

MICHIGAN FARMER

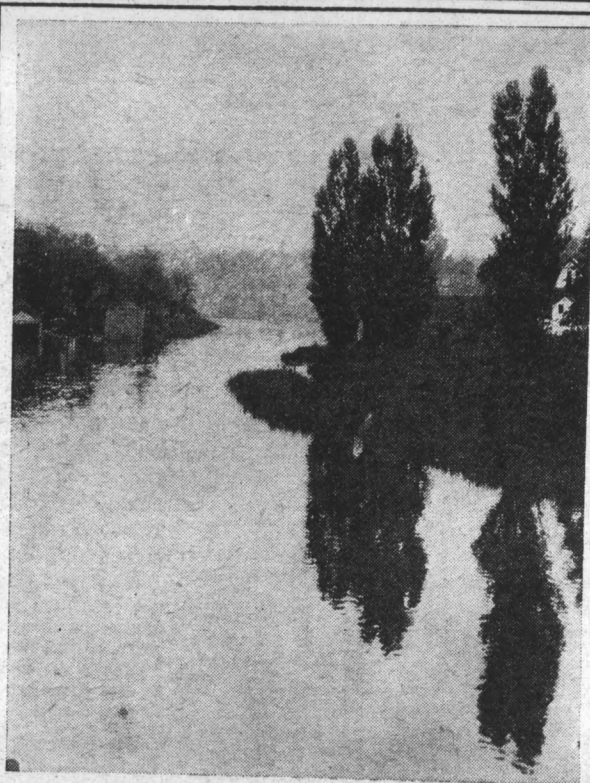
AND *LIVE STOCK*
PUBLISHED WEEKLY.

JOURNAL
ESTABLISHED 1843.

Vol. CLXX No. 10

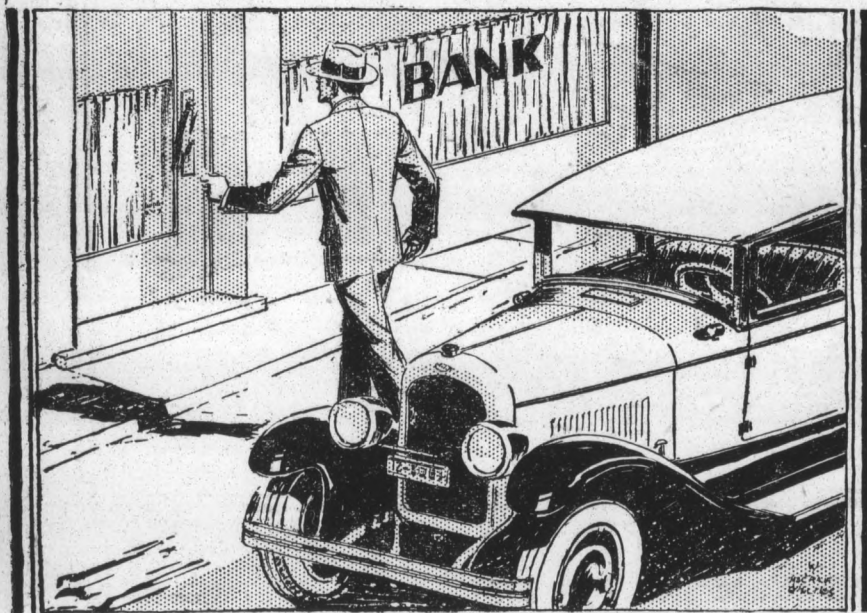
DETROIT, MICH., SATURDAY, MARCH 10, 1928

Whole No. 4803



THE Tahquamenon Falls pictured here are in the land of Hiawatha, made famous by Longfellow and still untouched by good roads. They are close to the northern borders of Luce and Chippewa Counties. The best way to get to them is to drive to Newberry and then go to the falls by wagon road or river. It's worth it.

The lower picture is not a scene in Holland but a view on the Indian River in Cheboygan County. M-14 passes through this beautiful section.



MORE PROFIT from every dollar invested in fertilizer

\$1,000 PER ACRE FROM ONIONS . . . Mr. Roy Baldridge, of Davison, Genesee Co., Mich., says: "This year I used 700 lbs. of your 'AA QUALITY' Fertilizer per acre on my 7 acres of onions. The yield was approximately 800 bushels per acre of saleable onions, which are bringing me \$1.25 per bushel, due to the fact that they matured early and are of the best quality." October 4, 1927.

PRIZE POTATOES GROWN WITH 'AA QUALITY' FERTILIZER . . . Mr. E. W. Lincoln & Son, Greenville, Montcalm Co., Michigan, say: "We are sure that a liberal use of 'AA QUALITY' Fertilizer helped us to get the Rotary Club prize for the highest yield in Montcalm Co., 304 bushels of potatoes per acre on five acres; and The A.A.C. Company prize for the best yield for one acre in a competition open to the state—our winning yield being 335 bushels of potatoes per acre." October 29, 1927.

100 BUSHELS OF CORN PER ACRE . . . Mr. Orton Zent, of Tippecanoe, Marshall Co., Indiana, says: "By the proper use of 'AA QUALITY' Fertilizer in sufficient amounts, I have grown what our county agent estimates will be a 100-bushel-to-the-acre crop, in spite of the fact that this has been a poor corn year. This corn ripened two weeks ahead of unfertilized corn and is of fine quality." October 11, 1927.

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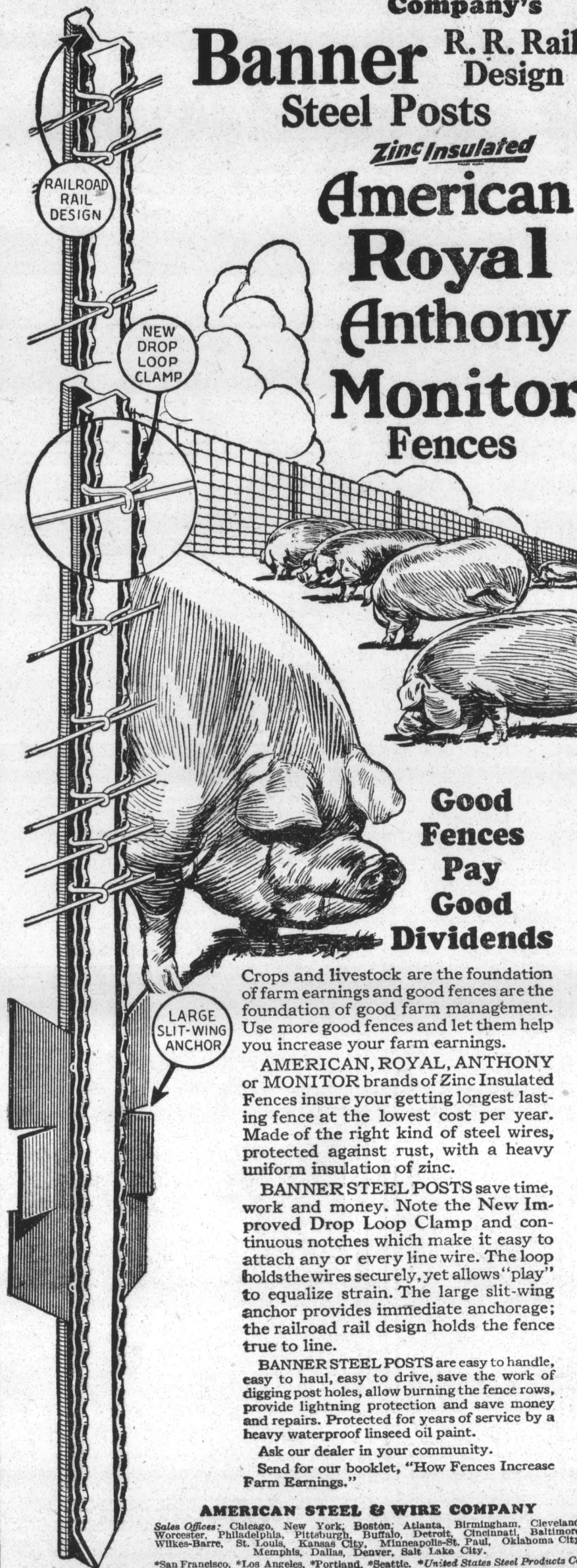
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VOLUME CLXX

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY
ESTABLISHED 1843.

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

QUALITY
RELIABILITY
SERVICE
NUMBER X

"Soul Mates" in the Orchard

The Influence of Pollination of Crops

By H. D. Hootman

IT is impossible to over estimate the importance of a knowledge of the pollination of fruit bloom. Without this knowledge the selection of varieties for planting and their arrangement in the orchard cannot be intelligently practiced. The cultivation of self-sterile varieties must constantly be attended by disappointment and loss when provision has not been made for cross-pollination to take place.

The whole question of pollination is one that is not generally well understood by fruit growers. Pollination involves, first of all, the transfer of pollen from the stamens to the pistil. Some varieties of fruit do not "set" well when pollinated with their own pollen. These varieties are termed "self-sterile." In such cases pollen of other varieties must be available so that cross-pollination can take place if profitable crops are to be harvested. There are other varieties that set fairly well when pollinated with their own pollen. Such varieties are "self-fertile." However, even self-fertile varieties "set" a larger per cent of their blossoms when the varieties are well mixed; so that cross-pollination can take place. For all practical purposes, with the possible exception of sour cherries and most peach varieties, fruit growers should regard all varieties "commercially self-sterile" and govern their planting practices accordingly.

Planting Practice for Apples

Convenience of spraying and harvesting demand that as many trees of a variety as can be adequately pollinized be planted together. When the planting arrangement of forty feet between rows is practiced not more than four rows of one variety should be

planted together. These should be followed by from one to four rows of the pollinating variety or varieties depending upon their desirability for planting. More than four rows of a single variety will tend to prevent adequate cross-pollination in unfavorable blossoming seasons. When a selection of varieties is made from the following list (Jonathan, McIntosh, Northern

It is not advisable to plant over three rows of a single sweet cherry variety together if adequate cross-pollination is to take place. The Schmidt Bigareau, Bing, and Windsor are the three best black sweet cherries. They will effectively pollinate each other when planted near each other. The Black Tartarian might be added to this list if a black sweet cherry of high quality



An Abundance of Fruit Resulted From the Cross-Fertilization of this tree.

Spy, Steele Red, Delicious, Wealthy, Wagener, Grimes Golden, or Rhode Island Greening) and the above outlined planting arrangement followed there is little danger of creating a pollination problem. The Rhode Island Greening is "cross-sterile" or a very poor pollinizer for other varieties and should this variety be selected for planting two others should be chosen to be planted with it.

Sweet Cherries

All sweet cherries are "self-sterile." They bloom very early, often during cold weather when insect flight is limited to relatively short distances.

but soft in flesh was wanted that would ripen earlier than Schmidt.

Securing Pear Pollination

The Flemish Beauty is the only pear variety grown to any extent in Michigan that is "self-fertile." The Bartlett is the variety most in demand. For years growers have been planting Seckel as a pollinizer for Bartlett in their orchards because they blossomed at the same time. It was not until 1925 that it was suspected that these two varieties were "inter-sterile." Seckel will not effectively pollinate Bartlett, and Bartlett in turn is a poor pollinizer for Seckel. When

these two varieties are grown a third variety such as Bosc, Flemish Beauty, or Howell should be near by to pollinate them. Pears, like sweet cherries, should not be planted more than three rows of one variety together.

Peaches

The J. H. Hale peach is possibly the only peach variety that is "self-sterile." When this variety is selected for planting it should be well mixed with other varieties, if large peaches instead of "buttons" (small peaches with undeveloped pits) are to be produced. Elberta, South Haven, Kalamazoo, and Banner will effectively pollinate the J. H. Hale.

How Blossoms Become Fertilized

Flowers secrete nectar for the sake of attracting insects. The honey-bees and wild insects in gathering the nectar, crawl deep into the blossoms, covering their bodies with pollen from the stamens. In visiting other blossoms the pollen adhering to their bodies comes in contact with the sticky stigmas. Here it germinates and grows down the pollen tube until it fuses with the ovary of the blossom which becomes fertilized.

The young fruits when first formed have but a slight hold upon life. Unfavorable influences, no matter how slight, may cause them to perish. Fertilization gives the tiny fruit life and enables it to hold upon the parent plant through nourishment drawn to supply the developing embryo in the seeds. Thus complete fertilization of the blossoms usually betters the chance of the fruit sticking on the spur and developing instead of falling to the ground during the "June Drop." When blossom fertilization takes place only on one side, with the ac-

(Continued on page 334)

Michigan Aids Prospective Farmers

This Service Differs from Any Offered by Other States

MANY farm failures could be avoided if those who venture would only inquire about their chances of success before they cast their lot into the fire. Not to mention the flock of barren regrets, dulled ambitions, and dark discouragements that follow in the wake of failure. The site of farm failures dot the country from east to west, no state is immune.

If those who are thinking of starting on such a course would only consult those who are in a better position to know the likelihood of success in that territory, everyone would benefit. There is a law of chance and most people would do well to find out what the law is before taking a step that may involve a whole life or even several years of abject poverty.

With the thought of guiding prospective farmers, the State of Michigan in 1922 embarked on a land-economic survey. It has no prototype elsewhere, no other state has done anything similar so it is a matter of some interest and may also indicate to venturing farmers some of the many sources from which they may gain information about the territory

they expect to assist in developing.

It is often thought that the only use for land is for agricultural or mining purposes. But the land-economic survey has disclosed several distinct uses for land; among others, farming, forestry, mining, recreation, water power, and game preserves. With the growth of cities, the recreational use for land is increasing and many Michigan communities have got into the "pay as you go" class through a wider use of their lands for recreation purposes.

Originally, the intent of the land-economic survey was to learn more about the agricultural possibilities of these regions, but that always involved a matter of local judgment which was always a controversial point. Now it has become a matter of making an inventory of the physical facts of the region and then anyone can draw his own conclusion either from what he already knows or through the combined experience of many others.

This work has cost the state approximately two and a half cents an acre for the field work and over four million acres have already been in-

ventoried. There have been in the past soil surveys, geological surveys, biological surveys, and others, but the defect in them was that each specialist went off on his own tangent and without thought of how it tied into other local facts. Now all the specialists at one time or another are called in so when the survey is complete composite of the local picture is secured.

A soil surveyor and a forester together go over the territory first, mapping it as they go. They map the soil types, subsoil, rivers, and character of the forest cover if there is any. The forester has some fifty symbols with which he can designate the approximate size of the trees, how closely they are spaced on the ground, what they are, etc., etc.

Another arm of the field force is the land economist who secures his information from the county records and township assessors. He learns first the intent in ownership from the township supervisor who is also the assessor—which men are owners, which are tenants, what land is held for speculation or sale, what farms are abandoned, etc. He also gets the

records and plots the farms showing the range as to assessed valuation. When these are mapped, any prospective settler can look at the territory where he proposes to buy a farm and see what the classification of experience has been, that is—how many abandoned farms there are in it, how many are occupied, and the value for purposes of taxation. No one need advise him, the experience of others is the best of all criterions.

The lakes are also mapped: the depth to the bottom, whether it is muck, marl, or sand; the character of the bank, whether steep or gradual, marshy or dry. A prospective cottage builder can then tell at a glance whether the lot is a desirable site for a summer home or a group of farmers can tell whether or not they can reclaim marl from that lake. The state division of fish hatcheries is finding this work very useful.

