a certain death rate the same as other animals, and losses such as you describe might occasionally occur even when the hens have the best of management.

LINER ADS PAY.

Having more pullets than we have space for, would like to dispose of a dozen or so at \$1.50 each f. o. b. They are R. I. Reds, nice healthy stock so far as I know, and I think are about ready to lay.—J. S.

I think the best method would be to take a small liner ad in the classified department of the Michigan Farmer. I have received plenty of inquiries for

pullets, but all have been for Barred Rocks, which is the principal breed I am raising. I know there is a fine demand for pure-bred Rhode Island Reds and will give your address to any breeder that inquires for them. The small classified ads bring your stock before many thousands of prospective buyers and I have found them very useful.

HENS POSSIBLY POISONED.

My chickens seem all right one day and eat fine. By the next day they will curl up their toes and are not able to walk, by night they are dead. I have lost six this week. I feed them chick feed and corn, give them warm milk or warm water when it is cold. This is our first year for poultry.—L. E. S.

The symptoms indicate food poisoning, which might come from eating spoiled grain, such as mouldy new corn. Perform a postmortem on hens that die, and note the condition of the digestive tract and the liver. It will improve the condition of the flock if you feed a balanced dry mash, such as the standard mash composed of equal parts of ground corn, ground oats, middlings, bran and beef scrap. If you do not wish to give the mash, a hopper of bran and a little charcoal will help keep down digestive troubles. Also feed green feed every day now that the hens are confined for winter.

If the birds are still on range they may be finding spoiled feed, decayed material, or rat poison which has caused the sudden losses.

HATCHING TURKEYS WITH HENS.

I desire to commence raising turkeys, and thought it would be cheaper to get a setting of eggs and set them with a hen. My neighbors have the Bronze, therefore, in order not to get the flocks mixed, I have decided on the Bourbon Reds. What is the best time of year to set them and the methods to use with a hen, and how to feed the young stock. Do you think the White Leghorn makes as good a mother as the heavy breeds? What breed would be preferable.—J. E. L.

April and May are probably the best times to start the young turkeys, as the natural conditions are then very favorable to young bird life.

You can place the eggs under an old hen of the American or Asiatic breeds but White Leghorns will not be satisfactory. A Plymouth Rock or Brahma hen usually makes a fine mother. The first feed for poults can be bread soaked in milk and squeezed dry, or finely chopped hard-boiled egg mixed with the crumbs from corn bread. After a few days they will be able to use fine chick feed. Young poults thrive the best when they have a range well supplied with insect life and green feed. Turkeys are seed eaters and insect eaters. They do not thrive on sloppy mashes.

A Plymouth Rock hen will cover nine or ten turkey eggs. Be sure the hen is satisfied with her nest before giving her the turkey eggs. Then the management of the hen during the period of incubation is about the same as in hatching chickens except that it takes about twenty-eight days.

WHY HENS EAT FEATHERS.

Will you please tell me what is the reason that chickens eat one another's feathers?—Mrs. A. C.

Nearly all of the complaints about feather eating come in the spring after the hens have spent a long winter in confinement. They most often occur in flocks where the birds have lacked something in the ration which they crave. Idleness due to lack of scratching litter in which to exercise is another cause.

The best remedy is to turn out the flock on range where the birds will separate and become interested in other things. Hang a piece of raw beef in the laying-quarters for the hens to peck at. Provide plenty of straw for scratching litter. Feed a balanced dry mash containing twenty per cent of beef scrap so the birds can satisfy their appetites without filling up on feathers.

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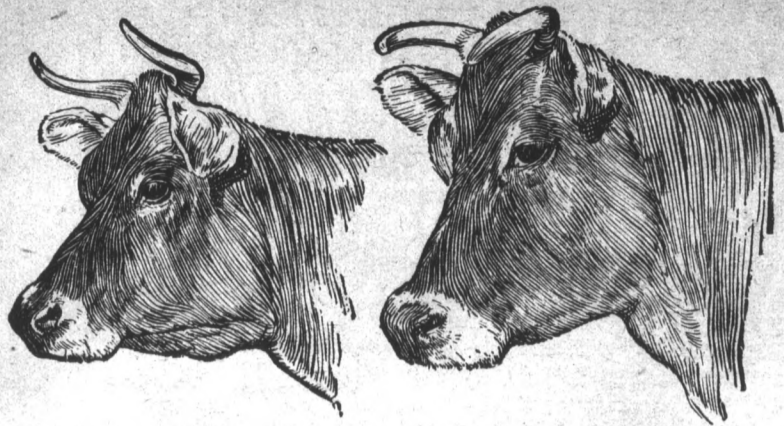
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Additional Poultry Ads. on Page 89.



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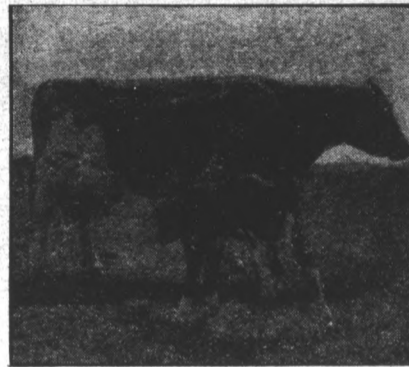


HANDLING YOUNG CALVES.

(Continued from page 47).

pen, stanchioning while feeding, and turning them loose for exercise. I have never been very successful in rearing a number of calves together. They contract bad habits that not only impairs their growth, but gives trouble later in life.

Young calves should be given the best of care. They should not be bunted and jostled around. I find it a good way to provide small pens about four by six feet to keep the calves in for the first few weeks. These pens are



Proper Feeding Has Much to do with the Kind of Calves Raised.

made of light panels and can be very easily put up and taken down. Each pen has a small feed box and rack for feeding.

Too much stress cannot be placed upon the importance of having light, dry, well-ventilated quarters for young calves. Damp, poorly-lighted quarters are productive of many of the troubles attacking young calves, and causes heavy losses. Plenty of bedding, I find, helps to keep the pens dry and comfortable. Frequently cleaning of the pens is necessary, and, in case of bad odor, the use of powdered lime keeps the pen clean and sweet.

For the first few weeks during the winter months, I like to keep the calves in a warm part of the stable. Young calves are tender and sensitive to sudden weather changes. Later, as the calves get older, they will stand considerable cold if the pens are kept clean and dry. Give the young calves plenty of exercise.—Leo C. Reynolds.

deficient in protein, and, by balancing these feeds properly with the right kind of feeds that carry sufficient protein matter, they can be fed to the best advantage. Overfeeding also results in waste for what an animal does not eat it will make it unpalatable for others. Judicious feeding and care of live stock prevents waste of feed.—J. L. Justice.

TUSCOLA HOLSTEINERS MEET.

THIRTY-FIVE breeders of the Black-and-Whites braved the dangers of icy roads to meet recently in the Court House at Caro, Michigan. The meeting was addressed first by John W. Sims, county agricultural agent of Tuscola county. Sims spoke briefly of the work accomplished since the last annual meeting of the Tuscola County Holstein Breeders' Association along dairy lines. He commended the members for cooperation, especially in creditable showing at the Caro Fair and in furnishing calves at reasonable prices for members of the Cass City Calf Club. He urged that as a special project for the coming year the members foster the use of better bulls through ownership of such in small clubs.

The breeders enthusiastically endorsed this bull club plan and agreed to help Sims form several clubs.

Other action by the assembly consisted of the unanimous passage of a resolution deploring the untimely death of Oscar Wallin, of Unionville. Mr. Wallin was president and sales manager of the association. He was always a steady worker for the breed—his death means a real loss.

Willis Campbell, teacher of agriculture in Cass City High School, explained the work of the Cass City Calf Club. This club consists of twelve members—one of whom, Jimmy McTavish, showed a heifer at the State Fair that was adjudged grand champion club female, and the highest Michigan heifer in the open class. Campbell served warning on the breeders that two new clubs would soon be ready in his locality for about sixteen calves.

The breeders appointed V. J. Carpenter, of Cass City, to help Mr. Campbell in calf club work, and Ed Rohlf, of Akron, to assist Superintendent Klein, of the Akron High School, in forming a Holstein Calf Club around that town.

The state secretary, J. G. Hays, of East Lansing, talked to the breeders on matters of interest to Holsteins from national, state and county viewpoints. One matter of great local interest touched upon by Hays had to do with the relationship between sale of cattle and testing for tuberculosis. Hays stated that the great bulk of Holsteins sold, particularly grades, went to eastern buyers to replace the dairy cattle that had reacted to the tuberculosis test. The buyers then insist that the replacement be reasonably free from tuberculosis; that is why they come to Michigan because it is the cleanest of the dairy states. The counties favored by the eastern buyers are those that have cleaned up under the area plan. One county, that is a modified accredited area, sold, according to its county agent, last year 110 carloads of Holsteins. The grades of Tuscola county, because they are superior in type to those of several counties most frequented by eastern buyers, will find a ready sale when the county has gone under state and federal supervision for eradication of tuberculosis.

Another interesting point of Secretary Hays' talk concerned the plan for the annual convention and sale of the Holstein Friesian Association of America to be held June 2-3-4, 1925, in Grand Rapids.

Officers of the Tuscola Association were elected as follows: V. J. Carpenter, Cass City, president; Wm. Turner, Akron, vice-president; George Foster, Fostoria, secretary-treasurer; sales manager, Thomas Kimmel, of Caro; board of directors are Charles Schnell, Vassar; E. A. Rohlf, Akron; Elmer Chapman, Deford; Thomas Kimmel, Caro, and George Walls, of Kingston.

Light receipts of cheese, the steady reduction in the storage stocks and the limited supply of strictly fine cheese are keeping cheese prices firm. Demand is rather slow but is expected to improve after the turn of the year. Cold weather is interfering with production, but it is believed that the seasonal low point has been reached.

The dairyman should ever keep in mind these facts: That the ration with a wide nutritive ratio has a tendency to put on fat, while one with a narrow nutritive ratio tends to promote milk production.

SOY-BEAN MEAL MAKES GOOD DAIRY FEED.

Soy-bean meal proved to be fully as valuable as oilmeal as a feed for dairy cattle in an experiment conducted recently at South Dakota State College. Feeding soy-bean meal in moderate quantities did not have a damaging effect on the butter made from the milk, although if fed in excess it has a tendency to produce a soft, salty butter.

SAVE THE FEED.

An economy that may well be practiced is that of grinding feed, especially for pigs, poultry and dairy cows. It has not been found generally profitable to grind feed for horses, fattening hogs or grain-fed steers where hogs were following them except when the steers were being finished for the market.

Ground feed for the dairy cow has proven about sixteen per cent more efficient than whole grain. Sows given ground feed after farrowing will utilize it to better advantage and the young pigs will learn to eat grain at an early age.

Have good troughs and boxes to give the feed in so that it will not be pushed out and trampled under foot or the stock cannot get their feet into it. Keeping the troughs clean makes the feed more palatable. Oftentimes, mixing feeds makes them more palatable. Some grain is made unpalatable on farms by pigeons and poultry getting into the bins and fouling it.

The feeding of a balanced ration to the stock helps to make better use of all feeds. Most farm-grown feeds are

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Scrubbing Out Herbs

Cloverland's Dairymen Have a Successful Year

By L. A. Chase

A YEAR ago the Upper Peninsula Development Bureau and the Extension Department of the Michigan Agricultural College inaugurated a campaign to rid the peninsula of as large a number of scrub bulls and scrub dairy cows as possible.

The work was assisted in each county by a county committee consisting of farmers, bankers and other business men, and others interested in the agricultural progress of the district. Prizes aggregating \$1,000 were to be given to the counties through its county committee which, at the close of the year, showed the largest number of scrub bulls eliminated that year.

The work has been promoted actively and the returns are now in. An Upper Peninsula committee consisting of E. G. Amos, assistant state leader of county agricultural agents; J. G. Wells, M. A. C. Dairy Specialist; G. W. Putnam, director of the Upper Peninsula Experiment Station of the Agricultural College; J. A. Jeffery, land commissioner of the Duluth, South Shore & Atlantic Railroad; Prof. O. E. Reed, of M. A. C., and G. E. Bishop, manager of the Upper Peninsula Development Bureau, had general supervision of the campaign, and has determined the relative standings of the counties participating in the effort.

The returns show that Ontonagon county is winner, having eliminated ninety-two scrub sires during the year. The county will, therefore, be entitled to a reward of \$500.

In regard to some other counties of the peninsula there are special circumstances affecting the result of the contest. Gogebic county already had a large percentage of its dairy cattle pure-breds and hence had little opportunity for expansion. Luce county, while not showing a large aggregate of pure-breds has, in fact, only one dairy sire in the county that is a scrub, with only five or six beef cattle sires in the same class. That is a remarkable showing for a county which is not as well developed as some others of the district. It is said that the presence of a very fine herd of pure-breds on the farm of the Michigan State Hospital at Newberry has assisted Luce farmers very much in building up their dairy herds.

The prizes to the counties participating in the dairy sire campaign were distributed during the dairy meeting held at Escanaba, January 9, and are designed to be used by the local county committees to continue the promotion of the dairy movement in the winning counties. In the campaign just closed, Marquette county made second place, having got rid of seventy-six scrub bulls. Chippewa county won third place, replacing seventy scrubs, while Dickinson placed fourth with sixty-nine scrub bulls eliminated.

A corollary of the elimination of scrubs is the addition of pure-breds to the herds of the county. Ontonagon placed thirty pure-bred sires; Marquette added sixteen to its pure-bred sires, while Dickinson added thirty-six. In Alger county ten scrubs were displaced; in Delta, 24; in Gogebic, 18; in Houghton, 6; in Iron, 15; in Luce, 20; in Menominee, 33; in Schoolcraft, 5. Gogebic county has the largest percentage of pure-bred dairy sires and cows in its herds of any county in the peninsula. At the county fair last fall, the county had 276 dairy cattle on exhibition.

During the year 1925 this campaign will be continued with a second offering of prizes amounting to \$1,000 by the Upper Peninsula Development Bureau. It is probable, however, that a somewhat different basis for the rewards will be worked out to take account of the pure-breds added, as well

as the scrubs eliminated. This is real work and means much to the agricultural interests of the peninsula.

Not only has this work gone forward during the past season, but the organization of cow testing associations has made a notable advance. There are now eleven of these organizations in the peninsula, and tabulations made in the office of the M. A. C. Extension Division, Marquette, indicate that while Wisconsin has 3.5 per cent of its dairy cattle in cow testing associations the Upper Peninsula of Michigan has six per cent in testing associations. During the past year about 450 pure-bred cattle of all kinds—bulls, cows and calves—have been added to the herds of the peninsula.

The anti-tuberculosis campaign has been actively promoted in several counties with excellent results. Gogebic county has had its third time over, and while numbers of reactors have been discovered, these are found almost exclusively not on the farms of that county, but around the mining locations, and there is evidence that many of these have been brought in surreptitiously from the neighboring state of Wisconsin in violation of the Michigan quarantine.

LEADS IN COW TESTING.

MICHIGAN will begin 1925 with a larger percentage of its cows in test than any other state. Three and one-half per cent in this state are under test, while the average for the country is only one per cent.

MICHIGAN LEADS IN COW TESTING WORK.

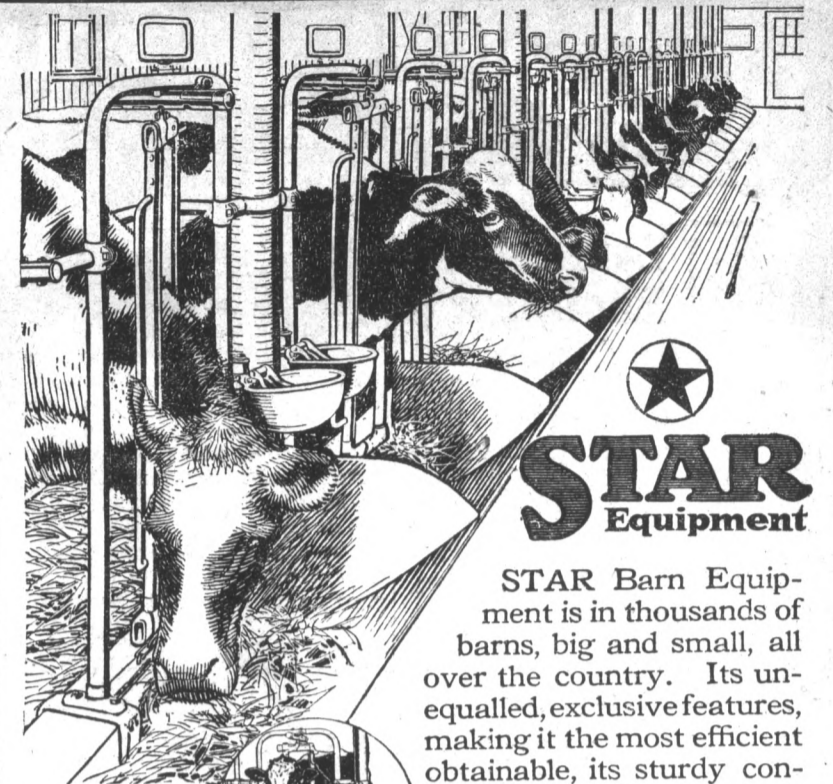
THE Livingston County Cow Testing Association, located at Howell, R. G. Powell, tester, had a successful annual meeting and is re-organized for the fourth year's work. This association has in it some of the most successful dairymen in Livingston county. These men are becoming very much enthused over cow testing association work.

Mr. Powell, the cow tester, mentioned that the results obtained during 1924 were better than those of any previous year. One of the outstanding things mentioned at the meeting was that eighty-five to ninety per cent of the past year's members were continuing in the association for the coming year's work. Mr. Gehringer, secretary of the association, gave his annual report and County Agent C. L. Bolander mentioned about the good feeling existing in the association.

A. C. Baltzer, Dairy Extension Specialist at M. A. C., mentioned some facts regarding Michigan's standing as a cow testing association state. The point was made that Michigan leads in the per cent of cows under cow testing association test. 3.79 per cent of all Michigan dairy cows are at present in cow testing associations. Genesee county, Michigan, is the foremost cow testing association county in the United States, having 14.3 per cent of its cows in the testing work. Reference was made to the record of performance work recently instituted by the Dairy Department at M. A. C. More than 700 entries have been received and many Livingston County Cow Testing Association members are planning to send in entries for such cows that qualify.

TO HAUL SURPLUS MILK.

IN the Grand Rapids district the milk producers are permitted to truck their surplus milk to Sparta and other nearby places, according to an agreement made at a recent meeting of the Grand Rapids Milk Producers' Association.



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15 to 30 points copper in the steel from which Square Deal is made causes it to resist rust more than twice as long as steel without copper. There is about \$5.00 per ton more actual material cost in copper-bearing "Galvannealed" fence, yet the price to you is not one cent more than the ordinary galvanized kind. Let us send you absolute proof of all claims made for this extra long life fence.

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Keystone Steel & Wire Co.
 4950 Industrial St., Peoria, Ill.

No Extra Price



GROWING THE WOOL CROP.