All of the areas in the counties are mapped regardless of what their prospect seems to be. I was told of one very low lying, apparently worthless combination of swamp and uplands. (Continued on page 331)

MICHIGAN SECTION THE CAPPER FARM PRESS



Published Weekly Established 1923 Copyright 1927

The Lawrence Publishing Co.

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 Telephone Randolph 1530.

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 CLEVELAND OFFICE, 1011-1013 Oregon Ave., N. E.
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VOLUME CLXX

NUMBER TEN

DETROIT, MARCH 10, 1928

CURRENT COMMENT

Prices Continue to Improve

A GAIN farm prices move to a more advantageous position. In January, wholesale prices for other than farm products, according to the bureau of labor statistics, averaged slightly lower than in December; whereas, farm prices as a group advanced over one and one-half points above the December level. This advance is due to increases in the prices paid for grains, potatoes, cattle, poultry, onions, and wool, sufficient to overcome the decline in prices of hogs and lambs. Compared with a year ago, farm prices are considerably higher, while a large decrease is shown in prices of building materials and smaller decreases on many other commodities.

Farm Relief Legislation

PROGRESS is being made with farm relief legislation. The House committee on agriculture has closed its hearings and is making an effort to include in its recommendations such provisions as will secure the approval of the majority of the members of that branch of Congress. A poll of the committee indicates a majority in favor of the equalization fee.

The committee has been generous with its time. Any persons or groups, wishing to be heard, had the opportunity. Those favoring the McNary-Haugen equalization fee provision have been better able to present their full program than at former hearings. The debenture plan of the National Grange also received stronger backing than was previously accorded it. While the measure sponsored by Congressman Ketcham of this state is generally regarded as the export debenture bill, a number of other bills embodying this provision have been introduced by southern Congressmen,

and these men will support this proposition rather than the equalization fee plan.

It is promised that a farm relief bill will be reported out of the committee of the House by March fifteen, and House majority leaders have agreed this matter will have right of way on the floor. The bill will therefore have the consideration of the lower branch of Congress after the appropriations and navy bills have been settled. These next few weeks will therefore be of special interest to farm folks whether they favor or oppose this line of legislation.

Farming and Aviation

WHILE aviation is making wonderful strides, and men who have been brought up on farms have contributed more than their share to the development and promotion of the industry, most farmers seem to feel that their opportunity to use the airplane in their business is remote. Very few farmers likely will own planes in the near future, but any farmer has a chance of providing a landing field for a crippled plane or a lost aviator at the most unexpected moment.

When an airplane accident occurs on a farm, both the aviator and the farmer are out of luck. Then, the immediate neighbors and a whole host of curious motorists from around the state, appear post haste to inspect the remains. This is equivalent to renting the farm to a dozen circuses for the same date. It is very hard on crops to have each plant tread upon no less than twenty times.

Furthermore, a poultryman often suffers from the presence of airplanes in the vicinity. Many report a decrease in egg production during the spring when the hens are driven regularly from the range by low flying planes. Of course, the planes look like hawks, and how is the hen to know they are not.

The introduction of improvements invariably brings new problems. At present few laws have been made for the control of aviators, except to keep stunt flyers from exhibiting over football fields, and to prevent low flying over cities. However, it is just as nerve racking to the farmer to watch a plane just skim over the orchard or the lightening rods on his buildings. The control of aviation will be worked out step by step. Until then most farmers will make the best of unexpected situations that may occur.

A Good Body Needed

THERE appears to be a tendency to underestimate the importance of the physical well being of the farmer himself. A strong well-developed body is a wonderful asset in the farming business. Keeping fit should be one of the first considerations of the farmer.

Too often the children in the school are the only members of the family receiving medical attention. But, the chances are, that the bread winner may be the one most in need of the doctor's care. Many a farmer has built an addition to his chicken coop when the money expended would mean more to him financially if used to pay a visit to the dentist or doctor.

Struggling along half sick for months or even years trying to keep the business going, often puts success just that much farther away. Equally significant is the effort of a wife or mother who tries to keep the home going under the handicap of an illness which could, if taken in time, be treated at small expense.

As a class, farmers like to pay their bills as they go. Many had rather suffer physically, than to undergo mental suffering from a debt hanging over them. But it pays to face the proposition squarely and realize the

true value of good health. There are few communities where some farmer cannot be found who is fighting a losing battle because ill health is too great a handicap to make success possible.

A Bed of Roses

IN the office of a Central Michigan farmer hangs a picture showing a man with a broad smile lying beneath warm blankets on a large comfortable bed. The bed is covered with roses. On the headboard of the bed is the sign, "A Bed of Roses," and underneath the title of the picture reads, "The Other Fellow's Job."

This was illustrated last week when a barber asked a farmer in the chair the price of fresh eggs. The farmer replied, "Fifty cents per dozen." The barber replied, "That is a pretty good price for eggs." When the farmer paid fifty cents for his hair cut, he thought the barber did very well to collect fifty cents for the gentle exercise with the shears.

Each man knew his own business best. The farmer knew that fifty cents was not a winter egg price that was making him rich after deducting the feed bill. And the barber had his financial troubles after meeting rent, light, water, fuel, labor, and other demands from his fifty cents. Each man envied the other, and both were earning their money.

All down the line men like the other fellow's job. They see the income but not the outgo. Some farmers think it would be great fun to own a garage, while some garage owners are weary and would like to be back on the farm.

It does not pay to judge the other fellow's job lightly. The doctor, the farmer, the barber, all have certain problems to solve, and sensing fully their own problems they think the other fellow is enjoying a "Bed of Roses."

The Practical College

ONE who does not come into frequent contact with the Michigan State College has no realization of the valuable work that it is doing. But those who have been in intimate relation have a growing respect for the efficient way in which real farm problems are being handled.

What may have brought this quite forceably to the writer's mind was one morning's session of the recent spring State Horticultural Society meeting. Three college men occupied the time in discussing fruit growers' problems. And if that time was not the most profitable for many fruit growers in attendance, we are poor judges.

The first speaker discussed the mechanics of spraying. Timeliness is a great factor in successful control of fruit insects and fungous diseases. An orchard should be thoroughly sprayed in thirty hours to get effective results. By this man's unique and original work he has found the type of equipment, combined with night spraying and dusting that will enable one to do the spraying quicker, cheaper, and more effectively.

The second subject referred to spray materials. The speaker, through his own spraying experimental work, obtained some real pointed facts regarding the getting of results from spray materials.

The third speaker told of the problems of pollination which he also discusses on another page of this issue. Hitherto thousands of fruit trees have remained barren for unknown reasons. This man's investigations show that pollination is the controlling factor in most all cases. Many farmers will have more apples to sell because of these findings regarding pollination. The grouping of these three men on

this program brought to mind quite forceably the clean-cut type of thoughtful workers on the college and extension forces who are seriously engaged in the solution of problems of the everyday farmer.

Forestry Week Designated

THE week of April 22-23 has been designated as American Forest Week by President Coolidge. The President urges that all citizens and appropriate organizations give thought to the preservation and wise use of our forests, to the end that energetic forest policies will be adopted in all communities. "We have made a beginning in forest renewal," he says, "but the task is stupendous, and we should permit no satisfaction over what has been done to blind us to the magnitude of what remains to be done."

March

WELL, here it is again—March with its longer days and Dame Nature getting things ready so we'll have to work.

Old Lady Nature sure does fix things so we kin work. She gives us long nights so we kin sleep and get rested good and proper when there ain't nothing to do and then when the growing season starts the days are longer so we kin have light to work by. The days get longer up to June 'cause there's more to do in spring. The farmer is about the only one who works by the sun—from sun up to sun down. Most everybody else works by the clock and day or night don't mean much to them, as long as they got a clock to work by.

But the farmers ain't gettin' to be any better. Fer inst., them radios is causing lots of farmers to lose sleep to find out what the jazz orchestra is goin' ta play about midnight. It uses up lots of kerosene oil and Sofie says it's lots harder to clean the lamps. I just wonder if the kerosene companies ain't behind this radio stuff. And now besides that, I see they're sayin' night is the best time fer sprayin' fruits. I knew night was O. K. fer stealin' them but this is somethin' new. This up-all-night stuff will kinda make a fellow think of his courtin' days.

March fourth is a great day not only 'cause the President of U.S. starts on his job, but because then the farmer is gotta march forth and get into action fer the annual battle of crops. He's gotta shoulder his spade and hoe and get his horses out to make some front line trenches. The fellow that ain't got his fightin' equipment ready for business ain't a good soldier. The better your equipment is the more chance you got to win the battle.

From March fourth it kinda means "go" fer us farmers who've been sleeping under blankets of snow all winter. That's just one reason I don't want to farm in the South. You ain't got no winter to have an excuse fer settin' inside and doin' nothing. I do just like settin' by a roarin' fire on a cold blizzardy day.

Well, here's hopin' that you got your harness oiled and fixed, tools sharpened, wagons greased, tongues and shafts fixed, machinery and wagons painted, manure hauled, wood hauled and cut, and etc., and etc., during them months when we lazy farmers don't have nothing to do, so that from now on you won't have nothing to do but work.

HY SYCKLE

France established the metric system of measures in 1799.



Phosphorous Boosted This Corn

Farmer Also Learns Other Needs of the Crop

By C. E. Millar

CHRIS HANSEN, a good farmer, but discouraged because long hours of work and careful cultivation of his fields failed to give profitable crops, had asked the county agent to go over the farm and make suggestions regarding soil improvement. I had accompanied them during the inspection of the hay and wheat fields and we now swung over the fence into a field of rich looking silt loam which was destined to be planted to corn.

"What trouble have you experienced with corn in this field in other years," inquired Dick, the county agent.

"Not a thing until fall," replied Chris. "Then in place of getting ripe the corn stays soft until along comes a frost and the result is poor quality grain and no seed for next year."

"The remedy for that," commented Dick, "is your old friend phosphoric acid. Did you notice Charlie Wilson's

couple of feet and see what this sand is resting on," I suggested.

"No need to do that. I can tell you what the subsoil is under all my fields," said Hansen with some pride. "Down here on this level sandy loam there is a brownish red clay and gravel mixture which gets hard as rock in dry weather."

"That helps," I replied. "You can build up a sandy soil if it has a good foundation, but when it is sand all the way down, soil-building is a tough job. That clay holds water enough to tide your crops over many a dry spell. But how does it happen, Chris, that you know what kind of subsoil is under your land?"

"Dad looked after that before he bought the place. You don't suppose he would buy a farm without investigating the subsoil, do you?"

"I am sorry to say many farmers do that very thing and then learn of



Although Benefited by Much Tillage, Soils Must Contain an Abundance of Available Plant Food to Grow Good Corn

corn last fall? As the crop stood in the field you could see little difference between that on fertilized and unfertilized land, but when it was shucked out the corn receiving acid phosphate was firmer on the cob and much more mature, besides it yielded fifty-nine bushels while the unfertilized crop only went thirty-five and one-half."

"Did acid phosphate make all that difference? It doesn't seem possible," exclaimed Hansen.

"Those are the actual figures," replied the county agent, "and there wasn't a bit of difference in the treatment of the two parts of the field except the addition of acid phosphate. The increase in yield was unusually large I'll admit," he continued, "but you know all the farmers who raise corn for show and to sell for seed use fertilizer high in phosphoric acid. If the land is in a good state of fertility no other commercial plant foods are needed, but if the soil is run a little nitrogen and potash should be included in the fertilizer."

"That sounds as though acid phosphate was the very thing for corn, but my experience has been that manure is a first class corn fertilizer," commented Chris.

"It certainly is," agreed Dick. "If a farmer could get all the manure he wanted to put on his land he could raise bumper corn crops if the moisture in the soil held out."

Then he went on to explain that manure is low in phosphoric acid and how field tests have proved that an addition of acid phosphate along with manure will balance the plant food situation and make a medium application give just as good results as a heavy dressing.

"That's one way," he continued, "that many farmers are making the manure supply stretch out over more acres. Now let's look at the other end of this field. It appears more sandy."

"Yes, the soil at the far side is pretty light. It blows some if I don't keep a crop on it all the time," admitted Chris.

"Suppose you dig down here a

their mistake after it is too late," I admitted.

"What's under those sandy knolls that you say blows some," asked Dick.

"That's yellow sand just as deep as you care to dig."

"Why don't you lime it, give it a good coat of manure and seed it to alfalfa? It will produce more that way than in other crops," advised the county agent.

"Well, maybe I will. But right now I want to know what kind of fertilizer to use for corn on this level sandy soil," said the farmer coming back to the purpose of our visit to the field.

"Have you manured it recently?" Dick was surely strong on using manure.

"No. And I can't get it covered this spring either."

"Better use a complete fertilizer then, say a 3-12-4, a 2-12-6 or similar analysis."

"About how much?"

"That depends on how you apply it. If it is broadcast and dragged in before planting, from 200 to 300 pounds is about right. In case you drill it in the row or hill, I would not advise over 125 pounds."

"You wouldn't suggest putting it in the row or hill, would you?" demanded Chris in astonishment. "I should think the roots would all cluster around the fertilizer instead of growing out through the soil, and then when a dry period comes the crop would suffer for water."

"Most people thought that until some of the experiment station men dug out the root systems of corn which had been fertilized in the hill and compared them with the root systems of corn fertilized by the broadcast method," replied Dick.

"What did they find out?"

"Well, there was a whole handful of feeding roots clustered around the fertilizer but the main root system extended through the soil just as far or farther than when the fertilizer was broadcast."

"That's interesting. What's the advantage of dropping the fertilizer so

(Continued on page 339)



Why I recommend this quality fertilizer

WELL, I could give you a lot of reasons why I recommend Swift's Red Steer Fertilizers but they would boil down to two things:

I know who makes them and I know who uses them. Swift makes them and the Swift name on a product always means the best product of its kind. Successful farmers around here use them and I'll take their judgment on results.

These farmers know that the *right kind* of fertilizer gives them bigger yields per acre and crops of better quality. That all means more profit. They make sure of the *right kind* of fertilizer by using Swift's.

They use Swift's *high analysis* fertilizer because it gives them their plant food for less money—saving on costs of bagging, labor, freight and hauling.

Come in and we'll talk this over—from your standpoint. I know the best farmers here and how they use fertilizer. I co-operate with Swift & Company and keep informed on the work of our Agricultural College. Let me help you select the kind and amount of Swift's Red Steer Fertilizer to make you the most profit.

P.S.: Come in soon—before the rush of planting time.



a.s.a.

Authorized
Swift Agent

Look for my sign

ORDER YOUR FERTILIZER NOW

Obstructing the Law

WITH much satisfaction, I think the country sees Harry F. Sinclair and two of his associates sentenced to jail for from fifteen days to four and six months, for criminal contempt of court. They attempted to and did obstruct justice by shadowing the jury in the Teapot Dome conspiracy trial.

Sinclair gets the longest sentence. He is also under sentence of imprisonment for three months for refusing to answer the questions of the Senate oil investigating committee.

Only one man was fined, the least offender, a son of Detective Burns. In ordering the other three men to jail instead of fining them, Justice Siddons of the District of Columbia supreme court, did something to make this year's anniversary of Washington's birthday memorable, it seems to me; something toward upholding the nation Washington founded.

The Senate's arrest of Colonel Stewart, Standard Oil official, for refusing to answer questions and thereby impeding justice in this same conspiracy, is in the same category.

* * *

That none of these men are yet in jail does not signify they will not be eventually. Just now the encouraging fact is they have been sentenced to imprisonment. The Senate sent Sinclair to jail a year ago, but through the law's delays he has not yet gone there. Now Colonel Stewart, head of the Standard Oil Company of Indiana, is in the same position. But a final reckoning is coming.