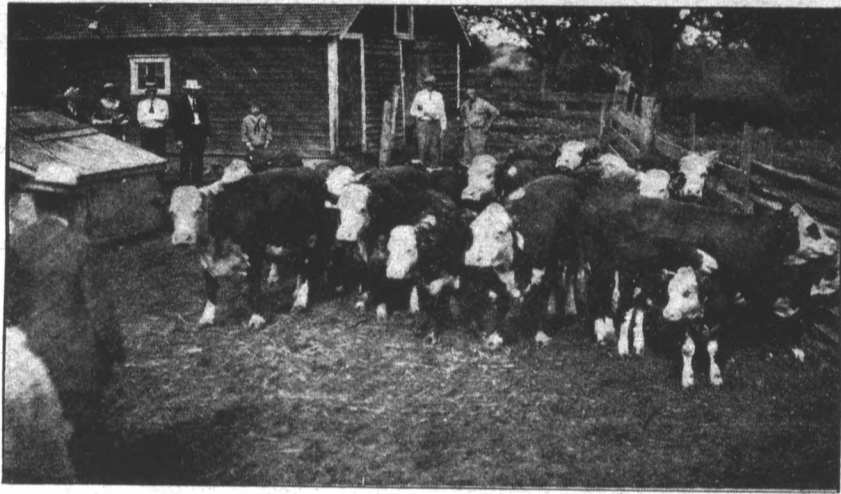
THE wool crop should be well grown. It requires as much skill to grow a good fleece of wool as to produce mutton, pork or beef. Wool is grown only by good feeding that properly nourishes the sheep's body. Good quality of wool is not alone the product of breeding, but the result of both breeding and feeding.

At Forest Grove Farm I keep sheep for both wool and mutton. I think the two go hand in hand. While the greater profit is derived from mutton, the wool crop is second and when properly grown adds a splendid profit to sheep

sows very sparingly during the winter season.

A good ration for brood sows is all the clover or alfalfa hay they will eat and from two to three pounds of corn and plenty of skim-milk. I like to feed my brood sows plenty of skim-milk along with the grain and roughage ration, as it assists digestion and helps to balance up the ration. I know of no other way of disposing of the surplus skim-milk from the dairy to greater profit than feeding it to pregnant sows during the winter when succulent feeds are difficult to obtain.

In feeding my brood sows I want them to get as much of their suste-



A Corner of the Barnyard on the Reed Shultz Farm, Calhoun County. This Herd Started with Two Heifers and a Half Interest in a Pure-bred Bull.

raising on the farm. I think it pays to keep close watch of the wool crop, as it is a reliable index to the health and flesh conditions of the flock.

Sheep that are well nourished, all things considered, generally produce a good fleece of wool of good length of fiber and of good quality. Inferior quality of wool, however, may be produced from healthy sheep due largely to improper nourishment. Nature has provided that the sheep shall first supply its body needs, and second, grow its wool.

Other conditions affect the quality of the wool. Disease impairs it. Exposure to sudden climatic changes of weather, or the lack of proper protection against storms, weakens the fiber of an otherwise good quality of wool.

Sheep are easily suited in many ways, but, to grow a profitable wool crop, they must be well nourished, kept in good physical condition, and provided with adequate shelter during the winter and spring months. Sheep to produce a good quality of wool must never be allowed to become run down in flesh.—Leo C. Reynolds.

WINTERING BROOD SOWS.

I KEEP from three to four brood sows. During the winter I allow them to run together in a large pen with adequate shelter to protect them from the cold weather. I do not believe in housing brood sows too closely, but rather, making them take plenty of exercise. I think it is a mistake to house brood sows in too warm quarters without imposing upon them the necessity of taking exercise in the open air.

It has been my experience in wintering brood sows that the most satisfactory results are obtained from feeding as much roughage as possible. Brood sows, bred to farrow in the spring, should be kept in good flesh, but not allowed to become too fleshy. The feeding of too much grain, especially corn, is very apt to cause the sows to take on flesh rapidly; and produce a sluggish condition of the system. Fattening grains should be fed to brood

sows during the winter when succulent feeds are difficult to obtain. In feeding my brood sows I want them to get as much of their suste-

nance from roughage as possible just as they do during the summer from pasture. If fed liberally during the winter with the right sort of feeds the sows will produce a pig crop upon which profits can be made.—R. C.

NEW RECORD RECEIPTS AT THE CHICAGO STOCK YARDS.

DURING 1924 the Chicago Union Stock Yards added to its supremacy as the leading live stock market of the world by establishing several new records for numbers of receipts. The total number of animals of all species received during the twelve months surpassed last year's high mark of 18,501,883 and set a new record of 18,653,539 worth nearly twenty-five million dollars more than those marketed in 1923.

More calves were received than ever before, 794,350 arriving at Chicago during the year, against the previous record of 771,489 made in 1922. The largest number of carloads of all species ever unloaded in a single month came to the Chicago market during December, a total of 34,440, as compared with 33,430 the former high mark set in January, 1919.

The run of hogs in December smashed all existing records. The week ending December 6, witnesses a total of 384,295 received, surpassing the old mark of 334,279 established during the week ending January 8, 1916. On December 15 the stupendous run of 122,749 hogs arrived, shattering by more than 25,000 the record of 96,964 that had stood since November 29, 1918. By the end of December the total hog receipts had mounted to a new monthly mark of 1,436,029 against the previous high figure of 1,273,587 made in January, also of this year, which in turn excelled the total of 1,227,508 established in January, 1916.

If all men should bring their misfortunes together in one place, most would be glad to take his home again, rather than to take a portion out of the common stock.—Solon.



THIS winter, keep your horses fit and sound with Gombault's Caustic Balsam. Known for 41 years as a reliable and effective veterinary remedy for Spavin, Capped Hock, Curb, Splint, Grease, Thoroughpin, Quittor, Wind Galls, Poll Evil, Laryngitis, Fistula, Sprains, Barb Wire Cuts, Calk Wounds. It won't cause scabs or discolor hair. Apply it yourself—directions with bottle. \$1.50 per bottle at druggists, or direct upon receipt of price. The Lawrence-Williams Co., Cleveland, Ohio. **GOOD FOR HUMANS, TOO**

GOMBAULT'S Caustic BALSAM

January Discount Sale

Our printed list of bulls for sale by MICHIGAN STATE HERDS includes a choice selection of excellent lines of breeding with wonderful record backing.

20% Discount from the regular quoted price for orders taken during January.

The list includes sons of:

Echo Sylvia King Model	266177
Sir Clothilde Concordia	113343
College Butter Boy	293505
Grahamholm Colantha Lad	297376
Traversa Echo Sylvia Kastra	343285

from good record dams.

SEND FOR OUR LIST.
 Bureau of Animal Industry
 Dept. C
 Lansing, Michigan

Reduction Sale PURE BRED HOLSTEIN CATTLE
 January 28, 1925

I have more cattle than I can possibly keep and am going to sell at auction a bunch of Good Young cows and heifers that are fresh or will soon freshen. More particulars next week.

Shorman Farm Quality Holsteins
 Fowlerville, Mich.

FOR SALE
 Five Pure-bred Holstein Heifers, \$600. Due to freshen in Jan. and Feb. Two from Adv. Registry dams. Four from C. T. A. tested dams. Excellent breeding. T. B. tested. Sidney Troiz, Grass Lake, Michigan.

Holstein Friesian Cows and Bulls
 for sale. Cows mostly high record A. R. O. 3 with 7-day records above 30 lbs. butter. Bulls from high-record A. R. O. dams. Sire's two nearest dams average 34 lbs. butter. I. A. Kidney, Brant, Mich.

Jerseys For Sale Bulls ready for service, also a few females. All from R. of M. dams. Accredited herd. Smith & Parker, R. D. No. 4, Howell, Mich.

15 Cows, 4 bulls from R. of M. Cows. Chance to select from herd of 70. Some fresh, others bred for fall freshening. Colon C. Lillis, Coopersville, Mich.

For Sale Registered Milking Shorthorn bull calves from our great "Count Eickford," out of record dams. Also few heifers. Prices right. I. W. Sullivan, Augusta, Mich.

FAIRFIELD Shorthorns—now offering a few choice young bulls ready for service. Priced right. H. B. Peters & Son, Elsie, Mich.

Shorthorns Two Bulls ready for Service. BARR & CURTISS, Bay City, Mich.

SHORTHORN BULLS reds and roans. W. E. Morrish, R. 5, Flint, Mich.

One Villager Shorthorn Bull one year old. Sired by Villager Elmdale by Villager Royal. Price \$100. A. & F. Parmenter, Durand, Mich.

Shorthorns Best of quality and breeding. Bulls, cows and heifers for sale. BIDWELL STOCK FARM, Box D, Tecumseh, Mich.

Registered Red Polled Cattle. For Sale, some Young Cows. Prices right. Roytan Stock Farm, Will Cottle, R. 1, West Branch, Mich.

Red Polled Cattle bulls, cows and heifers. Large Yorkshire Swine. DON P. CARR, Homer, Mich.

Parshall's Herefords Two Young Husky Repeater Bulls for Sale. J. B. PARSHALL, R. 1, Oak Grove, Mich.

STEERS FOR SALE

82 Shorthorns, weight 565 lbs.; 110 Herefords, weight 640 lbs.; 2 loads heavy feeders.
A. MACY, Monmouth, Ill.

HOGS

Large Type Berkshires Choice boars. Gilts bred or open. Reliable stock priced reasonable. W. H. EVERY, Manchester, Mich.

Service Boars and Bred Sows

A few sons and daughters of Super Col. Michigan headquarters for Colonel bred Durocs.
LAKEFIELD FARM, Clarkston, Mich.

DUROC JERSEY SWINE for sale. Type and quality our aim. Write your wants. W. E. BARTLEY, Alma, Mich.

O.I.C.'s last spring pigs, either sex, not akin, from big strong stock, recorded free. OTTO B. SCHULZE & SONS, Nashville, Mich.

Anyone wanting to buy Choice O. I. C. Service boars or bred gilts place your order before Jan. 20. J. R. VanEtten, Cliford, Mich.

KITSELMAN FENCE

GET IT FROM THE FACTORY DIRECT "Saved \$22.50 on 150 Rods," says William J. Heft, R. 2, Wyandotte, Mich.

"Saved \$25 on 125 rods," declares Charles Renville, Pence, Indiana.

You, too, can save money on Fence, Gates, Posts and Barbed Wire by buying direct from our great mills at lowest factory prices. Prompt shipments. Every article guaranteed satisfactory.

New Low Prices—Greater Savings
 Kitzelman Super Galvanized Fence and Kitzelman Rail Steel Posts cost less; last longer; save time, labor and expense in building. 100 styles and heights of Fence; Posts for every purpose.

Direct From Factory to Farm We Pay the Freight
 Write now—today—for our big FREE Catalog filled with real money-saving values in Farm, Poultry and Lawn Fence, Gates, Steel Posts and Barbed Wire.
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Bargain Book FREE

BREEDERS' DIRECTORY

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

Registered Guernseys
 LONE PINE RANGER our new Herd SIRE has a Dam with an A. R. O. record 936 fat. When in the market for better Guernseys, write GILMORE BROS., Camden, Mich.; J. W. WILLIAMS, No. Adams, Mich.

Registered Aberdeen-Angus, six bulls from eight to sixteen months, large and growthy. Price reasonable. F. J. WILBER, Clio, Mich.

FOR SALE Guernsey Bull, May Ross breeding, 4 years old, A. R. Dam, 531 lbs. fat. Frank E. Robson, Room 303 M. C. R. R. Depot Building, Detroit, Michigan.

Reg. Guernseys For Sale Springing cows, bred heifers, Bull calves. W. W. BURDICK, Williamston, Mich.

For Sale Reg. Guernsey Cows, Bulls and Bull Calves. A. R. Record May Rose Breeding. JOHN EBELS, R. 2, Holland, Mich.

\$900 BUYS
 six Two-year-old Heifers; Three soon fresh; other Three milking; all from our 33-lb. Bull; we can take a good note as part payment.
E. A. ROHLFS, Akron, Mich.

RAISING HORSES ON THE FARM.

WHILE tractor power has won wide popularity among farmers, the horse still holds a peculiar and important relation to agriculture and the time probably will never come when horse power will become eliminated from land cultivation. The tractor and horse power both have a place on the farm and both should be developed to their highest efficiency.

At Forest Grove Farm for years past I have been raising from one to two colts each year. I can not conceive how the general farmer is going to get along without good horses, even though he finds the tractor can be utilized to a profitable advantage. There is a great deal of work on the farm that can be done with horse power much better than with tractor power.

I like to drive good horses. I can take much pride and comfort in driving a good, well matched and trained team. By raising a colt or two each year I can keep up my horse power on the farm at a low cost, besides getting a great deal of enjoyment out of raising and handling horses.

I do not find that raising colts conflicts in the least with my farm work. I breed my mares to foal during the month of June just following the heavy spring work. I then turn the mares to pasture for a few weeks then put them back into the harness. During the spring while on heavy work I turn the mares to pasture for a little while each day.

At present I have two fine teams of growing colts. They seemingly have cost me very little. I shall have plenty of cheap horse power to replenish my teams as they wear out. I believe more farmers should be raising a colt or two each year. Good horses weighing around 1,500 pounds are in good demand at fair prices, and will soon be on a still higher basis.—Leo C. Reynolds.

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.

Loss of Appetite.—I have a cow about twelve years old that does not eat much hay or corn fodder, but she is fond of corn cobs left by the hogs in the yard. This cow is failing in milk yield and growing thin. I have good hay and fodder but she refuses to eat it. C. D. T., St. Johns, Mich.—Give her one dram of fluid extract of nuxvomica, one dram of fluid extract of cinchona, two drams of Fowler's solution at a dose in one pint of water as a drench, or give the medicine in drinking water three times a day. Feed her plenty of roots and the kind of food she craves.

Shy Breeder.—I have a young cow which dropped her first calf in October, 1923; veterinary took dead calf from her. Commenced breeding her in January and kept it up every three weeks until August, but she failed to get with calf. T. C. S., Buchanan, Mich.—Give her one ounce doses of bicarbonate of soda in feed or in drinking water three times a day. If she has any vaginal discharge, flush vagina daily, using one part lysol in one hundred parts tepid water. Use clean fountain syringe.

Constipation.—I have a bunch of lambs that I have had shut up in the barn for two weeks. Have been feeding them clover hay and oats, but they do not seem to care for it, they have access to salt and water. E. F. K., Byron, Mich.—If you will exercise them some twice a day, also feed plenty of roots, and if necessary give each one an enema of soap and water. Add some bran to their ration.

Warts on Teats.—I have a two-year-old heifer which freshened a few weeks ago. She has numerous warts on teats of various sizes, has a large wart on one teat, and when milked it pains her. O. P., Ann Arbor, Mich.—Warts which are slim and lengthy should be clipped or cut off, then apply boric acid to sores. After each milking, if you will freely apply olive oil the warts will gradually reduce in size and cease to grow. Give her two drams

of Fowler's Solution in feed or in the drinking water twice a day.

Paralysis of Throat.—I have been a reader of your paper for many years, and have never bothered you until now. About ten days ago my cow was taken sick, ate her feed all right at night, but refused to eat in the morning. Her tongue hangs out of mouth and she does not seem to suffer pain. Had three different veterinarians examine her, one used a probang, as he thought her choked; he also found one tooth missing. She is twelve years old. L. M., Plaineville, Mich.—The writer is unable to make a diagnosis in this case.

Weak Calf.—My cow was bred on March 14, had calf November 30, but the calf is weak, cow gives very little milk. She cleaned all right; will she again breed? C. H., Freeland, Mich.—Doubtless the calf came two weeks early, therefore it is not unusual for such a calf to be weak; besides, the cow is likely to give less milk than if she carried her calf full gestation period. Mix equal parts of powdered gentian, ginger, bicarbonate of soda, common salt together. Give her two table-spoonfuls at a dose in ground feed two or three times a day. She should be well fed and kept in warm stable.

Strong Milk.—We have a cow due to freshen in about four and one-half months. Two weeks ago she had an attack of indigestion, with loss of appetite, but she has seemingly recovered from it. She eats well and has about the usual flow of milk. When milk is first drawn it seems all right, but after standing for a few hours it has a very offensive odor and a bad taste. W. F. A., Owosso, Mich.—Clean hind quarters of cow, also clean udder before milking. It is also important for the milker to have clean hands and use nothing but clean milking utensils. Your cow stable should be kept very clean and be supplied with fresh air.

Contagious Abortion.—Can contagious abortion of cows be carried from one barn to another on a person? Would a bull be likely to become infected if bred to a single cow which was diseased? H. C., Everett, Mich.—It is possible, but not highly probable that contagious abortion is spread in the two ways you suspect.

Teat Stricture.—Will you please tell me how to enlarge the teat canal through teat of my cow? The stream is small and milking difficult and tedious. H. K., Fremont, Mich.—Have your veterinarian dilate the teat canal. Perhaps, if the external opening was enlarged by cutting, this would make milking easier.

Shy Breeder.—I have a heifer eighteen months old that has been served by three different bulls and she fails to get with calf. This heifer seems to be healthy. A. C. B., Springport, Mich.—She is perhaps barren and had better be sold to the butcher. Your veterinarian might be able to tell you why she fails to get with calf, the writer could tell if he had made a physical examination of her.

CROP PRODUCTION AND SOIL MANAGEMENT.

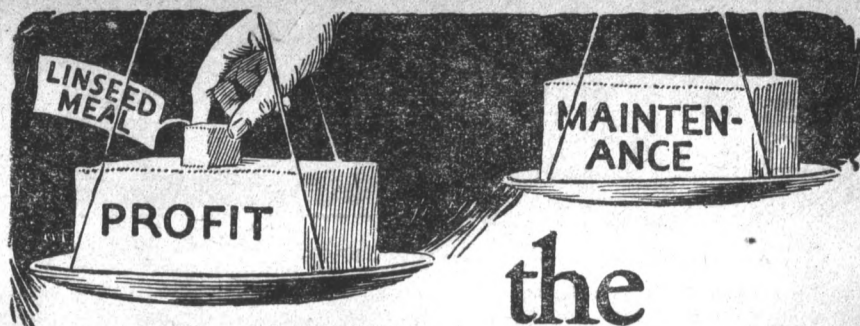
THIS 500-page well-illustrated volume by Prof. Joseph F. Cox, of the Michigan Agricultural College, has just come from the press of the publishers, John Wiley & Sons, Inc., New York.

After covering the major requirements of profitable crop production, Professor Cox goes into some detail on the necessity of selecting those crops adapted to the conditions obtaining in any farming locality. The selection and testing of seed on the farm is urged to the end that a farmer may discover and utilize those varieties which give the highest yields upon his particular land. The latest available material on proper soil preparation and on the planning of crop rotations, looking always toward the maintenance of soil fertility, is here given in a clear, concise manner.

Information on the time to plant and the quantity of seed to use, as well as on the best methods of putting the seed in the soil, makes up an important chapter in the volume. The control of weeds, and the protection of crops against pests, not only by the ordinary means of fighting insects and diseases, but also through the development of resistant varieties of plants. The time of harvest, and advice on storing and siloing and marketing complete part one of this practical book.

Part two is devoted to special crops. In it are included, corn, wheat, oats, rye, barley, buckwheat, flax, sorghum, potatoes, sugar beets, cabbage, field beans, soy-beans, clovers, including sweet clover, alfalfa, grasses, and emergency crops.

We particularly recommend this book to Michigan farmers who are looking for a complete volume covering the matter of crop production and soil management, since Professor Cox has in no place neglected Michigan conditions and requirements. The price of the book is \$2.75, net.



the **Tiny Weight** that tips the scales

EVEN the best farm animals need a large part of all feed they eat to maintain their own bodies. From the feed thus used up the farmer gets nothing but the "society" of the animals and their manure. The profits come only from the amount of feed used in addition to maintenance needs.