To obstruct justice, to interfere with the action or enforcement of law, is morally as wrong as breaking the law and is so recognized to some extent. Where great corporations are the offenders, modern conditions demand that the penalty and the disgrace shall be as great, for their opportunities for sinning to the injury of many are far greater and more serious.

To try to obstruct justice, to try to prevent the searching out and punishing of those connected with the Teapot Dome ignominy, is to be as ignominious.

* * *

Because of such obstruction and the legal delays, the Department of Justice, with all the power at its command, has been five years laying bare the Teapot Dome sore. But so far it has succeeded in compelling the return of twenty-four million dollars in cash to the United States. Also 300 million dollars' worth of oil in the ground from the Pan-American Petroleum Company, and from three to four millions in cash from the Mammoth Oil Company.

About 400 million dollars has been recovered by these five years of legal battles notwithstanding delays, legal and otherwise, to impede and defeat justice, which has made necessary the pursuing of blind trails up innumerable blind alleys, and some not so blind, at the expense of the taxpayers of the United States.

April 2, the oil magnate Sinclair faces another trial for conspiracy in connection with the Teapot Dome lease, and, if convicted, still another sentence to imprisonment.

The game of obstruction is about played out in the Teapot Dome case.

* * *

It is refreshing to turn from the sensational, melodramatic, and sordid phases of the Teapot Dome infamy to the strong condemnation of such trickery in business expressed by John D. Rockefeller, Jr., before the Senate investigating committee and in his letter to Colonel Stewart. It lays down a code of ethics for big business.

In his letter to Colonel Stewart, Mr. Rockefeller said:

I urge you with all the influence I

possess not to wait for an invitation from the Senate Committee, which has been appointed to look into this matter, much less a subpoena to appear before it, but to wire Senator Walsh at once, offering to put yourself at the disposal of the committee to tell all you know about this matter.

Unfortunately Colonel Stewart acted on only part of this advice and refused to answer revealing questions.

Taking the stand himself and answering all the questions put to him, Mr. Rockefeller said:

Nobody having information on this matter has a right to withhold it.

No officer of any company has a right to make money for himself, either at the expense of his company or by reason of the position he holds.

Every stockholder of a company whose officers participated in this particular deal should do his utmost to get the facts revealed and to have the securities searched for any evidence which may enable the Senate Committee to get the evidence it seeks.

I believe that business can be run

on a sound, high, fair basis. As a stockholder in any company, I want no profit derived from compromise with right. I want no officer in any company in which I own stock, whether he be high or low, or any employee, to do anything that I would not myself be willing to do.

Before it ends I believe the Senate's oil inquiry will have done much to bring about the general code of ethics for big as well as little business, that the younger Rockefeller stands for. Then there will be no need for obstructing the law or of seeking legal loopholes for the shelter of the guilty. Meanwhile those who have the procedure of the courts in their hands should see that the law's delay in such cases should not become "a burning disgrace to the jurisdiction of the United States."

Arthur Capper
WASHINGTON, D. C.

The Bean Outlook

THE 1927 crop of about 16,872,000 bushels of dry edible beans is apparently fully equal to domestic demands. While the total production in 1926 was larger than in 1927, the pick of damaged beans in 1926 was heavy. If the same acreage is planted in 1928 as in 1927 an average yield would give about 17,800,000 bushels. An increase over that figure would probably result in a further reduction in prices, even allowing for average pick and for normal increase in consumption.

The quality this season in most states is exceptionally high and the supply of merchantable beans appears to be greater than last year. Hence, the 1927 crop is being marketed at price levels slightly lower as a whole than were paid for the 1926 and 1925 crops.

Since 1923 imports and exports have

been comparatively small. Foreign price levels range too low to justify the production of beans for export except for limited quantities of some special types. Either the surplus of any crop which is larger than our domestic requirements must be carried over, with a depressing effect on prices, of the following crop, or the entire crop must be marketed at prices influenced by the price paid for export beans.

The total production of pea beans in 1927 was about 4,800,000 bushels, which is twenty per cent less than in 1926 and thirty-seven per cent less than in 1925. However, losses from weather damage were light this season compared with unusually heavy damage the two previous years and on a handpicked basis the production is about the same as in 1926 and sixteen per cent less than in 1925.



SWAMPED

WE knew that Michigan Farmer readers would respond generously; but we had no idea of what was in store when we published the first two articles on Michigan Farmer Protective Service. The response was enormous—staggering. We are now compelled to get our breath. There has been no time to arrange for publication even a small number of the letters assuring us of the fullest cooperation of the farm people of the state in this effort to gain public respect for farm property. Our failure to run a coupon has added to the office work in explaining to our friends how to become a member of the Property Protective Service. For this reason we are publishing below a coupon which we urge our readers to use in sending in their memberships to the Michigan Farmer Protective Service. Write name and address plainly.

E. A. Shearer,
Manager, Michigan Farmer Protective Service,
1632 Lafayette Blvd., Detroit.

Dear Mr. Shearer:

Enclosed find twenty-five cents for which enroll me as a member of the Michigan Farmer Protective Service and send me the weather-proof, steel Protective Service Sign, the Registered Tag and Key Chain with proper registration in your Detroit offices, a signed Membership Certificate, and a Warning Sign carrying the announcement of awards for capturing thieves and trespassers. I am enclosing the stencil of my address from the Michigan Farmer showing that I am a boni fida subscriber to that publication.

Name R. D.

P. O. State

Prices showed a steady upward trend during the summer of 1927. They have declined slightly since September, but have averaged higher than in any similar period since 1923. Growers' returns were enhanced by the low pickage and by the high quality of the crop. The demand for pea beans for canning has been rapidly increasing during recent years, but its established position as the standard dry bean in grocery trade is being vigorously contested by the newer western types. The present supply of pea beans, which appears ample for normal demands, was produced with acre yields materially below the average. A slightly smaller acreage, with an average season, would produce a supply equal to probable needs.

There was a heavy decrease in the excessive production of red and dark red kidney beans following the rapid decline in prices at the beginning of 1927. The present supply is considerably below the average of the past five years and present prices are higher than the low levels of 1927. The market demand for these beans is relatively limited and plantings of this type may easily be overdone.

The production of great northern in 1927 was the largest on record—2,500,000 bushels compared with 1,335,000 in 1926, and 1,530,000 in 1925. Owing to depleted stocks in distributors' hands the 1927 crop moved rapidly at prices to growers only slightly below those of last year. The rapid increase in the production of this class of beans and the readiness with which it has been marketed has made it a strong factor in the white bean markets in competition with some of the older types; however, a further heavy increase in production in 1928 would be likely to result in considerably lower prices.

News of the Week

Harry Brooks, of Birmingham, Michigan, who made a recent record non-stop flight with the Ford flivver plane, was drowned off the coast of Sebastian, Florida, when his plane dived into the sea for some unknown cause. His plane has been recovered but search for his body has been given up.

The city of Chicago has bought the O'Leary homestead for \$36,000 and will erect a memorial fire station on this site where the famous Chicago fire started.

The much discussed beer-by-the-glass bill was overwhelmingly defeated by the Ontario, Canada, legislature.

The Detroit Edison Company and the Consumers' Power Company have joined forces physically at Jackson, Michigan. Their lines will be connected but the companies will be separate.

Melvin Thomas, 50 years old, a farmer living near Ann Arbor, was trampled to death by an angered bull in his barnyard.

Fifteen co-eds at Michigan State College have petitioned the college to let them take a mechanics course. Their petition has been granted.

The trimotored plane which Commander R. E. Bird will use to make his trip to the South Pole is at the Ford airport, in Dearborn.

Mrs. Gifford Pinchot, wife of the former governor of Pennsylvania, has announced herself as a candidate for congressional nomination.

Hildegard Braun, wife of a baker in Berlin, Germany, gave birth to her thirteenth consecutive pair of twins.

Two hundred and twenty students have been required to drop from the literary college of the University of Michigan because of their lack in scholarship.

A report from Washington indicates that more than 500,000 union workers are out of employment. This constitutes one-sixth of the memberships of the unions.

Lester Hendershot has invented a motor which is said to run without fuel. Electricity generated by the revolution of the earth is supposed to be the motive force.

LINING ATTIC TO KEEP OUT SOOT

I have a large attic in my home which could be used for storing a good many things except for the fact that dust and soot collect on everything. The roof does not seem to leak water, but does let the dust and soot through. Would it be feasible to tack something to the rafters and thus prevent damage to the goods stored in the attic? If so, what material would you suggest for the purpose? Since there would be about 1,800 square feet to cover, I am anxious to get the best material I can without making the cost too high. Some have suggested muslin, but a practical painter and paper hanger tells me that muslin would last only a couple of years and that it would hardly pay to put it on. Some have suggested building paper, but that is too easily torn. An insulating board of some kind might do, but I fear it would be rather expensive for so large a surface. Your suggestions will be appreciated.—R. J. N.

I doubt if tacking any material to the rafters will give you the results you want, because I think you will find that when this is done considerable soot and dust will still work in around the gable windows, through gable siding, around cornice joints, through and around gable and dormer windows, and so on. In my own home, I covered the sheathing with half-ply roofing well lapped and then put on good asphalt shingles, and still plenty of soot works into the attic.

I do not believe it will pay you to put on anything less than good wall board, or better, some of the insulating boards or plaster boards. Almost any of them are good, although they do cost a little more. Also the attic room ought to be totally enclosed and the windows calked and made as tight as you would for a living room, as they are small and this will not cost much except for the time. You will find that this insulation will be worth while in itself for making the house warmer in winter and cooler in summer. Unless you are willing to put enough into it to make the attic into a sort of room, it will hardly pay to do anything except to furnish large cloths to cover up the things you wish especially to protect. We should be glad to have the experience of some of our readers as to how they have improved their attics.

BEST TREATMENT FOR HARDWOOD FLOOR

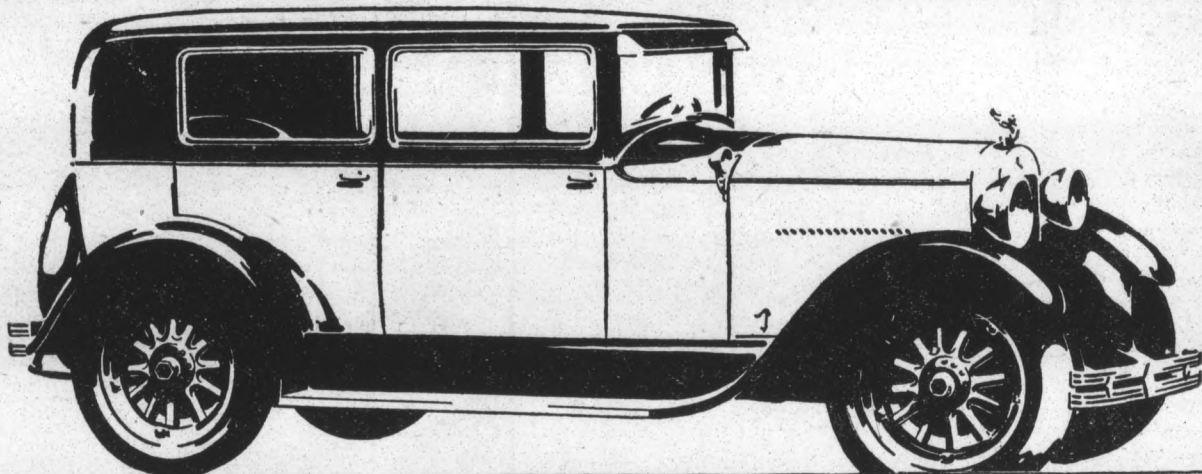
WAX is one of the best finishes for hardwood floors, as it preserves the natural grain of the wood and, if properly cared for, will improve with age. Worn places on a waxed floor are easily repaired because they may be retouched with the wax and still match the rest of the floor. The following suggestions from the New York College of Agriculture will be helpful:

A new floor should be put in shape and waxed by an expert. After a good surface has been obtained, it is not necessary to rewax it often. If it is dusted with a dry mop, and polished every month with a weighted brush, a woolen cloth, or a dry mop, it will stay in good condition.

Parts of the floor which are used should be given a thin coat of wax when they first show signs of wear. The wax should dry for an hour; then it should be polished. No retouching is necessary around the worn area.

Soiled spots may be removed with a cloth dipped in turpentine or gasoline. Either will remove the surface wax which holds the dirt and will leave the floor bright and clean. Water should not be used because it removes the wax finish. Leaky radiators sometimes cause white spots on waxed floors. If these spots do not yield to the turpentine or liquid wax treatment, rub them with a cloth dipped in weak ammonia water, and apply fresh wax. If these directions are followed, the entire floor will usually require waxing about once a year.

World's Greatest Value



Looks it-Acts it and You Can Prove It— Altogether or Part by Part

The New Essex Super-Six is a delight to the eye—in lines, fine exterior appointment and careful finish. Inside, you receive an immediate impression of luxurious quality enhanced by every detail.

The high-backed, form-fitting seats are richly upholstered. Sitting behind the new slender black steering wheel you look out over the shining beauty of cowl, hood, saddle-type lamps, heavy arching fenders, to the winged figure that expresses the spirit and fleetness under your hand. And before you is the handsome grouping of dials and meters upon the new ebony instrument board. Starter and electro-lock are here, too.

Bendix four-wheel brakes give positive stopping action and a sense of greater security. All doors are weather-stripped. The body is of silenced construction. And, withal—you have the famous Essex chassis, powered with the Super-Six, high-compression, high-efficiency motor that turns waste heat to power, giving brilliant, sustained performance never before known in this field.

To see, to examine, to ride in the New Essex Super-Six can bring only one conclusion—it is the World's Greatest Value—altogether or part by part.

SEDAN (4-door) \$795; COUPE \$745 (Rumble Seat \$30 extra)
COACH \$735

All prices f. o. b. Detroit, plus war excise tax
Buyers can pay for cars out of income at lowest available charge for interest, handling and insurance

BENDIX
4-wheel Brakes

Extra Large
Balloon Tires

New Vertical
Radiator Shutters

Instrument Panel
with: Motometer, Gas
Gauge, Speedometer,
Oil Gauge, and
Ammeter.

Wide
Heavily Crowned
Fenders

Steel Core, Hard Rubber
Steering Wheel.
Horn, light and
throttle controls on
the wheel

And many other
FEATURES
including—
The World's Famous
SUPER-SIX
MOTOR

ESSEX Super-6

HUDSON MOTOR CAR COMPANY • • • DETROIT

Oatmeal... Cod Liver Oil and Meal... Molasses

No Wonder Baby Chicks Thrive On It!

The pure, fresh oatmeal of Quaker Ful-O-Pep Chick Starter is just the thing for the little birds' tender digestive tracts. It is free from dust, or other irritating substances.

And authoritative tests prove oatmeal more digestible (96% available) than any other grain product!

Cod Liver Oil in this complete feed provides valuable ingredients to build strong, big bones. Cod Liver Meal tones up the birds' digestion so that all ingredients give more nourishment.

Quaker pioneered the use of these proved ingredients in Ful-O-Pep Chick Starter. And now Quaker offers to poultry owners another invaluable ingredient—molasses. This substance is blended with Ful-O-Pep Chick Starter by an exclusive Quaker process so that the mixture remains a dry feed, convenient to handle.

Included in the diet of baby chicks, molasses practically eliminates coccidiosis. Molasses is a remarkable food material, rich in vitamin B. It furnishes potash—ten times as much as some grain products.

Start them right—they'll live, they'll thrive, and grow to be the finest market fowl or pullets that you've ever had.

Send for your free copy of the 1928 Ful-O-Pep Poultry Book. Your name and address on the margin of this page, or a card, will do.



**Quaker
Ful-O-Pep
Chick Starter**
The Quaker Oats Company
CHICAGO, U. S. A.

Manufacturers of a complete line of live
stock and poultry feeds—look for the
striped sacks

STANDARDS AND GRADES FOR EGGS

IN discussing the U. S. Standards and Grades for eggs on the Farmers' Week poultry program Leon C. Todd said that the grades of eggs are not well established as yet in spite of a great deal of talk by producers, buyers, and consumers. Eggs are not graded like grain which can be sold under the same grades in both the Chicago and New York markets.

The federal grades established are specials, extras, standards, trades, standard dirty, trade dirty, and checks. The shell, air cell, white, yolk, and germ are studied in candling eggs. The color, size, and shape are also considered in making up the grade. In the buyers' grade are extras, standards, and trades. The wholesale grade will tolerate a few eggs of a lower grade mixed with a higher grade. The wholesaler sells to jobbers who recandle the eggs for stores, hotels, and restaurants.

Federal Inspectors

There are federal egg inspectors stationed in New York City, Philadelphia, and Chicago who will inspect a carload of eggs for a buyer on the basis of the wholesale grading system. The buyer will pay for the carload on the basis of the inspector's report and this method has been working out fairly well.

The system of egg grading must be less complicated if the trade accepts it. At present the buyers are not familiar with the federal grades and it is not believed that they will be accepted by the trade. The Canadian system is on a simpler basis and works better. A national egg grading system must be simple and readily applied from the farm to the consumer's table and must touch the pocketbook all along the line if it is to be a success.

In New York City they have the Mercantile Exchange which sets the standard for egg prices. The men stand in a room and trade back and forth with boys at the blackboard to mark up deals. Phone calls and private deals on the floor also make up

a part of the trading. Seats in the exchange are valuable and are only held by reliable brokers.

Pacific coast eggs are sold by the Pacific Coast Poultry Producer's Association and they put up a beautiful product. The eggs are auctioned off and the price obtained has a great influence on the New York egg market. A carload of these eggs can be sold from a small sample and the buyer can be sure that the remainder of the carload will be the same as the sample. The brokers feel safe in buying such a product. The Pacific egg producers pay six cents per dozen freight to get to the New York market.

To Be Common

It is predicted that eventually we will all be selling eggs on grade. Weight is only one factor that can be considered in selling eggs. It is evident that an egg which had been under an old hen for three weeks would still be of good weight and other factors are necessary to determine its quality.

Some buyers are now asking for dark yolks that formerly asked for light yolks. They used to think that a dark yolk meant a stale egg and then learned that the dark yolk contains more vitamins. By a dark yolk is meant the rich yellow yolk that appears dark when the eggs are candled.

It is better to clean eggs that are slightly dirty with a damp cloth rather than wash them all over. Washed eggs are often docked and are easily located by an experienced grader. Heated eggs cause much trouble in hot weather and when candled the yolks flop around like they were in water. They start incubating in a small way at a temperature of sixty-seven degrees. About forty-five degrees is a good storage temperature for the eggs gathered and held on the farm. They should be gathered at least three times per day in the summer and twice per day in the winter.

An Economical Candler

A good egg candler can be made from a one pound coffee can with a
(Continued on page 375)

Common Poultry Diseases

II.—Roup and Colds

ROUPE and colds are thought by many authorities to be different diseases, the one being simple catarrh and the other contagious catarrh. But the modern thought is that colds and roup are the same and need the same treatment. Certain symptoms of chicken pox also have been often mistaken for roup. Where chickens are kept under hygienic conditions and are properly fed, this disease is seldom seen except when weather conditions are bad. On the other hand, it is rather common where chickens are poorly fed and kept in filthy or poorly ventilated coops.

Symptoms—The first indication is a watery discharge from the nostrils. The discharge gradually accumulates and thickens, sealing the nostrils and finally producing a bulging of the bones below one or both eyes, causing the eyes to swell and gradually close. Because of this the disease is sometimes called swelled-head. There is sneezing and a shaking of the head in the efforts of the bird to get rid of the accumulations. As the nostrils become closed the breathing is through the mouth. From this the tongue becomes hard and dry, a condition commonly called "pip." Other symptoms are dullness, suppressed egg production and occasionally diarrhea.

Treatment—The correction of unsanitary conditions and feeding should be the first step in treatment as they are largely responsible for the disease. Often that alone will bring about a cure. However, to prevent the spread of the disease, the affected birds should be isolated in warm, well-ventilated quarters and treated as follows: Remove the exudations from the nose. Press the swollen parts to get the accumulations out through the nostrils. Apply to the nostrils with a medicine dropper a healing lotion of twenty drops of oil of eucalyptus to one ounce of mineral oil. Or, after removing the accumulations, one may dip the heads of the fowls into a solution of one teaspoonful of salt to a quart of warm water. A three per cent solution of boric acid will be just as effective. Do not hold the head under too long.

The medicinal treatment suggested above will be of little value if the coop is not thoroughly cleaned out and disinfected. Clean, tempting food should be given, and pure water in sanitary utensils should always be available. Some advise the use of potassium permanganate in the water to help check the spread of the disease. Enough to make the water a cherry red in color is recommended.

Dead birds should be buried deeply or burned, preferably the latter. Some of the most serious affected birds may not be worth the cost and trouble of cure; they should be killed and disposed of.

While roup is mostly a disease resulting from neglect and carelessness, chicken pox is an infectious disease often causing heavy losses. It will be discussed next week.

FERTILIZER ON SPUDS INSURES GOODRICH SEEDING

FOR fifteen years, Norman Goodrich, a farmer of Lapeer County, Michigan, has been growing forty acres of potatoes on his general farm in a rotation of potatoes, oats or rye, and clover. He says that fertilizing the potatoes not only pays him well on this crop but it has practically insured him a clover stand and this in a territory where clover failures have become the usual thing in that time.

Goodrich plows up about seventy acres of clover each year, putting this into potatoes, beans, and corn. The corn is put into a silo for milch cows which gives the owner the manure that he applies on his potato ground. He uses a three year rotation which forces him to plow but once in three years.

He puts out twenty acres of early potatoes and twenty acres of late ones. The clover sod for early potatoes is manured, from twelve to twenty loads per acre, then plowed as early as possible. The early potatoes are really a late variety—Petoskey—planted early. His custom is to drill broadcast 400 to 500 pounds of 0-12-12 fertilizer just before planting. He claims that this gets him marketable potatoes two weeks earlier than the local market run and gives him a greatly increased yield. During the season of 1927, he sold his early potatoes out of the field at \$1.15 a bushel while two weeks later the price had dropped to ninety cents a bushel. The twenty acres of early potatoes yielded 120 bushels per acre and the field returned him \$2,760 gross income.

On the late potatoes, Goodrich uses from 300 to 400 pounds of the same analysis fertilizer and does not plow until about ten days before planting. He sows rye after his early potatoes and oats the following spring after the late ones, seeding clover with these two grain crops.

"It is in the clover seeding that I get double value for my fertilizer," says Goodrich, "for I have not had a failure in clover in fifteen years except where the drill clogged up, even though rye is usually considered unsatisfactory as a clover nurse crops."—I. M.

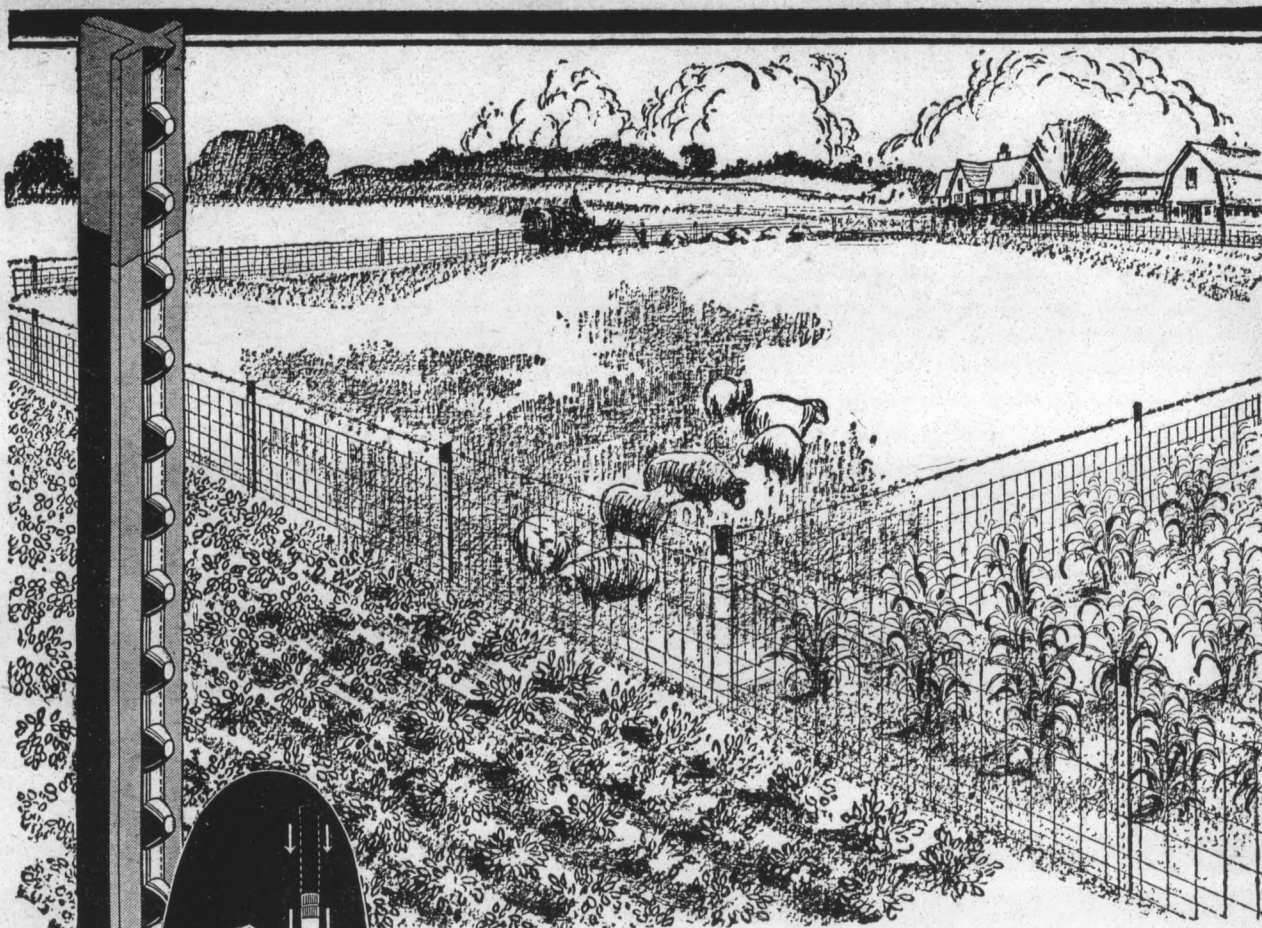
AIDS PROSPECTIVE FARMERS

(Continued from page 325)

At the time it was surveyed, it seemed to have no future whatever but a few months later, a man looking for a muskrat farm came in, went over the maps and settled upon this piece as an ideal location for a muskrat farm. These and dozens of other examples could be given to show how this work is constantly increasing in value. Waterpower prospects are also included in the survey. When the reports are published and printed they are in such terms that the ordinary man can understand them.

All land will produce something of value and when it produces that, little though it may be, it is an asset; when it is barren it is a liability, a perfect piece of tinder that serves to connect the fires left by campers and smokers with the valuable forest beyond. The Michigan land-economic survey has already shown its utility in aiding prospective settlers, accelerating the setting out of forests, pointing out game refuges, determining the best sites for recreational grounds and locating water power developments. When the surveyors get through with a county, they know what is down, up, and in between. And they have worked out a method of recording this that is so plain that anyone can read.—I. J. M.

Out of 17,000 electric signs in New York below 135th Street, 2,800 are restaurant signs, 1,300 advertise barber shops, 1,100 tobacco, while theaters come sevenths on the list with only 706 signs.



It costs more not to have good fences than to build them!

MUCH of the farmer's profits leak through run-down fences. Crops and live stock lost through weak spots in your fence lines will pay for many rods of fence. Pasturage and feed lost because of not enough fencing will pay for many more rods.

Today no farm can absorb such losses and still pay a profit. So good sound fences necessarily become the foundation for all profitable farming.

Good fences depend on good fence posts—RED TOP Steel Drive Posts. They prolong the useful life of your fence. RED TOPS are made of tough, springy, long-lived steel. That's why they drive so easily through the hardest soil and last so many years in the fence line.

One man with the RED TOP driver can drive 200 to 300 posts

a day and align them perfectly. They outlast four or five ordinary wood posts, eliminate yearly replacements and repairs, permit closer cultivation to the fence line, protect stock from lightning. RED TOPS can be so driven as to be easily withdrawn and re-driven in a new location, making them particularly adapted to temporary fence support.

Red Top

GUARANTEED

Steel Fence Posts

Go Now and See Your RED TOP Dealer

Let him explain how good fences save enough waste on the farm to pay for themselves, also how a well planned fence system will increase yearly profits. He knows. That's why he is a RED TOP distributor. Ask his advice.

RED TOP STEEL POST COMPANY

38-L South Dearborn Street, Chicago, Illinois

TRUCKS, WAGONS, WHEELS



Steel Wheels—to fit any running gear. Catalog tells how to save money on Steel or Wood Wheels, Farm Trucks, Wagons and Trailers. Send for catalog today. ELECTRIC WHEEL CO., 35 ELM STREET, QUINCY, ILLINOIS



BOLENS GARDEN TRACTOR

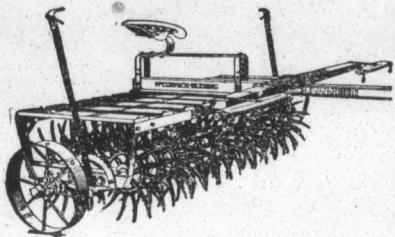
Nothing finer for Garden Plowing, Harrowing, Seeding, Cultivating, Spraying, Lawn Mowing, Belt Power.

Instant Hitch makes all tools quickly interchangeable. Important new tools. Arched Axle, Tool Control, Power Turn and other vital features. Power Pulley for Belt Work. Time Payment plan. Write today. GILSON MANUFACTURING CO., 789 Park Street, Port Washington, Wis.

Good Tillage Means BIGGER Crops

THE homely truth you have just read is old as the hills yet it is a fundamental of all agriculture, and therein lies its wisdom. Good Tillage is essentially a matter of using the best implements you can get. It is one of the most important farm operations and you can't afford to gamble with inferior, out-of-date equipment. The McCormick-Deering dealer in your town has a full line of modern, thrifty tillage tools for you to see and try.