Linseed Oil Meal supplies the excess protein requirements at maximum profit. And in addition, it is a splendid conditioner. It's "the tiny weight that tips the scales."

Adding Linseed Oil Meal to each ration costs little, and it brings such good gains that you simply cannot afford to miss this source of extra profit. Any number of experiments and practical experiences will prove it. Consider these brief summaries:

- Proved worth \$85 a ton when added to a corn, tankage and chopped alfalfa ration for pigs.—Wisconsin.
- Showed a profit of \$22.65 in one month when added to ration for 8 cows.—Iowa.
- Showed a profit of \$12.79 a ton when added to a ration for fattening baby beeves.—Minnesota.
- Showed a profit of \$7 a ton in fattening lambs.—Nebraska.

Perhaps you have been feeding only a very small amount of Linseed Oil Meal as a conditioner. You should be feeding more for its protein value. At any rate "get straight" on Linseed Oil Meal—See just where it will fit in with the feeds you now have and make them far more profitable. Send for our new book that is being read with interest and profit by thousands of farmers—

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Asst. Director Wisconsin Agricultural Experiment Station and Prof. of Animal Husbandry, University of Wisconsin. Author, with W. A. Henry, of the Recognized American Authority on Stock Feeding—"Feeds and Feeding."

Your copy is ready for you and it will cost you nothing. By all means send for it, for it may add scores or hundreds of dollars to the season's feeding profits.

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Balance the Ration With **Linseed OIL MEAL** Costs Little, Earns Much



DISPOSAL SALE

WILL SELL AT PUBLIC AUCTION
January 20, 1925 at 12 o'clock

the following dairy herd at farm located 2 miles west on Midland Road and 1 1/2 miles north of Bay City, or 2 miles south of Kawkawlin.
19 head of Holstein-Friesian Cattle.
10 2-yr.-old heifer calves by side.
3 2-yr.-old heifers due soon.
1 6-yr.-old cow, calf by side.
2 1-yr.-old heifers.
1 bull 2 yrs. old.
1 bull 4 months old.
1 heifer 2 months old.

WEISMILLER BROS.
R 3, Bay City, Mich.

Fred. H. Cotton Auctioneer John C. Harris Clerk

HOGS

O. I. C.'s. Registered and immuned. Breeding stock of all ages for sale at Farmers' prices. Come and see my herd at Morrish Crossing on D. U. R. Atherton Road, R. F. D. 6, Flint, Mich. **EARLE R. MORRISH.**

O. I. C.'s Fall pigs. Sired by "Giant Boy" and "Jumbo's Bell Boy." Brown Swiss Bulls. Milo H. Peterson, R. 2, Ionia, Mich.

Chester Whites Gilts bred to son of Lengthy Prince, Iowa grand champion. Also fall and summer pigs. C. O. D. ALBERT DORR, Clinton, Mich.

Francisco Farm Poland Chinas

Now offering some wonderful bred gilts, granddaughters of National Grand Champion—at prices you can pay. P. P. POPE, Mt. Pleasant, Mich.

Hampshires Spring Boars for sale. Place your order for Gilts Bred to order. 11th year. John W. Snyder, R. 4, St. Johns, Mich.

Big Type Poland Chinas Choice gilts bred for Mar. & April farrow, for sale. WESLEY HILE, Ionia, Mich.

Fall Pigs either sex, by the great Boar, The Wolverine. Priced reasonable. Best of dams. W. E. Livingston, Parma, Mich.

For Sale Large Type Poland Chinas either sex. Also Brown Swiss Bulls. A. A. FELDKAMP, Manchester, Mich.

Additional Stock Ads. on Page 69



THE LATEST MARKET REPORTS



GRAIN QUOTATIONS

Tuesday, January 13.

Wheat.

Detroit.—No. 1 red at \$2.00; No. 2 red \$1.99; No. 3 red \$1.96; No. 2 white \$2.00; No. 2 mixed \$1.99.

Chicago.—May \$1.85% @ 1.86%; July \$1.56% @ 1.57; September \$1.46%.

Toledo.—Cash \$2@2.01.

Corn.

Detroit.—No. 2 yellow at \$1.32; No. 3 yellow \$1.29.

Chicago.—May \$1.30% @ 1.30%; July \$1.31% @ 1.31%.

Oats.

Detroit.—New, No. 2 white 63c; No. 3, 62c.

Chicago.—May 62% @ 62%; July 62% @ 62%; September 59% @ 59%.

Rye.

Detroit.—Cash No. 2, \$1.51.

Chicago.—May \$1.10% @ 1.10%; July \$1.40; September \$1.25%.

Toledo.—\$1.50.

Barley.

Detroit.—Barley, malting at \$1.02; feeding 96c.

Buckwheat.

Detroit.—Milling grade \$2.27 @ 2.30.

Beans.

Detroit.—Immediate and prompt shipment \$6.05 @ 6.25 per cwt.

Chicago.—Navy, choice at \$6.50; kidneys \$9.50.

New York.—Choice pea \$6.75; red kidneys \$9.75.

Seeds.

Detroit.—Prime red clover cash at \$19.80; alsike \$13.25; timothy \$3.35.

Hay.

Detroit.—No. 1 timothy at \$17.50 @ 18.50; standard and light mixed \$16.50 @ 17.50; No. 2 timothy \$15.50 @ 16.50; No. 1 clover and No. 1 clover mixed \$15 @ 16; wheat and oat straw \$11 @ 11.50; rye straw \$12.50 @ 13.

Feeds.

Detroit.—Bran at \$37 @ 38; standard middlings at \$37; fine do \$43; cracked corn \$54; coarse cornmeal \$50; chop \$43 per ton in 100-lb. sacks.

Apples.

Chicago prices on apples: Northern Spies \$8 @ 10 bbl; Baldwins \$6 @ 6.50; Jonathans \$9 @ 9.50 bbl; Kings at \$6 @ 6.50; Greenings \$7.50 bbl; Wageners \$6 bbl; Snows \$4.50 @ 5; Winesaps at \$7.50 @ 8 bbl; Grimes \$6; Starks at \$5 @ 5.50.

WHEAT

Wheat prices had a good rally last week as the decline of about 10 cents from the extreme high point ran into some export business and milling demand has improved distinctly since the first of the year. In the last few days, the market has moved sidewise, as foreign prices did not follow the rise here very closely. Clearances of wheat from Australia, India and Argentina in the last week were about 6,500,000, which is much larger than a year previous, showing that those countries are rather willing sellers at the present level of prices. The greatest change has come about in the milling demand. Stocks of flour are said to be rather light, in spite of the fact that mills have been grinding more wheat than a year ago. The status of the new crop is rather uncertain, as much of it is under a pack of ice and snow. In general, the condition is much below last year, although that fact is not receiving much emphasis right now.

CORN

While corn has shown considerable strength in the last week in line with wheat, the market supply and demand situation is not very encouraging. In spite of the small crop, primary receipts are running considerably heavier than a year ago, while shipments are much lighter, so that corn is steadily accumulating at terminals. During December, old corn, for which the demand was fairly good, made up a large share of the arrivals. At present, receipts of low-grade new corn are heavy and much of it must go to the elevators for conditioning. With space largely filled with wheat and oats. The elevators have not been particularly keen buyers, and discounts on these low grades are extremely large. Country offerings are said to be quite small so that the movement to primary markets may shrivel up soon.

OATS

The decline of about seven cents from the high point in the oats market seems to have improved the demand for this grain. Both the dairy sections and the south seem to be buying more freely and a little export business has been reported. Receipts are ample and, with the large visible sup-

ply, prices have not staged much of a recovery, but it is possible that they will hold above the recent low spot.

SEEDS

Seed prices are about the same as a week ago, but a firm tone is apparent. Some buyers are inclined to hold back because of high prices for red clover seed, but the supply is small, with only limited offers from producers. From July 1 to December 31, only 509,000 pounds of red clover were imported, compared with 4,736,000 pounds in the same period last year. Alsike is selling at an extreme discount below red clover and demand for it is improving. The amount of high quality alfalfa seed moving out of first hands is small. Timothy seed prices are much below their usual parity with legume seeds, as the demand is slow. High prices for grains will probably have some bearing on the price consumers of grass seeds will be willing to pay during the sowing season.

RYE

Rye importing countries have allowed their stocks to run extremely low and were active buyers of United States rye during the week. Norway, Denmark, Finland and Germany all were reported as buyers. Clearances have not increased much as yet, however, and the accumulation at terminals is at the high point of the season. Most of the distress rye at the atlantic seaboard has been disposed of and remaining holdings are in rather strong hands. In some cases, owners of stocks of rye in position for export have stated that their holdings are not for sale at the present time.

FEEDS

Prices on most by-product feeds are steady in line with the strength in coarse grains. Consuming demand is rather slow, with buyers reluctant to pay the prices asked. Cottonseed meal is easy, although stocks at mills are slightly smaller than a year ago, in spite of the increase of 30 per cent in the cotton crop.

HAY

Activity in the hay market increased after the first of the year as colder weather stimulated the demand, and many buyers had delayed purchases until after January 1. Receipts are light at most markets. No big change has occurred, however, and there are signs of quieting down again. Reports

upon country loadings indicate continued light receipts. Demand for alfalfa hay has improved and prices are about 25 per cent higher than at the low point during the fall.

BEANS

The statistical position of the bean market is generally strong, with prices occupying a better position than a week ago. Deliveries were not as heavy in December as usual, which leads dealers to believe that farmers are taking a somewhat bullish attitude toward the market. The cold weather has stimulated consumption in many districts.