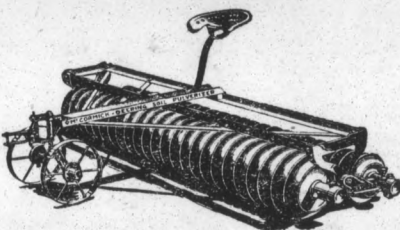
The McCormick-Deering ROTARY HOE



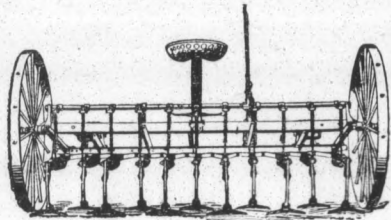
The McCormick-Deering Rotary Hoe does a perfect job cultivating young crops and breaking crusts. You can use it when the delicate plants are struggling through, and also after they are well up. It is the only tool that will cultivate right in around the young plants; the only tool to cultivate solid plantings of soybeans—without harm to the plants. It cannot be beat for winter wheat cultivation in the spring. Growers of mint, beets, potatoes, cotton, tobacco, garden truck, etc., find this a most effective mulcher, cultivator, and weed killer.

The McCormick-Deering SOIL PULVERIZER

The McCormick-Deering Soil Pulverizer makes a finely mulched, deep, mellow seedbed, ideal for conservation of moisture and maximum germination of the seed. No other type of implement will produce so fine a condition from top to bottom, and none will do it so economically. In small corn, wheat, oats, cotton, potatoes, sugar-cane, etc., it pulverizes crusts and lumps with no damage to the plants. It keeps down weeds, conserves moisture, keeping little plants firmly set in finely mulched soil.



The McCormick-Deering FIELD CULTIVATOR



McCormick-Deering Field Cultivators can be supplied in sizes ranging from 6 to 12 feet for tractors or horses. Equipped with tough teeth or shovels and capable of speedy cultivation of summer-fallow. Ideal for pulling up, without breaking roots, all forms of parasitic grass, weeds, etc. A popular implement with growers of alfalfa.

Complete information on any of these tools will be mailed on request.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave. of America Chicago, Ill.
(Incorporated)

93 Branch Houses in the U. S.; the following in Michigan Farmer territory--Detroit, Grand Rapids, Green Bay, Jackson, Saginaw

McCormick-Deering

Handy Man's Corner

SHARPENING DISKS

DEVICES of various types are now on the market for sharpening disk harrows, and I think that in general these can be bought more cheaply than makeshift devices can be made by the farmer himself. One type is a heavy frame into which a disk gang is fastened and the gang is then driven by means of belt and sprocket chain from a gas engine. The sharpening is done by a piece of hardened steel held against disk edge as it rotates. Other devices rotate the disk and sharpen it with a grinder. In some cases the disks are removed and ground separately and then polished at the same time. Still another method is to sharpen the disks while at work in the field by means of a heavy rod or pipe which hooks over the disk thimble or axle, while pressure on the other end by the operator holds a piece of sharp hardened steel or file against the edge as the disk turns.

For best work the disk should be sharpened each year, yet many go many years without attention and their owners wonder why they do not do satisfactory work.—I. D.

PROPER SPARK PLUGS HELP OIL PUMPING

MANY engines, after they become old, have a tendency to "pump oil" because of rings that no longer fit tightly. In many cases new rings are of little help when the cylinder itself is out of round, and yet the owner does not care to go to the expense of reboring the cylinders and installing oversize pistons and rings. Sometimes light steel springs or innerings under the old rings will make a marked difference in the operation and fuel economy of the engine.

In some cases the amount of oil that gets by the rings is so slight that it can hardly be detected as oil, but appears as a thick gummy carbon deposit on the piston head, combustion space, and spark plug. This gradually increases until the spark plug is short circuited and the cylinder fails to fire. Carbon-proof spark plugs of the correct type often give wonderfully improved operation for such engines or for engines that have a tendency to run too cool. These have a carbon-proof insulator or porcelain, with a series of high-temperature fins girdling the lower end. These sharp edges quickly become hot enough to burn off any deposits of soot or oil, thus overcoming carbon troubles.

A USE FOR DISCARDED CASINGS

HERE is my method of making an inexpensive but very efficient and satisfactory tire chain out of a pair of discarded tire casings of the same size as the tires on which they are to be used.

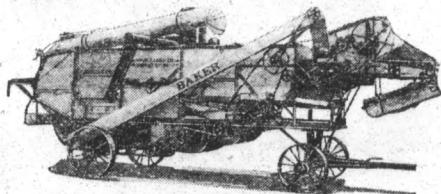
With a heavy pencil or piece of chalk, go around the outside of the old casings and make marks crosswise about 3½ inches apart. Saw a block off a pole and fasten it solidly end up at a convenient working height, and with a sharp cold chisel cut out between the marks so as to leave a strip about an inch to an inch and a half wide and also leave about an inch of the bead at each end of these cuts. Cut the old casing of such a length that the ends will lack three or four inches of meeting when put on the wheel, and rivet a heavy strap on the outside of each bead at one end and corresponding buckles on the other beads and your chain is ready to put on.

Astronomers who viewed the eclipse of the sun in Sumatra say that natives were alarmed at the eclipse, believing a dragon was trying to eat the sun.

A Michigan Farmer Liner Gets Results—Try One

THE BAKER STEEL GRAIN THRESHER

Built in Several Standard Sizes



THE A. D. BAKER CO.

Hyatt Roller Bearing equipped. 15 bar, 5 tooth track cylinder. Three distinct motions in straw. Double eccentric driven. Two clearing fans. Double belted. Reasonably priced and generous terms. The purchase prices of a Baker is not an indebtedness—only an investment. Visit our factory. You are welcome. Complete Tractor and Thresher Catalogs free.

Swanton, Ohio

REGISTERED and CERTIFIED SEED CORN

Clement's White Cap Yellow Dent, Picketts Yellow Dent and Michigan Yellow Dent (a very early dent), Certified Worthy Oats, Two-Row Barley and Sweet Clover Seed.

Why take a chance on common seed when our scientific method of drying and preparing our corn insures germination and vigor. Write for Circular and Sample.

PAUL C. CLEMENT, - Britton, Mich., Dept. B

Member of the Crop Improvement Association.

"FRIEND" TRACTION SPRAYERS
Write for catalog and learn about the many exclusive features of this fine sprayer.
"FRIEND" MANUFACTURING CO.
142 East Ave., Gasport, N. Y.

FRUIT TREES
Seeds—Berry Plants—Ornamentals
3-4 ft. Apple, 25c; 3-ft. Peach, 15c each post-paid. Guaranteed stock. Farm, Flower and Garden Seed. We have 500,000 Fruit Trees, Evergreens, Shade Trees, etc., in fact, our 1927 Catalog has everything for Garden, Farm and Lawn.
ALLEN'S NURSERY & SEED HOUSE
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Power Plants
\$35.00 **Fords**
Worth \$100.00
to \$300.00
REGU GOVERNOR
Ford Engines make valuable power plants when equipped with the Regu Governor. Fits like part of motor. Simple. Reliable. Easily installed. Automatic. Saves fuel, trouble and gives even speed for every load. Write for price, description and special 30-Day Trial Offer.
30 DAYS TRIAL
HARLAN MACHINE CO. Box M, HARLAN, IOWA

Sugar Beets Fertilizer Requirements

By James Tyson

THE Department of Soils of the Michigan State College has conducted a large number of co-operative field experiments in various sections of the state on a great many soil types in order to determine the fertilizer requirement of the more important field crops grown in the state. This work has been rapidly increased in recent years, but a vast amount of this kind of work remains to be done.

The sugar beet crop, being the most important cash crop grown in certain sections of Michigan, has received considerable attention, and a comparatively large amount of experimental work has already been done in determining the fertilizers to use in order to make the maximum profit with this crop.

Fertilizers Help on Best Soil

During the seasons of 1926 and 1927, experiments were conducted on the farms of Joe Davis at Fairgrove and Burt Thurston near Vassar in Tuscola County to study the effect of various analyses and amounts of fertilizer on the growth and sugar content of sugar beets grown on this soil. These two farms are located in what is recognized as the largest beet producing area in Michigan. The soil is known as Brookston silt loam. The soil is dark grayish silt loam. The subsoil is gray and yellow mottled sandy clay and the substratum is usually a sandy clay. This soil is a high lime soil. Alfalfa and sweet clover grow luxuriantly on it. Artificial drainage is necessary as the natural drainage is very poor, due to the almost flat topography of this area. However, fields located on this soil, when tile drained, can be worked much sooner than adjacent fields on soils of the same texture, even though the topography is rolling. This type of soil is probably the best natural sugar beet producing soil in Michigan. It is a naturally productive soil having a high lime content, high natural fertility, and a high content of organic matter. The two farms on which these experiments were conducted grow sweet clover and alfalfa in the rotation. The sweet clover is usually turned under as a green manure crop the year before planting sugar beets. Barnyard manure and high grade fertilizers containing a large percentage of phosphoric acid is also applied in the rotation. In this way the fertility of the soil and the organic matter is maintained and increased.

The results obtained up to the present time with these cooperative field experiments on the Davis and Thurston farms emphasize the fact that the beet crop pays an enormous rate of interest on the money invested in high grade fertilizer, even on soils of high fertility and with a high organic matter content. The beet, like the dairy cow, demands a balanced ration for its best development and production. Elements lacking in the ration must be supplied. Applications of 400 pounds of 4-16-4 fertilizer on the beet crop on Mr. Davis' farm increased the yield of beets to twenty-six tons per acre as compared to fifteen tons where no fertilizer was used. The same treatments on the Thurston farm increased the yield from thirteen and one-half tons with no fertilizer to seventeen and one-half tons with 400 pounds of 4-16-4. The tonnage of beets per acre is greatly increased, the cost of production per ton is decreased, and the profit per acre of beets is greatly increased.

At the present time there seems to be no correlation between sugar content of the beet and fertilizer treatment, unless it is that the sugar content tends to increase when the nutrient supply of the soil is optimum for beet production.

AGRITOL

the new land-clearing explosive
replacing Pyrotol, the
war-salvaged dynamite, now discontinued



THOUSANDS of farmers who never before used a stick of dynamite have, since the Government distribution of Pyrotol, learned to use explosives.

These farmers will never return to the old back-breaking methods of land-clearing. Yet they have wondered what to do when the supply of salvaged war explosives is exhausted. Must land improvement stop—must they continue farming on 30 acres and pay taxes on 40?

The Federal Government announces that no more Pyrotol will be distributed for agricultural use after April 1st. The du Pont Company, which prepared Pyrotol under Government contract, has met this situation with a new land-clearing explosive even more efficient than Pyrotol and about as economical.

AGRITOL

More sticks to the case

The price of Agritol is in itself an economy but that isn't all. Instead of 150 sticks of Pyrotol to a 50-pound case, there are about 172 sticks in the case of Agritol—a gain of 22 sticks. And every

stick is worth more because it has more heaving, shattering power than an equivalent stick of Pyrotol. And when you slit it for loading or cut it in half, Agritol doesn't waste.

Agritol is also more easily and more safely handled. It is much less inflammable than Pyrotol, and it resists moisture.

Everything that Pyrotol could do, Agritol will do; not just stump and boulder blasting, but also such agricultural work as tree planting and subsoiling.

Get Your County

Agricultural Agent's Advice

The extension service of your state agricultural college and your county agricultural agent will help you develop and improve your farm. Your county agricultural agent will give you sound, impartial advice. He'll tell you how you can buy explosives on the community carload plan and save money.

This coupon will bring you a valuable booklet describing AGRITOL—the new land-clearing explosive replacing Pyrotol. Mail the coupon today.

Your County Agricultural Agent will help
you Make More Money out of your farm



REG. U.S. PAT. OFF.

E. I. DU PONT DE NEMOURS & CO., INC.
Dept. MF-3, Explosives Department, Wilmington, Del.

Gentlemen: Please send me a copy, free, of your booklet describing Agritol for land clearing.

Name

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Mention Michigan Farmer When Writing to Advertisers

Get This Real Labor Saver **SHAW** GARDEN TRACTOR

Does Work of Several Men
Cuts Expenses!
Write for Liberal Offer

The SHAW DU-ALL plows, harrows, seeds, furrows, mows—does every small farm and garden power job. Runs belt machinery. Costs but 3 cents an hour to run. Light, sturdy, easy to handle. Works close to rows without damage to plants. Pays for itself in time and labor saved in a season. Can be used every day in the year. Made with single or twin engines, walking or riding types. Patented tool control. Gauge wheel regulates depth of cultivating. Satisfied owners in every state. Ironclad guarantee. A boy can operate it.

10-Day Trial Offer!
Try the SHAW at our risk. Get our liberal Trial Offer and low Direct-from-Factory Price before you buy any tractor. A postcard brings you FREE CATALOG and full details. Write today.

THE SHAW MFG. CO.
3503 Front St., Galesburg, Kansas

REVERSE GEAR—The SHAW DU-ALL can now be equipped with a reverse. An exclusive SHAW feature. Has two speeds forward. Worlds of power.

PLOWING
RUNNING WASHING MACHINE
CULTIVATOR RIDING ATTACHMENT

GALVANIZED Roofing & Siding

Buy Your Roofing Direct

The famous old GLOBE Brand, proved right by satisfied users for 3 generations, delivered freight prepaid to your station—direct from our mill warehouse. You get quick service, quality, reliability and

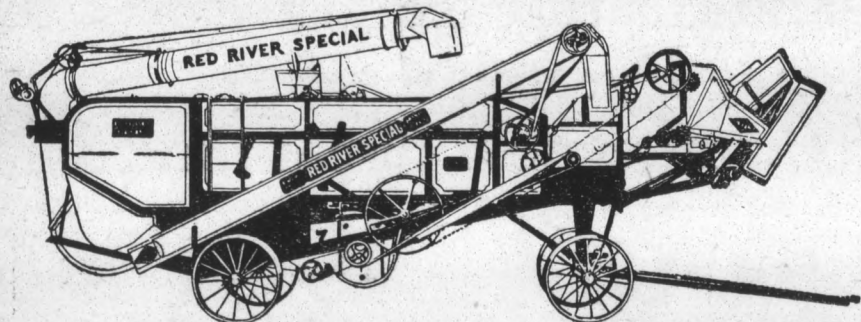
The Best Value Money Can Buy

Plain, Corrugated and V-Crimp Sheets, long-lasting, easy to apply; fireproof, lightning proof, weather proof. Also Cluster Shingles, Standing Seam Roofing, Eaves Trough, Conductor Pipes, Culverts, etc. High quality—and low cost. Buy direct from manufacturers. Write for price list and sample. (11)

THE GLOBE IRON ROOFING & CORRUGATING CO.
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CINCINNATI, OHIO

FREE SAMPLE WRITE TODAY

The Finest, Fastest, Cleanest Thresher The 28x46 for 1928



the most popular machine in 1927
& again improved &

- 5 Big Shakers for Big Separating Capacity
- 13 Hyatt Roller Bearings—at every main bearing point
- 13 Weatherproof Fiber Pulleys—on every high speed drive

The 4 Threshermen—

The Big Cylinder

The Man Behind the Gun

The Steel Winged Beater

The Beating Shakers

—the greatest combination ever devised for getting the grain from the straw.

Many other features including Armco Ingot Iron in all sheet metal parts, Double Belting, Alemite Zerk Lubrication, the Tilting Feeder, French and Hecht Wheels, Bridge Truss Construction, and a host of other features built to do clean threshing fast in a machine built to last for years to come.

80 years of building by the Nichols & Shepard Company is back of the 1928 28x46—the Finest, Fastest, Cleanest Thresher.

You will want to know more of this thresher. Send the Coupon for our book, "The Finest, Fastest, Cleanest Thresher," and see why it is all that.

The Red River Special Line for 1928
Threshers
 22x36
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The "28" for '28
NICHOLS & SHEPARD
 In Continuous Business Since 1848

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 Please send me the book: "The Finest, Fastest, Cleanest Thresher."

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 City..... State.....
 My tractor is a..... size..... make.....

The RED RIVER SPECIAL Line

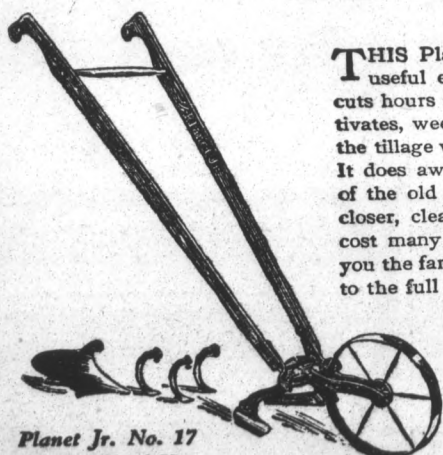
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MEN BIG PAY NOW!
 Easy to sell our quality line of barn and house Paints, Varnishes, Stains, Brushes, etc. Factory to user! Lowest prices—big commissions—easy sales! Paint salesmen make the big money—season just starting. Write quick for our wonderful new sales plan.
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NOW is the time to order
 Nursery Stock
SELECTED TREES AND PLANTS
 A complete assortment—hardy and northern-grown
 Write for 1928 Catalog
 "West has the Best" Lock Box 142
T. B. WEST & SONS
 PERRY - LAKE COUNTY - OHIO

The most valuable implement on your farm

Planet Jr.



THIS Planet Jr. No. 17 Single Wheel Hoe is useful every day of the growing season. It cuts hours off the time of hoeing. It plows, cultivates, weeds, ridges, furrows—in fact does all the tillage work in even the largest home garden. It does away with the back-breaking drudgery of the old hand hoe. Does a better job, too—closer, cleaner and deeper. It earns back its first cost many times over the first season, and gives you the farm home's rightful privilege—to enjoy to the full the fat of the land.

Every farm should have a garden—every garden a Planet Jr. Write for catalog and our free garden booklet "Home Gardens—How to 'Grow What You Eat'"

S. L. ALLEN & CO., Inc.
 Dept. 58-D 5th & Glenwood Ave., Phila.

ORCHARD AND GARDEN

OUR GARDEN

FOR many years we have realized the real value of a vegetable garden both in the city, where space was limited, and later in the country where a larger plot of ground was available. Our garden has been planned and worked out with much success.

The planning of the garden should be done early. The location and space would determine, to a certain extent, just what vegetables could be planted and the personal tastes of the family being considered as to which varieties to plant. Each member of the family is given a part of the work caring for certain vegetables that best suits his fancy. This we find has created a competitive spirit which adds to the interest of the work and helps to make a well-kept garden.

A sunny sandy slope is best adapted for garden purposes with from eight to twelve inches of soil. The plowing or spading has been done as early as conditions of the soil would permit. With a liberal allowance of well rotted barnyard manure worked into the soil, the soil is well pulverized for a depth of at least three inches; this makes a suitable bed for the seeds. Now you are ready to mark your rows and plant. Many of our seeds are saved from last year's garden, such as radishes, cucumbers, pumpkin, squash, and many others. To be sure of germination the seeds should be tested. An easy way to do this is to take pieces of heavy cloth that will hold moisture, dampen them, and put a number of the seeds between layers or folds of the cloth. Keep them in a warm place and sprinkled well with warm water. In a few days you will be able to tell just what per cent of your seeds will grow. Plant the varieties that grow tallest on the north and west sides of the garden. We save time and labor by using the hand drill as most seeds can be planted in this way. As carrots and parsnips are slow to germinate, plant a few radish seeds in the rows with them. This helps to mark the rows for cultivation until the slow seeds are up.

We always found room for a few rows of early potatoes, even in the small garden. Get good seed for these as seed potatoes are injured by extremes of temperature. Cut them just before planting with two or more eyes in each piece.

Do not cultivate the garden too deep but get the weeds early and all the time. In a few weeks you will feel well repaid for your pains. Our garden lasts most of the year as beets and carrots and other root vegetables keep nicely all winter in boxes of clean sand. This saves canning.—M. S.

FRUIT PROBLEMS DISCUSSED

THE Michigan State Horticultural held an interesting spring meeting at Pontiac, February 28-29. There were several hundred in attendance at most all times and everybody was awake throughout the sessions. The subject and the discussions were enough to keep them awake.

The Tuesday morning session started with a talk by John Sims on the need of humus in the orchard soils. Orchards with plenty of humus are surprisingly able to withstand drouth and produce larger fruit than those lacking in it. Cover crops and the use of alfalfa are solutions of the humus problems. They are helped by the addition of nitrogenous fertilizers to stimulate cover crop growth.

Following talk on the geology of Eastern Michigan fruit soils by W. S. Toothacker, R. J. Coryell spoke of the back yard fruit garden. Mr. Coryell

is not favorable to the quite common thought that fruit growing should be left to specialists but that most farmers can care for a home fruit garden with profit.

E. F. Palmer, of Vineland Station, Ontario, gave a very fine talk on peach cultural practices in Ontario. It was full of practical information which will be given in excerpts of his talk in some future issue.

Judge Arthur J. Tuttle, of Detroit, told of his experience with the home-stead orchard in Ingham County. The orchard contains 4,000 trees of several varieties, so the Judge has no pollination problems. His experiences were all the more interesting because of his ability to tell them in an interesting way.

The Wednesday morning session was started by a very interesting talk by H. A. Cardinell, of the College, on the mechanics of spraying. More of his talk will appear later.

W. C. Dutton, also of the College, told of the spray material side of the spray situation. Liquid lime sulphur, dry lime sulphur, dry mixed, and oils were discussed. Generally he preferred the liquid lime-sulphur although the dry lime sulphur was effective but much more costly. Oils were valuable in the control of insects on which the lime-sulphur was not effective. It was also more pleasant to handle. The delayed dormant spray was the most effective in the control of aphids and scale. Nicotine was the best means of control for aphids. The prepared commercial lime-sulphur substitutes were not very effective.

H. D. Hootman, of the college, told of his investigation of the pollination problems of fruit and the value of bees in solving them. His article, on page three, in this issue, and continued next week, gives this information.

Frank Farnsworth of Ohio, impressed the need of supervision of help on orchard work. He also said that no one orchard practice would bring success, but that proper pruning, spraying, fertilization, and other operations were necessary.

"SOUL MATES" IN THE ORCHARD

(Continued from page 325)

comparing development of seeds, a misshaped fruit often results.

Michigan is one of the older apple growing states. The idea of our forefathers in setting out these old home orchards, that are still standing on many farms was to assure a supply of apples throughout the year for the family's needs. The orchard was generally never more than two to four acres in extent and on this comparatively small area were often planted a few trees each of Red Astrachan, Autumn Strawberry, Baldwin, Northern Spy, Rambo, Golden Russet, and Ben Davis. Under these conditions of orcharding cross-pollination was amply provided.

About 1900, apple growing received a new impetus through the demand for fruit coming from our rapidly growing cities. In recent years the demand for certain particular varieties have greatly increased. This demand for certain varieties has largely determined the planting practice of many commercial fruit growers.

As a result it is not uncommon to find an orchard of ten, twenty, and even sometimes as large as sixty acres that has been planted to a single variety such as McIntosh, Northern Spy, Delicious, or Rhode Island Greening without providing for cross-pollination.

In a later article I will discuss practices that may be resorted to in correcting the pollination problem in some of these orchards in which too many trees of a single variety have been planted.

Radio Department

WHICH DO YOU LIKE BEST?

NO audience assembled has the privilege of being more fickle if it chooses, than does the radio audience. The great variety of programs that are put on the air gives us the opportunity of "getting what we want when we want it."

But the big problem for the folks who prepare the radio programs is to know what the majority of the vast radio audience wants. Through this department, let's have an expression of the opinions as to what kind of radio programs you like best. When you turn the dials of your radio, what kind of programs do you seek first?

For any of the letters we print we will award a special prize. Address your letters to the Radio Editor, Michigan Farmer, Detroit, before March 17.

RADIO HAS PAID FOR ITSELF

MY husband bought a radio for a Christmas gift to the family this year, and I wish to say it has already paid for itself. Each day, we get the market prices on everything one grows on the farm. And not only that—we have been well entertained since we have this "companion." It's such a blessing to tune in and get any information one wants, even to know what to cook each day. "The Home Makers' Hour" is very good advice for every housewife. The Sunday sermons are most inspiring and there is little chance for misunderstanding.

The use of the radio increases tremendously the scope of those who seek to supplant misinformation with correct information, and falsehood with truth. I would never want to be without our radio again. I hope it won't be long until every farm has a receiving set. The cost is so little to keep one in good order. It surely is true that out of the unknown somewhere, people are getting wonderful entertainment for both young and old. The best way to forget your troubles or tired feelings, is to tune in and get anything you wish to hear.—Mrs. A. C. M.

NEWS FROM THE AIR

TUNE in on the non-partisan programs that are sponsored by the National League of Women Voters through station WEAJ if you would gather some valuable pre-election information. The programs are on the air every Tuesday night from seven to seven-thirty E. S. T. March 13 the subject will be "Power and the Public;" March 20, "What Congress is Doing;" and March 27, "How We Nominate Our Presidents."

Mutt and Jeff Now in Radio

Mutt and Jeff, synonymous for all elongated and diminutive human beings seen together, have invaded the broadcasting field. Station WEAJ proudly announced a few months ago that Paul Duman, the shortest radio announcer had joined their staff. The long part of the duo is now complete through the recent engagement of Edmund Ruffner, who stands six feet, five and one-half inches, a veritable sky-scraper. The question of adjusting announcers to microphones or microphones to announcers is now becoming a problem at that station.

Radio Audience Puts on Candy Show

The first large public exhibition of candy and cakes which was held in the grand ball room of the Savoy-Plaza, New York, last week was the result of the labors of at least ten thousand members of the radio audience of Mrs. Eljnor Hanna, head of the Candy Institute. Besides cakes

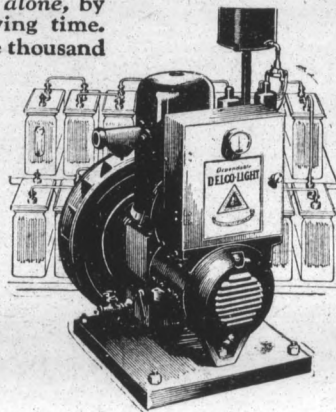
300,000 farmers vouch for every claim we make. That's why more DELCO-LIGHT plants are used today than all other farm electric plants combined!

HELP yourself to bigger profits in 1928. Help yourself to shorter hours—lightened labor. A DELCO-LIGHT is all you need to gain both of these objectives.

Talk to any farmer who owns a DELCO-LIGHT. Five minutes with this man will do more to convince you than anything it's possible for us to say. Talk, for instance, to D. J. Sjolseth. He'll tell you how egg production jumped just 400% after he lighted his hen house with DELCO-LIGHT. Talk to August Moukemeier. DELCO-LIGHT enabled him to pocket \$135 extra profit from his hens in just 3 months' time. How is that for making easy money? Talk to Julius Schramm. He raises 250 to 300 hogs per year. Says his DELCO-LIGHT paid for itself in the hog barn alone, by saving pigs at farrowing time.

Other farmers by the thousand are reaping extra profits every year in similar ways. And you can do as well as any of them in proportion to the volume of your farm production.

The New Combination Delco-Light "does everything but think." Combines all the advantages of both Automatic and Battery Service Systems.



A Product of General Motors

Delco Light Co.,
Flint Sales Branch,
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The E. H. Walker Co.,
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Stover Co., Inc.
445 E. Erie St.
Chicago, Ill.

and candies made by radio listeners who used her recipes, there were also displays of elaborate candy decorations. At the end of the exhibit all cakes and candies were auctioned off for the benefit of the Dug-Out Club of New York, an organization of wounded war veterans.

Two In One

A recent lengthy letter from a listener-in closed with this paragraph: "Thanks for the diversified aerial fare which enables me to keep my head in the clouds while my hands are in the dish pan."

Never place batteries near a radiator, advises radio experts, as this will tend to cause them to dry out and therefore shorten their life. It is also advisable to keep the batteries away from open windows or any place where the change in temperature or humidity will affect them. Examine all batteries carefully after testing them. See that the wax is not cracked. The container should not be wet on the bottom nor should there be white spots on it. See that the terminals are not green with corrosion.

Shorter Hours Bigger Profits

that's what Delco-Light
now offers every farmer

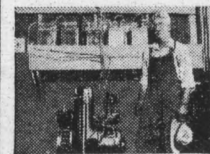
Saves work in a hundred ways—Builds up profits in as many more. Increases egg production. Saves pigs at farrowing time. Provides running water and thus ends fire hazard. Cuts cost of hired help. Makes the farm home a healthier, happier place to live in.



Now Delco-Light supplies hand labor for running the feed grinder, sheller, churn and cream separator. Does the work quicker and better, too.



Not only bright, clean electric light, but power too, that runs the washing machine, vacuum cleaner, electric iron and D-L Water System.



Ten Years' Use
"We bought our Delco-Light Plant 10 years ago," writes C. R. Willis. "Since then we have had continuous service. Delco-Light is certainly an all-around good investment for any farmer."



38 Years of Service
"Our Delco-Light Plant has run a total of 20,075 hours," says M. E. Maxwell. "This is equivalent to 38 years of average farm service. This is such a remarkable record, I wanted you to know about it."

A Scientific Marvel

With this new-type plant you can use up to 7 or 8 electric lamps and draw the necessary current right from the battery. Thus the engine runs infrequently. Less fuel is used. But throw on a heavier load. Instantly and automatically the engine starts—generates current to carry the heavier load plus a surplus supply to recharge the battery! Thus only a small battery is needed. And even this small battery lasts longer.

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Our Readers' Corner

Facts and Opinions by Michigan Farm Folks

RECOGNIZE PIONEER FARMERS

I HEARTILY agree with the idea expressed through the Farmer a few weeks ago by Mr. I. H. Butterfield that there should be some way devised to give recognition to our earlier farmers and live stock breeders who are either now retired or passed to the great beyond as well as those now in their prime. Mr. Butterfield should be among the first to have this recognition.

It strikes me that it would be a fine thing could a history be prepared of our earlier live stock breeders especially as well as a room somewhere given over to as many of their portraits as possible to be obtained. Enlarged photos would be sufficient. As to obtaining such a room it should be at M. S. C. and if none now obtainable the state could well afford to provide one.

Mr. Butterfield will have the sympathy of all of us in the loss of his wife.—J. W. Clapp.

HELP THE LITTLE HEATHEN

I MAY go to the rubbish heap with this letter, but I have felt that the beautiful pheasant that makes our fields and woods more beautiful is unjustly blamed for breaking up financially quite a per cent of the farmers. Too bad some people begrudge a few kernels of corn or wheat that the beautiful birds might eat. It seems that even if they should eat a hearty meal off Mr. Farmer once in a while, he should feel he was well paid when in the early morning to hear their voices calling through the meadows. Just put a handful of grain where they could get it when the supply of rose seeds and weeds and bugs are gone. Please just help the little heathen live and make our barren world more beautiful. We are farmers and throw feed to them. We never have killed one and have our farm posted just to try and save them, for there seems not many birds, quails or partridges left. When we read Mr. J. J. Forward's letter, we could not help trying to save the pheasant. We understand one of our wealthy neighbors complained that a half dozen pheasants were stealing his corn. So it seems it was investigated and two killed and all they found was the wild rose seed and weed seed. But he has the satisfaction of having two less birds. Long live the beautiful birds, and don't begrudge them a good meal once in a while. Want to say we have taken your paper twenty years and am a paid up subscriber until 1937. Seems we must enjoy every page.—Mrs. S. W. P.