POULTRY AND EGGS

Egg prices have gained back some of their recent losses. Supplies are light for this season and the weather conditions in large producing areas give no expectation of any material increase immediately. Consumption of eggs generally is good and prices for fresh firsts may hold above the 50 cent level at Chicago a while longer. Prices on April storage packed firsts opened at 30 1/2 cents which is about six cents higher than a year ago, another sign of the optimism as to future prices in the egg market.

Live poultry receipts are still materially curtailed in eastern markets where abnormally high prices prevail. Middlewestern markets are more liberally supplied as the embargo does not affect shipments within the states covered. There is no reason for alarm as to the possibility of controlling the disease which necessitated the embargo, according to recent word from the Bureau of Animal Industry.

Chicago.—Eggs, miscellaneous 51 @ 52c; dirties 39 @ 40c; checks 37 @ 38c; fresh firsts 53 @ 54c; ordinary firsts 45 @ 50c. Live poultry, hens 22c; springers 23c; roosters 15c; ducks 27c; geese 20c; turkeys 23c.

Detroit.—Eggs, fresh candled and graded 52 @ 54c; storage 44 @ 45c. Live poultry, heavy springers 27c; light do. 20c; heavy hens 27c; light hens 18c; roosters 15c; geese 15 @ 18c; ducks 26 @ 28c; turkeys 32 @ 33c.

BUTTER

An increase in receipts, added to the conservative trading policy dealers have been following for the past fortnight, depressed butter prices early in the week, but a part of the loss has already been regained. A declining butter market frequently occurs in Jan-

uary, but prices are already on a lower level than usual. Taking the country as a whole, production of fresh butter has not shown any material gain as yet. Satisfactory reductions are still being made in storage reserves, although the movement slowed down somewhat last week. Consumption during December, as measured by distribution at the four leading markets, was the largest for any month on record. This delay in production, negligible imports, and the disappearance of butter probably offset the remaining large stocks of butter and the possibility of increased fresh output as soon as the cold weather breaks.

Prices on 92-score creamery were: Chicago 39 1/2c; New York 41c. Fresh creamery in tubs at Detroit sells for 35 @ 40c per pound.

POTATOES

Carlot shipments of practically all fruits and vegetables have increased sharply since the passing of the holiday season. Daily loadings of potatoes are running nearly three times as large as during Christmas week. While the demand has broadened, the increase in shipments is affecting prices, and part of the holiday advance has been wiped out. U. S. No. 1, northern round whites, are quoted at \$1 @ 1.15 per 100 pounds in the Chicago carlot market.

WOOL

The wool market shows a strong tone, although the total quantity changing hands is not large. In some cases, dealers have advanced their asking prices. The weakness evident in foreign markets before the holidays seems to be disappearing, although most of the sales in Australia and New Zealand have not yet reopened. South American wool prices are rising, partly because of higher exchange. Contracting the new clip in the west is proceeding less actively, as buyers have already signed up about one-third of the total domestic clip. Growers' ideas seem to be strengthening as time passes, and the amount of wool still in their hands diminishes. It is believed that the majority of the wools in Wyoming and Montana are under contract, and a rather large fraction of the Utah, Idaho and eastern Oregon clips also has changed hands. The goods trade is now looking forward to the heavy-weight opening to come in another month or six weeks.

DETROIT CITY MARKET

Produce was in moderate supply and forced some price cuts. Good apples were fair sellers but small sizes went at lower prices. Potatoes moved slowly in small lots, while cabbage and root crops were lower in price. The supply of celery was small and sold readily. Poultry was a moderate mover. Eggs were a little lower.

Apples, \$1 @ 3 bu; beets 75 @ 90c bu; cabbage 75c @ \$1 bu; carrots 75c @ \$1 bu; head celery, large, 25c @ \$1 dozen; horseradish \$4 @ 6 bu; leaf lettuce \$1.50 bu; dry onions \$1.75 @ 2.25 a bu; parsnips 75c @ \$1 bu; potatoes, No. 1, 65 @ 75c bu; Hubbard squash \$1.50 @ 2 bu; turnips, No. 1, \$3 bu; No. 2, \$1.50 @ 1.75 bu; vegetable oysters 60c per dozen bunches; honey \$1 @ 1.25 per 5-lb. pail; eggs, wholesale 60c; retail 65 @ 70c; hens, wholesale 27 @ 28c; retail 30 @ 32c; springers, wholesale 26 @ 28c; retail 28 @ 30c; geese, retail 23 @ 25c; hogs 14 1/2 @ 16c; veal 18 @ 19c; dressed poultry, hens 35 @ 38c; springers 30 @ 38c pound.

GRAND RAPIDS

The pork market was temporarily easier in Grand Rapids early this week. Heavy receipts last week from farmers who were making sales to raise tax money are responsible for the unsettled condition of the market. Farmers are finding it advisable to contract their pork before slaughtering as there seems to be a tendency on the part of butchers to take advantage of those who butcher their hogs first and seek a market afterwards. Veal and beef are slightly stronger in tone and poultry is in good demand as a result of the furniture season. Fresh eggs are holding their own around 50 @ 55c dozen. The demand is improving as the supply of storage eggs is gradually exhausted. Beans were firm at \$5.35 @ 5.50 per cwt. to the farmers and \$6 to jobbers. All home-grown vegetables are higher with potatoes selling at 50 @ 60c bu; parsnips \$1.25 @ 1.50 bu; carrots \$1 @ 1.25; cabbage 1 1/2 @ 2c lb; leaf lettuce 17c lb; radishes 90c dozen. Wheat was the highest of the year at \$1.74 per bushel.

Live Stock Market Service

Tuesday, January 13.

CHICAGO

Hogs.

Today's receipts were 52,000. The market averages about 15c higher, but is less than early bids. Big packers holding back. Most weighty butchers \$10.90 @ 11.15; tops \$11.25; bulk of 180-220-lb. average \$10.30 @ 10.80; 140-170-lb. kinds \$9.50 @ 10.20; bulk pigs \$7.50 @ 8.50; most packing sows at \$10.35 @ 10.60.

Cattle.

Receipts for the day 11,000. Market generally slow. Quality considered, most killing classes steady to strong; short-fed predominating; she stock in liberal supply; best fed steers \$7.50 @ 9.50; best matured offerings at \$10.50, some held higher; yearlings \$12.75; vealers steady to 25c higher; bulk at \$10.50 @ 11.50; shippers \$12 @ 12.50.

Sheep and Lambs.

Receipts today were 14,000. Market is active; fat lambs were generally 25c higher; bulk fat natives and fed westerns \$18 @ 18.50; few early sales to shippers unevenly higher at \$18.75 @ 19, but latter price is no criterion on the market. Clippers brought \$10.50 @ 16; fat sheep strong; good ewes \$9.50 @ 10.25; feeding lambs are very scarce and around steady at \$16.50 @ 16.75.

DETROIT

Cattle.

Receipts 507. Canners slow; all others 25c lower.

Good to choice yearlings dry-fed \$ 9.25 @ 9.75
Best heavy steers, dry-fed 7.50 @ 8.25
Handyweight butchers 6.75 @ 7.50
Mixed steers and heifers 5.00 @ 6.25
Handy light butchers 4.25 @ 5.50
Light butchers 3.50 @ 4.00
Best cows 4.50 @ 5.00
Butcher cows 3.50 @ 4.00
Cutters 3.00 @ 3.25

Canners 2.25 @ 2.75
Choice bulls 4.25 @ 6.00
Heavy bologna bulls 4.25 @ 5.25
Feed bulls 3.25 @ 4.25
Feeders 4.75 @ 6.00
Stockers 4.25 @ 5.75
Milkers \$45.00 @ 70.00

Veal Calves.

Receipts 4,908. Market steady.
Best \$14.00 @ 14.50
Others 4.00 @ 13.50

Sheep and Lambs.

Receipts 1,568. Market 50c higher.
Best lambs \$18.00 @ 18.25
Fair lambs 14.50 @ 17.50
Light to common 9.00 @ 14.00
Fair to good sheep 8.00 @ 9.25
Culls and common 2.50 @ 4.25
Buck lambs 8.00 @ 17.25

Hogs.

Receipts 645. Market was generally steady on pigs and roughs, but 10 @ 25c higher on others.
Mixed hogs, heavy y'rkr. \$10.85 @ 11.00
Pigs 8.00
Yorkers 10.50 @ 10.70
Roughs 9.25
Stags 6.00

BUFFALO

Hogs.

Receipts 6,770. Market is steady. Heavy sold at \$11 @ 11.50; medium at \$11 @ 11.25; light \$10.75 @ 11.10; light lights \$8.50 @ 10; pigs at \$6.50 @ 8.50; packing sows and roughs \$9.50.

Cattle.

There arrived 125 head of cattle here today and prices continued steady.

Sheep and Lambs.

Receipts 1,600. Best lambs sold at \$18.50 @ 18.65; ewes \$9.50 @ 10.50.

Calves.

Receipts were 200, with top at \$15.

COUNTY CROP REPORTS.

Berrien Co., Jan. 8.—There is not much feeding in this locality outside of the dairy herds. Wheat is bringing \$1.75; hogs, live weight, 9c. The poultry interest has developed considerably in our locality. Milk is sold to a local condensing plant. The chief activities of farmers at the present time is paying their taxes.—C. A. C.

Lenawee Co., Jan. 7.—Farmers in this locality are not feeding as many lambs this winter as usual. There are, however, about the average number of steers and hogs on feed. The poultry business shows some development. Eggs bring 54c for brown and 57c for white; butter 45c; wheat \$1.75@1.77; oats 55c; barley \$1.70 per cwt. The ground is covered with heavy ice, which may cause damage to wheat and clover seeding. The local grange has been revived and is now one of the largest in Lenawee county. The farming business looks brighter for 1925.—L. R. L.

Jackson Co., Jan. 5.—The farming outlook is some brighter, but not good enough to keep the young men at home or call other young men from the city. The rise in price of farm grains came after a considerable portion of the crop had been sold. However, the farmer with ten or more good cows and a flock of poultry is in the best shape, except where it is necessary to buy grain. On account of the poor corn crop, there are fewer lambs, steers and hogs being fed than usual. Certainly there will be little leftover feeds on the farm at the end of the feeding season.—G. L. K.

Ontonagon Co., Jan. 4.—Not much feeding being done outside of dairying. We have a cheese factory that takes our milk. Farmers are selling some wheat at \$1.60; oats 50c; beans \$5 per cwt. Farmers are a little more optimistic over the coming year. The church is about the only social organization in the community. No farmers organization of any kind have been organized.—N. N.

Charlevoix Co., Jan. 24.—Very little stock is being fed for market. Dairying is the principle source of income for our farmers during the winter. Butter-fat is bringing 42c; eggs 50c; corn \$3.10 per cwt.; oats 60c per bu., and other feeds in proportion. Not much doing in the line of social activities since our roads are blocked with snow. The lumber company who owned much of the land in our township has deeded this property to the state, which makes it appear that taxes in our locality might still continue to climb.—W. H. B.

St. Joseph Co., Jan. 2.—Dairying is about the same as a year ago. There is very little other feeding being done. Poultry activity in this section is particularly noticeable. Eggs bring 56c; butter-fat 40c; wheat \$1.74; rye \$1.33; corn \$1.25; oats 60c; hogs \$9.50. The farmers here get together at the grange, and are taking interest in farm bureau measures and cooperative organizations.—O. J. B.

HOLSTEINERS HOLD ANNUAL PROGRAM.

TUESDAY, February 3, at 6:30 P. M., the annual banquet of the Michigan Holstein Association, will be held at Plymouth Congregational Church, Allegan Street, south of the Capitol, Lansing, at which ladies are especially invited.

Features will be, "Peddling Holsteins," by John M. Kelly, Baraboo, Wisconsin, ex-vice-president of the Holstein-Friesian Association of America; vaudeville act from Lansing "Strand Theater."

Wednesday, February 4, at 10:00 A. M., will occur the annual business meeting, in the Agricultural Building at M. A. C. At 1:00 P. M., in the Judging Pavilion, Agricultural Building, an address, illustrated with experimental animals, on "Relation of Minerals, Vitamins, and Light to Nutrition of Dairy Cattle," will be given by Carl F. Huffman, M. A. C. Dairy Department. Business meeting will be resumed after the address.

Special attention is called to the address by Mr. Huffman. Everyone interested in dairy cattle, whether a Holstein enthusiast or not, should plan to take in this feature. Mr. Huffman has been doing research work at M. A. C. for several years along the advanced lines indicated by his topic—he rates among the best in this field. He will demonstrate his points with the experimental animals that he uses in his researches.

Holstein folks will be glad to hear John Kelly at the banquet. Mr. Kelly, in addition to being ex-vice-president of the Holstein-Friesian Association of America, a breeder of Holsteins himself, counsel for Ringling Bros., etc., is a gifted, witty speaker. He talks, also, at the general meeting of farmers on Tuesday afternoon, on "Selling the Public."

The vaudeville act is captured because of the friendship between M. W.

Wentworth, president of the State Holstein Association, and Mr. Butterfield, manager of the "Strand Theater" circuit. The act will be brought over to the banquet between playings at the local theater.

The whole meeting will be of especial interest because of the role which the State Association must assume next June 2-3-4, when the annual sale and annual meeting of the Holstein-Friesian Association of America comes to Grand Rapids. Plans already made for this big event will be discussed. Every live Holsteiner should be present to take a part in such discussion and to give his views on how to help make the State Association an "ideal hostess."—J. G. Hays, Secretary.

GUERNSEY BULL EXCHANGED FOR SCRUB.

ON January 14, at the time of the annual meeting of the Cass County, Michigan Guernsey Association a unique plan for advertising Guernseys in southwestern Michigan was planned. In cooperation with the Dowagiac Chamber of Commerce arrangements were made to purchase a purebred Guernsey bull and exchange it for a scrub bull. The owner must have had the scrub bull in his possession for at least two months and had to signify his intention of breeding up a Guernsey herd. He must also allow the bull to be used for service in his neighborhood at a nominal fee.

60 Acres of Roses

THINK of the choice you have when selecting from our great rose gardens. You are sure of getting only sturdy, prolific, field-grown rose plants, guaranteed to bloom in three months. Our reputation of 71 years is back of the rose offerings in our 1925 free catalog. Post-card brings it immediately.

THE STORRS & HARRISON CO. Nurserymen and Seedsmen for 71 years Box 635 Painesville, Ohio

Save on Farm Wagons. Split Hickory farm wagons, truck wheels, steel wheels, and milk wagons at lowest prices. Big bargains also in all kinds of roofing and paints. Split Hickory Factories, Dept 23, Lawrenceburg, Ind.

Seed Corn and Seed Oats. My drying house is filled with Clement's Improved White Cap yellow dent and Duncan's yellow dent seed corn. Fire dried on racks, ear tested, guaranteed germination from high yielding stock. Registered and certified Worthy Oats. Developed by the Michigan Agricultural College. Heavy yielders with a stiff straw. Write for prices. PAUL C. CLEMENT, Britton, Michigan.

POULTRY. You buy experience with our chicks. For years we have bred for more eggs. The result is business chicks. Get our catalog and start even with us. GREAT NORTHERN HATCHERY, Zeeland, Mich., B. 56

BRED FOR EGGS WHITE LEGHORNS BROWN LEGHORNS WH. & B'D ROCKS

CLASSIFIED ADVERTISING

This classified advertising department is established for the convenience of Michigan farmers. Small advertisements bring best results under classified headings. Try it for want ads and for advertising miscellaneous articles for sale or exchange. Poultry advertising will be run in this department at classified rates, or in display columns at commercial rates. Rates 8 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 6 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order. Real estate and live stock advertising have separate departments and are not accepted as classified. Minimum charge, 10c.

Table with 4 columns: Words, One time, Four times, One time, Four times. Rates for advertising: 10 words for \$0.80, 11 for \$0.88, 12 for \$0.96, 13 for \$1.04, 14 for \$1.12, 15 for \$1.20, 16 for \$1.28, 17 for \$1.36, 18 for \$1.44, 19 for \$1.52, 20 for \$1.60, 21 for \$1.68, 22 for \$1.76, 23 for \$1.84, 24 for \$1.92, 25 for \$2.00. Similar rates for 26-41 words.

Special Notice. All advertising copy discontinuance order or change of copy intended for the Classified Department must reach this office ten days in advance of publication date.

REAL ESTATE

80-A. MICH. FARM ONLY \$2,200—6 Cows & Calves, all corn, wheat, rye, beans, potatoes, horses, poultry, machinery, tools, everything complete for comfort and profit; on improved road, near lake; 60 acres productive fields; warm 7-room house, barn, hog, poultry houses. See forces low price \$2,200, half cash. Details pg. 141 big illus. Barzani Catalog, money-making farms and business chances. Free, Strout Farm Agency, 205BC Kresge Bldg., Detroit, Mich.

ON LAKE AND STATE ROAD—280-acre stock and dairy farm, 35 acres timber, 175 tillable land, 35 head stock, crops and tools included. R. M. Charlesworth, 322 East Cross St., Ypsilanti, Mich.

TO RENT on shares or work by month, furnished farm by experienced stockman. H. R. Coons, 48 Lafayette, Pontiac, Mich.

White Leghorns Exclusively. Pure Tanned Cockerels from 225-299-egg dams head our high grade Royal Breeders. This means high flock average and poultry profits. 75% of the chicks we sell go to old customers. 100% live arrival and good condition guaranteed. All orders have my personal attention. Write for catalog. ROYAL HATCHERY AND FARMS, S. P. Wiersma, Zeeland, Mich., R. R. 2.

First Choice Hatched on a Real Poultry Farm of Seventy Acres. Our slogan is quality. Our watchword, economy. Our ambition, service. Our policy, a fair deal. Our endowment, experience. Brown Leghorns, Anconas, Barred Rocks. Catalog Free. Rural Poultry Farm, Box 109 Zeeland, Mich.

Chicks for 1925

Again we are ready to book orders for Baby Chicks: Barred and White Rocks, Reds, White and Silver Laced Wyandottes, White and Buff Orpingtons, Black Minorcas, Anconas, White, Brown and Buff Leghorns. Send for Poultry Circular with price list. 100 per cent delivery.

STATE FARMS ASSOCIATION, Kalamazoo, Michigan. Active member International Baby Chick Association. Member Michigan State Farm Bureau.

EARLY MATURING BABY CHICKS

From pure-bred stock which have all been blood tested to eliminate the infected birds and decrease the bacillary white diarrhea troubles in the chicks. Write for prices on our I. I. Reds, B. P. Rocks, White Wyandottes and W. Leghorns.

Milan Hatchery, Box 4, Milan, Mich.

FARROW CHIX FOR SUCCESS. Profit Makers—Early Layers. Leghorns, Anconas, Rocks, Reds, Wyandottes, Orpingtons, Minorcas. Lowest prices. Catalog Free. Address nearest office. D. T. FARROW CHICKERIES, Peoria, Ill., Des Moines, Ia., Milwaukee, Wis., Indianapolis, Ind.

Big 5-Lb. English W. Leghorns. Larger hens, better winter layers. Chicks, hatching eggs. Free catalog describes them and is full of practical, money making poultry information. Send for it. A. W. WAUCHEK, Gobles, Mich.

10 chicks with advanced orders; 9c and up. 20 pure-bred tested varieties. Circular Free. Beckmann Hatchery, 26 E. Lyon, Grand Rapids, Mich.

SHEEP Bred Ewes

For sale, in lots of 50 or more, telephone Newport, telegraph Rockwood, P. O. So. Rockwood, ALMOND B. CHAPMAN & SON.