TROUBLE WITH HUNTERS

I WAS much interested in Angelo Gennara's article regarding the need of the trespass law as seen in your January 21 issue and still he was in no man's land. My troubles here are rabbit hunters. It's a quiet Sunday when we don't have from one to six cars parked. Sometimes so that we are unable to get out on the main road ourselves.

Last fall six men with as many dogs started through the brush. I called to them. They answered with words not fit to print. I called again and told them I wanted to talk with them. They told me where to go. I said all right, I'll shoot if you don't come out. I shot in the air. (a mistake, of course). They answered with a shot covering the front porch. Two of them came out and I went to meet them. They wanted to know, in broken Eng-

lish, if I was king around here. I said no, I'm just a farmer with horses and cows running around where you're hunting. One of them called me a name that Dempsey couldn't get away with, being only two feet from him and not much of a fighter, I only gave him a slap. He all but broke my arm with the gun.

I didn't fall but was done for. He then turned the gun, pulled back the hammer and his partner cried, "No, no, don't kill that man." I walked back to the house and they went about their hunting and I nursed a bruised arm for two weeks. I guess we farmers need trespass protection all right before some of us hot-headed ones take the law in our own hands.—T. H. Whitburn.

THE RURAL TAXES

MY idea of the tax problem would be to make those who get their living off of the roads, pay to build them and keep them up, and put the prohibition offenders and such minor offenders to building roads instead of building larger prisons to put them in. By keeping the prisoners on roads and in open air, it would be good for the men and would be doing the state some good instead of making an expense. I would put on more gas tax to have the tourists help pay for the roads and state parks that are for their benefit instead of putting the burden on real estate and improvements as has been.

If one has forty acres of wild land the tax is five dollars and on some improved forty acres it is eighty dollars. When someone is living on the land, he will have motors which can be taxed, also the produce he has makes work for the railroads, etc. This helps to keep industry and business going in the state, so he is really helping the state instead of being a liability to it. So why tax him more than the one who doesn't contribute anything?

When they compare the tourist trade to the lumber industry, there is something wrong somewhere, as I can name any number of people here who make a living off of lumbering, but I have the first one to see who makes a living off of tourists in the country. I am not trying to hand it to the tourists as I enjoy touring as well as anybody, but I fail to see where anybody gets rich off of us as we don't keep it up the year around as they do in lumbering.

When we hear how many tourists were here and how much they spend and then see our taxes go up makes us think of the story about the little boy who swallowed the nickel. They sent for the doctor to get it out. The next day his father was telling about it and said the doctor must have thought he swallowed the nickel because he made him cough up five dollars.

We sure like the Michigan Farmer and appreciate what it is doing for the farmer. We hope you can find some form of taxation that will be more equalized and help us to enjoy life on the farm again.—B. A. Hillson.

RURAL CHURCHES

MR. S. A. Walton's article regarding rural churches in the issue of February 18 struck a responsive chord in me. I heartily endorse everything the writer mentions, not only regarding rural churches, but the city churches as well.

The church may well be compared

to an electric light plant, everything functioning fine when everything is in place, but let the wires be severed from the source of power and everything is in darkness. That's the way with most of the churches today trying to function with connections cut from the source of power. Too many preachers today try to convert the pocket book first. Convert the heart first and the pocket book opens easily. What were burdens then become privileges. —Mrs. F. W. B.

NOT A PUNISHMENT

IN "Our Readers' Corner," February 11, G. E. C. says, "Farming was inflicted upon mankind as a punishment." How so? Before Adam was created "there was not a man to till the ground." Gen. 2:5. Gen. 2:15 "And the Lord God took the man, and put him in the Garden of Eden to dress it and to keep it." By their transgression Adam and Eve brought death and sorrow into the earth, and were banished from the garden, "lest he put forth his hand, and take also of the tree of life and eat, and live forever." God cursed the serpent "Because thou hast done this thing." God bestowed upon Adam the blessing of work of keeping mind and body usefully employed, evidently hoping to keep him out of mischief. God said in Gen. 3:17 "Cursed is the ground for thy sake."

Vain hope for in Gen. 8:21 we read, "I will not again curse the ground any more for man's sake for the imagination of man's heart is evil from his youth."

So we see God was trying to help man when he was sent "to till the ground from whence he was taken." —John W. Coleman.

THE HUNTING SITUATION

I WANT to add my protest to the state taking an unfair advantage of the farmer. They turn their stock and fowls loose to get their living off the farmers, then fine the farmer when he tries to protect his crops from being destroyed.

We never knew the quails to destroy any crops except to eat the shelled buckwheat, but the pheasants have utterly destroyed or driven the quails out of the community. They have destroyed unmeasured quantities of corn, oats, and garden crops. They have killed many chickens, especially the young ones that wandered very far from the buildings. How do I know it was pheasants? Well, a hawk, skunk, or other predatory animal will eat what they kill. So when you find the dead bodies of chickens here and there with the skin torn and head pecked, you readily conclude that it was done by something which did not care to eat it, but only to kill it, and nothing but a pheasant would kill fowls just for the sake of killing. But do we get any redress from the owner of these destroyers? No indeed!

I think instead of fining the farmers, they should be allowed a bounty on all they kill when found destroying crops. I don't mean an open bounty so that some few can make a business of hunting them any place, but only the farmers who suffer the losses. Then, as the birds belong to the state, which charges a fee of the hunters, let people hunt on state land. But oh, no one must even shoot off a gun on the state land! That is sacred.

The old Roman and early English tyrannies can scarcely be compared with this. Worse than all sometimes the "gentleman" pheasant makes an immoral attack on an innocent unsuspecting hen with the result that when the eggs hatch, we have a lot of little sneaking half-breeds which are so ashamed they won't come near the house for feed and the hen feels so disgraced she tries to keep them hidden. Let's get rid of this menace. —L. M. C.



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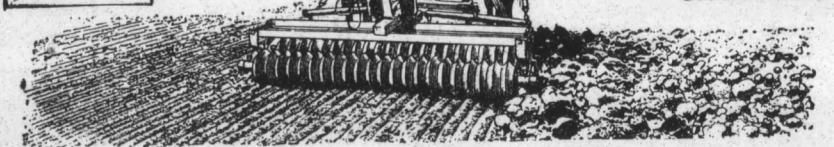
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News and Views

From INGLESIDE FARM—By Stanley Powell

FROM nothing at all ten years ago to a volume of business amounting to \$9,000,000 during 1927 is some record for an organization of farmers, whom we are told "won't stick together." To have distributed back to the members during the last five years and eight months patronage dividends totalling \$53,000 and at the same time to have accumulated a surplus of \$29,000 still retained in the treasury, is a rather astonishing achievement for a group of "green" farmers who had to go up against a merciless competition with firmly-entrenched, adequately-financed old-line business, having the experience, seasoned management, and accumulated profits of generations at their disposal to fight competition.



Yet such were some of the remarkable facts included in the reports presented to the delegates in attendance at the tenth annual meeting of the Michigan Live Stock Exchange held at Lansing, February 23-24, 1928.

Slipping away from Ingleside for about twenty-four hours it was my pleasure and privilege to attend all the sessions of this memorable convention, from the opening banquet on the evening of the 23rd on through the closing business session on the afternoon of the second day.

While the banquet was a new feature of the meeting, it proved to be a very popular one and will undoubtedly become an annual occasion. Crowding the facilities of the Hotel Kerns to capacity, 454 men and women interested in live stock marketing enjoyed a fine meal, heartening fellowship, and a splendid program of addresses. For those so inclined, an old-time dance completed the evening's entertainment. The fact that almost half of those attending the banquet were women illustrates the growing recognition of the truth that the farm enterprise is a family partnership.

Vision Becomes a Reality

Opening the banquet program, Mr. E. A. Beamer of Blissfield, president of the Michigan Live Stock Exchange, said, "Ten years ago when the organizers met and launched this Exchange, they had nothing but a vision. Tonight that vision has become a reality. Our Exchange is selling more stock in the Detroit Yards than any other firm and over forty per cent of all the stock handled there. We are a part of the National Live Stock Producers Association which operates cooperative commission firms on thirteen of the largest live stock markets in the country. We have gone a long ways toward the fulfillment of the dreams of our founders that we might set up machinery that would favorably influence prices and handle our live stock all the way to the packer or other final purchaser."

Added facts regarding the history and achievements of the National Live Stock Producers Association were brought out at the Friday afternoon session when the delegates listened to an address by Mr. C. A. Stewart of Chicago, Executive Secretary of that organization. Mr. Stewart showed that live stock prices at one market are almost immediately affected by fluctuations at other terminals and that therefore marketing of live stock is a national problem requiring a national organization.

Established six years ago, the National Live Stock Producers Association has grown steadily until during 1927 it handled stock valued at \$631,960,210.05 which was 10.54% of all the stock marketed through the terminal yards.

Mr. Stewart explained that the activities of the association were not confined to marketing, but included publicity, transportation, legislation, research, statistics, and public relations. He emphasized the slogan which appears in connection with the emblem of the organization. This slogan is, "In the Hands of a Friend from Beginning to End."

President Beamer, in his annual report, voiced as the ideal of the state organization that 100 per cent of the locals should patronize the Exchange with 100 per cent of their business. He announced that a "100 Per Cent Club" would be organized, to be composed of those locals that sent all of their live stock to the cooperative terminals.

Exchange Is Flourishing

The salesmen who sell the various classes of stock for the Michigan Live Stock Exchange were present and each gave a short talk. The local managers and delegates availed themselves of the opportunity to ask the salesmen many interesting questions about market conditions and selling methods.

Other features of the sessions were the consideration of resolutions and an illustrated discussion on accounting methods suitable for a local live stock shipping co-op. This was led by Prof. Howland of the M. S. C. Economics Department.

Class Visits Ingleside

We were happily surprised a few days ago when the agricultural class from the Ionia High School visited Ingleside to look over our pure-bred stock. They were a fine bunch of boys, orderly, courteous, and full of intelligent questions. Through class room work, laboratory experiments, home projects and farm visits they are learning both the art and the science of agriculture.

When I went to high school I had no such opportunity. In those days the farm boy who went to a town or city high school never heard a kind word about his father's business. Then everything tended to head him away from the farm. Today the Smith-Hughes work is giving rural life new dignity in the eyes of thousands of high school students throughout the land.

A Most Welcome Check

One of the pleasantest things which has happened in a long time around here was the receipt today from the Ohio Wool Growers Cooperative Association of a check covering the cash advance on our 1928 wool clip consigned to them recently. On most Michigan farms the money side of the enterprise goes in cycles. That is, there are periods when there will be frequent and encouraging sources of income and then there will be weeks and often months when expenses will run on mercilessly, while income dwindles sickly.

This is another busy week. Grange play work Monday and Friday evening; speak on "The Farmer's Tax Burden" at a community institute some thirty miles away, Tuesday evening; social at the Grange Hall, Wednesday evening; Parent-Teacher Association Thursday evening; and regular bi-weekly meeting of our local Grange Saturday night. I'm sighing for some of those "long winter evenings" at home that farmers are supposed to enjoy.

FOREST GROWTH CAN BE INCREASED GREATLY

ACCORDING to Forestry Service experts, the annual growth of wood products in our forests can, with proper management, be increased to more than four times its present volume. Adequate protections from fire, plus crude forestry practice would increase the present estimated net growth of six billion cubic feet per year to ten billion by 1950, and intensive management of our forests as crops may be expected ultimately to result in an annual yield of more than twenty-seven billion cubic feet.

The Forest Service estimates that nearly half of our forest area is at present producing no net growth, either because it is virgin forest where growth is offset by decay, or because it is so denuded by overcutting and fire as to be unproductive. The encouraging forecast is that with provisions made for a succeeding forest growth upon the removal of the remaining virgin forest, and with effective fire control, care, and planting, our forest area will again come into production. Even a small woodlot on some waste places on the farm, added to the windbreak every farm should have, will take care of much of the farm's timber needs.

Readers interested in replanting or better management of farm windbreaks or woodlots can secure bulletins and other helpful information from the Forest Service, Washington, D. C., or through their own agricultural experiment station.

PHOSPHOROUS BOOSTED THIS CORN

(Continued from page 327)
near the seed?" That farmer was sure looking for information.

"The crop gets the benefit of it almost as soon as growth starts. Corn fertilized in the hill shoots right ahead of that fertilized in other ways and this stimulation of early growth leads to earlier maturity."

"Then you really recommend this method?"

"If the other crops in the rotation are properly fertilized so that there is plant food left distributed through the soil, I would certainly drop a small amount of fertilizer near the seed in planting corn. On the other hand, if fertilizer has not been used on the previous crops more fertilizer must be used for the corn and the larger part of it should be distributed uniformly over the field, only a small amount being drilled in near the seed."

"If I could get more humus into this soil I wouldn't need so much fertilizer," volunteered Chris.

"More humus in the soil would undoubtedly permit your crops to make better use of the fertilizer supplied," agreed Dick. "Now tell me what you have done to supply organic matter to this soil."

"Well, I cover it with manure about every four years and I guess that is about all."

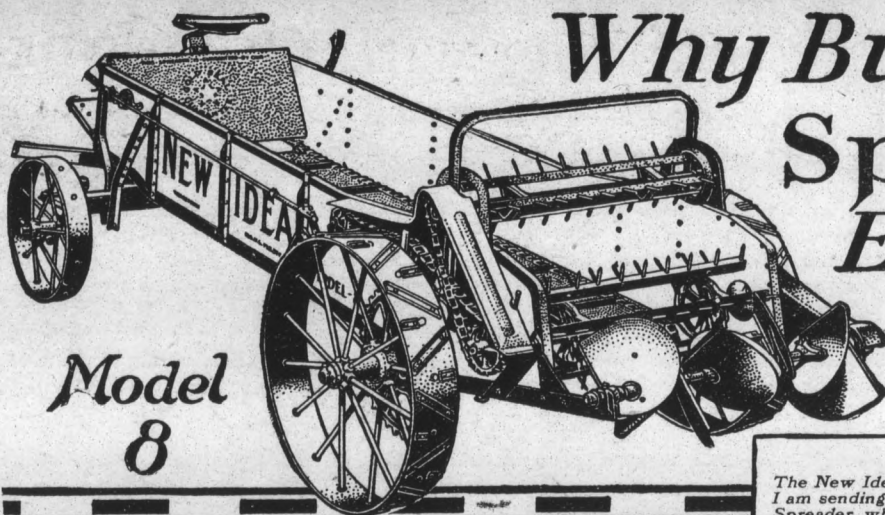
"Do you ever plow under green crops?"

"No. I can't afford to lose the use of the land for a year just to grow a crop to plow under."

"You don't need to. There are other ways of doing it. We'll talk them over as we walk up to the barn. I got to be getting home."

The U. S. Bureau of the Census reports that the infant-mortality rate for cities in thirty-three states and the District of Columbia, which formed the birth-registration area in 1925, was nearly three points higher than for the rural area—that is, the city rate was 73 per 1,000 live births as compared with 70.3 for the rural areas.

During January prices of grains, cattle, poultry, onions, potatoes, and wool increased.



Model 8

Why Buy a New Spreader Every Few Years?