Delaine Breeding Ewes. Lamb. March and April. Highest price wool in the world. Make 150% in lambs and wool. Two cars ewe lambs, both cross-bred and Delaines. 50 Pure-bred Delaine ewe lambs, (unregistered). Geo. M. Wilber, Oaklands, Marysville, Ohio.

Breeding Ewes. For sale, extra good young Delaines. B. FUNESS, Nashville, Mich.

MULES

For Sale. One pair brown mules, 7 and 8 years old, wt. 2,700 lbs. Well broke, sound and true in every place. For further particulars see Ernst J. Maurer, Nashville, Mich.

SEEDS AND NURSERY STOCK

SEEDS—New Crop "Kansas" Alfalfa \$7.00 and \$9.50 bu., also Sweet Clovers, Red Clover, Alsike, Timothy, Sudan, Cane, Kaffir, Millets, Seed Corn, Soy Beans, Cow Peas. Lowest Prices, Bags Free. Send for samples and Save Money. Solomon Seed Co., Solomon, Kansas.

CHOICE SEED CORN—1000 bu. 100-day Improved Yellow Dent; 500 bu. Lancaster County Sure Crop; 300 bu. Early White Cap, nearly all 1923 Crop, all high germination. Write for price, Sample and Circular. Order early to save money. Shull Farm, Box 12, Tullytown, Bucks Co., Pa.

RHUBARB-MAMMOTH VICTORIA—1-yr. whole roots, 20, \$1; Giant Crimson 3-yr. divisions, \$3. \$1; Asparagus Roots, 50, \$1. Delivered prepaid anywhere. Weaver Gardens, Wichita, Kans.

FRUIT GROWERS AND FARMERS attention! Send for FREE catalog on small fruits, containing actual photographs of a new blackberry nearly two inches long. Also strawberry and raspberry plants. Reduced prices. South Michigan Nursery, New Buffalo, Mich., Box 14.

FREE—NEW RED RASPBERRY—Tip Grower, Very Hardy. Send for Literature. Strawberries \$3.00 per 1,000. All Small Fruit Plants. Dept. H. Hellengr's Nursery, Three Oaks, Mich.

22 GRAPEVINES—\$1 postpaid. Red, White, 20 Concord. 1 Week. Gobles, Mich., Nursery.

CERTIFIED Wolverine Oats. Certified Robust Beans. A. B. Cook, Owosso, Mich.

PET STOCK

FOR SALE—High-class Foxhounds; Beagle hounds, Coonhounds; Bloodhounds; and Setters; partly and well-broken; puppies of all breeds; no money in advance, ship C. O. D. Stamp for booklet. Landis-Kennels, Mohnton, Pa.

PURE-BRED Flemish Giant Rabbits, 3 mo., weight 5 1/2 to 6 lbs., \$2; 4 mos., \$2.75. Leonard Norton, Three Rivers, Mich.

PUPS—Some natural Heelers, also grown Stock, Sable and White Collie at Stud. G. J. Dunnewind, R. 1, Comstock Park, Mich.

FOR SALE—Beautiful White Collie puppies at farmers' prices, from trained stock, farm bred. Hezner Brothers, Reed City, Mich.

FOR SALE—Registered Collie Puppies, natural heelers. Silvercrest Kennels, Gladwin, Mich.

POULTRY

BABY CHICKS—Pure-bred S. C. Anconas, and English White Leghorns from tested breeders of utility and exhibition matings. Send today for mating list and egg records. Special discount on early orders. "Gibbs" Winterlay Hatchery, Bronson, Mich.

OAKLAND HILLS QUALITY CHICKS—Strong, vigorous, true to breed, profitable. English Leghorns, Reds, Rocks, White Wyandottes, etc. Safe delivery guaranteed. Circular free. Oakland Hills Poultry Farm, Farmington, Mich.

CHOICE RINGLET Barred Rock Cockerels, real Rock type. Satisfaction guaranteed. Earle Murphy, Britton, Michigan.

BABY CHICKS from heavy egg producing strains. R. I. Reds, B. Rocks, and White Leghorns. Farmrange Chick Hatchery, Charlotte, Mich.

SILVER LACED or White Wyandotte quality cockerels, three to five dollars each. C. W. Browning, Portland, Mich.

BABY CHICKS AND EGGS—Superior Ringlet Barred Rocks, Rose Comb Rhode Island Reds, White Leghorns, Wyandottes, Ideal Hatchery, Tiffin, Ohio. Circular.

FOR SALE—200 English Leghorn pullets, bred to lay, \$1.25 each. A. J. Kane, R. 7, Box 102, Kalamazoo, Mich.

COCKERELS—Ringlet Barred Rocks bred to lay, weigh and win. Robt. Martin, Woodland, Mich.

WHITE WYANDOTTE COCKERELS—High quality stock. Howard Grant, Marshall, Mich.

S. C. BUFF LEGHORN CHICKS—First hatch March 3. Circular. Willard Webster, Bath, Mich.

TURKEYS

MICHIGAN'S BEST Giant Bronze turkeys. Strong, healthy birds. 10 years breeding from America's best strains. Satisfaction guaranteed. N. Evelyn Ramsdell, Ionia, Mich.

GIANT BRONZE TURKEYS—Goldbank Strain. Choice heavy birds. Satisfaction guaranteed. Mrs. Perry Stebbins, Saranac, Mich.

TURKEYS—M. Bronze, B. Red, Narragansett, White Hol. Hens, Toms, Pairs and trios, no kin. Order early. Walter Bros., Powhatan Point, O.

PURE-BRED Giant Bronze Turkeys. Extra values in fine large, healthy birds. Mrs. Laverne Brownell, Belmont, Mich.

PURE-BRED Giant Bronze Turkeys, Vigorous Birds, choice stock. Mrs. Charles Boone, R. 5, Traverse City, Mich.

FOR SALE—Pure-bred Bourbon Red Turkeys. H. O. Ruggles, Milford, Mich.

PURE-BRED large White Holland turkeys. Toms \$3, and hens \$7. Darwin Dean, Milford, Mich.

PURE-BRED Bourbon Red Toms, \$8.00. Eva Myers, Ionia, Mich.

AGENTS WANTED

BIG MONEY Selling New Household Cleaning Set. Washes and dries windows. Sweeps, scrubs, mops. All complete only \$2.95. Over half profit. Write Harper Brush Works, 173 3rd St., Fairfield, Iowa.

WE PAY \$200 monthly salary, furnish car and expenses to introduce our guaranteed poultry and stock powders. Bigler Company X 683, Springfield, Ill.

HELP WANTED

WANTED, FARMER, married, best references. Box 60, Michigan Farmer, Detroit.

SITUATIONS WANTED

WANTED—Farm managing job by married man with life experience. Stock farm preferred. Best of references, including bank reference. Box 803 Michigan Farmer.

MICHIGAN FARMER Classified Ads. pay well. Try one.



Here's My new CUT PRICE CATALOG



FREE!

YOU can SAVE a lot of Money this Year

if you will send for my new big CUT PRICE CATALOG. Don't buy a rod of fence, barb wire, gates, posts, roofing and paint until you get this money-saving book. I'VE CUT PRICES to the bone on my 150 styles of DOUBLE GALVANIZED Farm, Poultry and Lawn Fences — Farm, Drive and Walk Gates; on Corner Posts, Steel Fence Posts, and Gate Posts—Barb Wire, Smooth Wire, Grape Wire—Roofing and Paints. Catalog shows a bigger variety than you'll find in a dozen stores and at prices that save you fully one-third or more. Send for this catalog today — compare my quality and NEW CUT PRICES with what you have to pay elsewhere. You'll SAVE big MONEY.

Jim Brown PAYS the Freight

The new low prices in my catalog are *delivered* prices. I pay the freight right to your freight station. You know when you look in my catalog exactly what your goods are going to cost laid down at your freight station. You've no extras to pay. You'll find a big difference in price and a tremendous difference in *quality* — for instance — my fence is made of Basic Open Hearth Steel Wire and all *double galvanized* by the famous Brown process which puts on twice the usual amount of galvanizing. That's why it don't rust out—why it lasts two or three times longer than ordinary fence. My Gates have Carbon Steel one piece frames—last a lifetime. My Steel Posts are bigger, heavier and much stronger; my Barb Wire and Smooth Wire is the best ever; my Roofing is *asphalt* Roofing with *wool felt* base—not coal tar and paper; my *WEARBEST* paint with its big percentage of Pure White Lead and Pure Linseed Oil is all that its name implies. Just read these letters:

"The 140 rods of fence you shipped me seven years ago is as nice and bright today, with no sign of rust on it. I put up another make of fence about the same time I did yours, and it is very nearly ruined by rust. The Brown Fence is by far the best fence put up in this locality."
John Bruce, Cauthron, Ark.

"I received my roofing in good condition. I feel that I saved at least \$1.00 on each roll by ordering from you and if I ever need any more roofing I sure will send you my order for I know I would get the worth of my money. I certainly will recommend your roofing to all my friends."
A. B. Ingram, Eton, Ga.

"Yours is the heaviest paint I have ever used. It covers better and it goes farther. And my neighbors say it is the whitest paint they ever saw. You saved me \$1.30 a gallon."
Harry Thomas, Athenia, N. J.

Fill Out and MAIL COUPON NOW!

Everything made in the Brown factories is so unusually high quality that it always gives the best of satisfaction as expressed in the letters above. Besides you take no risk in buying from Jim Brown—my unqualified guarantee makes you safe. You have nothing to risk but lots to gain when you buy from Brown. I ship promptly from my 3 big factories at Cleveland, Ohio, Memphis, Tenn., and Adrian, Mich., also shipping points at Kansas City, Mo., and Davenport, Iowa. Fill out and mail coupon today and get my latest New Cut Price Money-Saving Book before you buy.—Jim Brown.

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