YOU know that a spreader is as necessary to continued prosperity as a plow. You fully realize that you will need an efficient spreader this year, next year — every year. Buy with that knowledge in mind! Assure yourself added profits — every year you farm. Get the spreader that you know will last, just as you know that it is easy loading, easy handling, light draft and perfect in performance. Built for lifetime service — a spreader you will never need to replace.

NEW IDEA Spreader

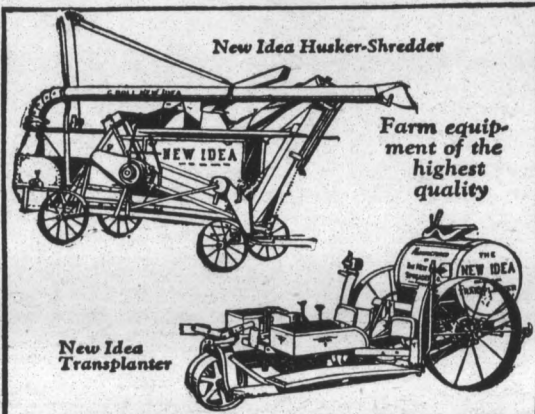
The NEW IDEA Model 8 excels not merely in one or two features — but at every point. Easy loading — less than 40 inches high. Sides free from obstructions. Draft — the lightest ever attained. Wide tires to carry over the softest ground. Steel cleats for traction on mud, snow and ice. Auto steer front axle gives short turning radius and easy handling. 16-inch ground clearance so that you can spread over rough ground and high stubble. Power to handle the heaviest manure without choking. Distributor blades arranged to give

that perfectly uniform, finely powdered, wide spread for which NEW IDEA is famous. And *endurance, endurance, ENDURANCE* — in every part and every detail! Frame like a bridge truss, riveted throughout — and in turn riveted to the body. No bolts to work loose. Body of finest yellow pine; each board painted before assembly and the whole again painted after assembly — for complete protection. Self-aligning roller bearings. Non-stretching sprocket chain — flexible in any weather. Rust-and-acid resisting distributor blades. Special steels, special materials — special care — throughout.

The NEW IDEA Model 8 is permanent equipment. See it at your dealer's or write us for complete details

THE NEW IDEA SPREADER CO.
COLDWATER OHIO U. S. A.

BRANCH: Jackson, Mich.
ADDITIONAL STOCKS at Petoskey, Mich., and London, Ont.



New Idea Husker-Shredder

Farm equipment of the highest quality

New Idea Transplanter



THE NEW IDEA SPREADER COMPANY
Dept. 87, Coldwater, Ohio

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Your Crop Rotation!

THE farmer's biggest problem is not only to maintain the fertility of his soil, but also to improve it. A good crop rotation which includes winter grain crops and clover hay will help any soil improvement program. Yet—a rotation alone is not always profitable. This is due to the fact that while the clover adds organic matter and nitrogen to the soil, it takes out large quantities of other plant food elements. Clover is a "potash-hungry" crop:

Experiment station results show that a suitable fertilizer, containing potash, applied in the fall to wheat, will help the entire rotation by increasing the yields of clover.

Increased yields of clover hay increase the amount of feed on the farm at very small cost, thus reducing feed bills. More hay per acre also increases the amount of nitrogen and organic matter returned to the soil, thereby helping the other crops in the rotation.

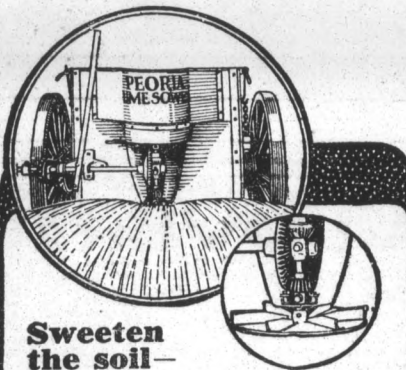
Fertilizer mixtures containing 4% to 6% potash are recommended for mineral soils, while on peat and muck soils 10% to 32% is used with profit.

Our Agricultural and Scientific Bureau will be glad to help you with your fertilizer problems without charge or obligation. Communicate with our nearest office.

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Sour soil means small returns. Sow lime and make your land increase your crops—liming pays big dividends.

The Peoria Wagon Fertilizer sows damp or dry lime. Uniform 18 ft. spread. Force feed. No windage waste—no clogging. Does double the work of wheel sower—costs much less. Attaches to wagon without removing endgate—strengthens wagon box. No high lifting. No cleaning or repair of cleats to attach. Half the gears and sprockets. Capacity 100 to 10,000 pounds. Fully guaranteed. Low in price.

New Attachment
—makes two machines in one
At just a few dollars extra cost the Peoria is equipped with NEW small grain sowing feature. Casts oats 30 ft.; wheat, rye, barley and rice 50 ft.—in any desired quantity. The Peoria with NEW ATTACHMENT does your fertilizing and sowing—two machines in one. Write for circular on this and our other new farm tools.
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—that has proven amazingly effective in conquering very bad ruptures. Entirely different from trusses. No straps, buckles or springs attached. Easy to apply—inexpensive. Plapao Co., 693 Stuart Bldg., St. Louis Mo. is sending FREE Plapao to all who write now.

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Better chicks for bigger profit. It's not how much you pay, but what good quality. We breed for egg production. Barred Rocks, Reds, White Leghorns. KREUPER HATCHERY, Wabash St., Milan, Mich.

Suffering with Others

Our Weekly Sermon—By N. A. McCune

I HAVE always thought that the story of this week's lesson was one of the real tests of Christ. The tests that test us are the unexpected ones. Put yourself in his place. His program had been fast and strenuous. He was dealing with people constantly, the most exhausting form of work. Ask any teacher, minister, doctor, social service secretary. After one has been giving out ideas, encouragement, or advice, for about so long, he feels like going off for a time of mental and physical recuperation. Sometimes he gets so weary and nervous he feels as if he never wanted to see another human.

That was Christ's fix, and the fix of the Twelve. They were anxious to get away somewhere, for a bit of quiet.



Probably one of the men knew where there was a cool, green spot with a spring of water. They were off, but not quite quick enough. People saw them going, guessed where, and when

the boat touched the shore, it was met by a crowd of people who had gotten there first. It was a perfect opportunity for an outburst of temper. There they were again, the same sort of a clamoring crowd, anxious to be healed of their disease, to ask questions, to push and jostle him—all of them wanting something, not one with anything to contribute; none who would make his task a whit easier.

But He does not give way to temper. He does not look at it that way. The rest He and His men were to have had is forgotten, and He looks at the crowd with sympathy. He had compassion on them. Mark says, compassion means to suffer with. In their suffering he suffered also. He forgot himself, the most difficult achievement that teases the human spirit. Somewhere in one of the prophets we read, "In all their affliction he was afflicted." That was written as an ideal, but here it is lived in actual flesh and blood. He had that virtue that we talk so much about and which is so much more easily talked about than possessed—love. Is love practical? Here is what one of these modern sociologists says, those men who are supposed to know all about society and social relationships. "The few men gifted with the genius of love which enables them to feel for mankind what ordinary men feel for wife or child, have always stood forth as the teachers capable of inspiring the world with a new gospel." And once more: "To work effectively for the redemption of our world from its ignorance, selfishness, and sin, something more is needed than the cool, understanding intellect. That something more is a deep compassion for men wherever found, no matter what their social, intellectual, or moral condition may be. We need for the redemption of our world a deep enthusiasm for humanity which will gradually spread from the leaders among the masses of our people. We shall not get the sacrificial service which we need from the educated, from the well-to-do, from every class of the socially fortunate, without this enthusiasm for humanity, this deep compassion for men, this sacrificial love, which will prompt the socially fortunate to share their life, their goods, and achievements, both material and spiritual, with the socially unfortunate and backward." That sounds like the parson, of a Sunday morning, doesn't it? Well, it's from Charles A. Ellwood, Professor of Sociology in the University of Missouri. Love has a high market value.

Jesus did what Professor Ellwood is talking about. He shared his life with the folk who needed him most. And love is efficient. Efficiency is the word of this mechanical age. And often in seeking efficiency we miss the very thing that makes it. The entomologist tells us that the lightning bug is the most efficient light-producer known. He makes light without heat, which is something that the best electric lamp cannot do. If it could be done, the cost of lighting would drop immediately. Love is efficient, as a social force, as well as a religious one. We have associated so much sentimentality with love that it has lost its force. Yet the real attitude of disinterested compassion cannot be counterfeited.

A striking example of this was the life of the late Mother Alphonsa. She was the daughter of Nathaniel Hawthorne, and the wife of an editor of the Atlantic Monthly. Her husband, dying, she desired to devote her life to some form of unselfish service, and chose the repellent field of nursing incurable cancer patients. She became a Catholic sister, and founded a small hospital consisting at first of three rooms, for cancer incurables in New York, in one of the poor sections of the city. She nursed all day, and wrote letters at night, for financial help. No patient was too poor to be received and cared for, white and colored alike. She carried on for twenty-eight years, dying at seventy-five. A striking modern example of this amazingly beautiful thing called compassion.

Education is not a substitute for it. The twelve apostles were probably not educated men, and yet with this spirit of devotion they wrought well. Paul and Apollos were educated, and yet neither did anything in religion until love had entered the life. "Thou I speak with the tongues of men and of angels, and have not love." "Selfishness with much can do little; love with little can do much."

SUNDAY SCHOOL LESSON FOR MARCH 11th

SUBJECT:—Jesus' Compassion for Human Need. Mark 6:31 to 44 and 8:1 to 10.

GOLDEN TEXT:—John 6:35.

"By the Way"

NOT SO

Johnnie, boastfully: "I come from a big family."

Jenny: "Indeed! How many of you are there?"

Johnnie: "Well, there were ten of us boys, and each of us had a sister."

Jenny: "Good gracious! Then there must have been twenty of you."

Johnnie: "No, only eleven."

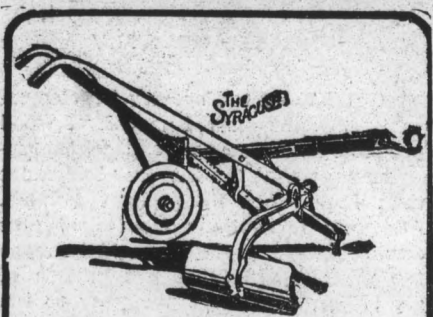
A PUP'S PROBLEM

An American and an Englishman were arguing about the queer dialects of different people.

"Why, the other afternoon," exclaimed the Englishman, "I asked your colored porter if he thought it would rain, and he said, 'Little dogs it will, and little dogs it won't.'"

The American was puzzled at this and questioned Rastus about it. The negro scratched his woolly head and replied, "That ain't what ah said. I just tol' the man that p'ups it would rain, and p'ups it wouldn't."

There are 31 towns named Franklin in the United States.



Save Labor— Increase Profits

If you grow grapes or berries you need the good work and labor - saving advantages of the horse-drawn

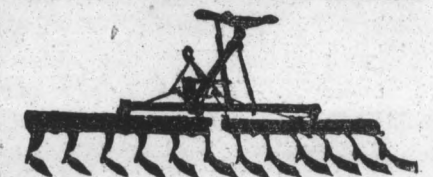
John Deere-Syracuse Grape and Berry Hoe

With it, you can do the work of a hoe crew. It does a thorough job killing weeds and stirring the soil. Its consistent use prevents mildew, increases the quality and quantity of the fruit.

You can set this hoe to throw toward or away from the row. Its hoe blade gets under the foliage—no danger of damaging the vines. You can easily guide it around posts and vines. A spring-tooth cultivator attachment can be furnished extra.

Learn more about this money-maker—write today for a FREE FOLDER. Address John Deere, Moline, Ill., and ask for folder GA-922.

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



Plow The Corn Borer Under And KEEP Him Under With An Acme Coulter Harrow.

Plow corn stubble deep—that's the beginning of the end of the corn borer. Then finish him with a harrow especially adapted to the job—one that won't pull the stalks and valuable organic matter up to the surface. That means an Acme Coulter Harrow—the harrow that has made perfect seed beds for 50 years. Its sharp, double-curved coulters and sod-crushing spurs, penetrate to the full depth of the furrow and slice, chop, and pulverize completely every stalk, every bit of trash. The Corn Borer is down for keeps—soon killed by his natural enemies. And the finely sliced valuable organic matter quickly rots, adding richness and increased fertility to the soil. Acme Coulter Harrows made for horse and tractor use, sizes 3 to 17½ feet. Mail coupon for FREE catalog which includes valuable chapters on "Bigger Crops from Better Tillage," also letters from farmers telling about their experiences with Acme Coulter Harrows. Additional Corn Borer information also sent FREE.

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Send me free Acme catalog described above.

Name
Address



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Genuine High Power Coleman Mantles give the clear, strong brilliance that Coleman Lamps and Lanterns are guaranteed to produce. So avoid substitutions! See that the name "Coleman" is stamped on each Mantle—your guarantee of the genuine. Coleman Mantles are made just the right size, shape and texture to give more light and longer service.

Price 10¢ each or buy them by the box (1 dozen \$1)—at your dealers.

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Wichita, Kansas
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Service Department

A LINE FENCE QUESTION

One hundred and sixty rods lies between my neighbor's land and mine. My brother and I had divided it each taking half. Before my brother sold the place he took the fence down. The man he sold to wants me to put up half the fence. My eighty rods are built. Will I have to build half of the eighty rods that is left? If not, how can I make him put up his line fence for the eighty rods? He knew there was no fence when he bought the place.—Reader.

Line fence decisions are not binding upon successors to the title, but the fence erected by either belongs to him and in case the neighbors cannot agree the probabilities are that the fence viewers will make the same division as before. If either party fails to build his share after being ordered to do so, the other may build it and have the same charged as a tax upon the land of the party who should build it.

INCOME TAX

Is a person having an income of \$7,500 and a net income of less than \$3,500 required to make income tax return to federal collector's office? Income consists of wages, interest on investments, payments on real estate sold, and cash from farm products sold.—A. M. S.

Internal Revenue Act of 1926 provides that every individual in the United States and every citizen whether he is residing at home or abroad, having a gross income for the calendar year 1927 of \$5,000 or over, or a net income for the same period of \$1,500 or over if single; or \$3,500 or over if married, shall make an income return under oath. The tax is 1½% for the first \$4,000 in excess of the exemptions and three per cent on the next four thousand. The exemptions are \$1,500 for single persons and \$3,500 for married persons, with \$400 allowed for each child under eighteen years of age, or other dependents.

DRIVER'S LICENSE AND OVERSEER OF HIGHWAYS

THE statute Public Acts 1919 No. 368 referred to in our issue of November 26th last, fixing the age of 16 years for a driver's license, was amended by Public Acts 1921 No. 91, providing that the applicant shall be over 14 years of age. We were also in error in the issue of February 11th, in stating that the qualification of the highway overseer is governed by Compiled Laws 1915, Section 2162. Compiled Laws 1915 Section 4460 provides that the overseer of the highway must be a resident tax payer of the district.—Rood.

MEMBERS' RESPONSIBILITY

A grain elevator was destroyed by a fire of a peculiar origin about a year ago. After the fire, the association collected from insurance companies money which was carried as insurance upon the grain stored in the elevator. Without any attempt to pro rata the proceeds of the insurance, the manager began paying out the farmers for the grain that was stored by them in the elevator at the time it was burnt. Certain farmers were paid in full and as the fund was soon exhausted, other received nothing. The trustee for the association is now demanding 50% of the money paid out to these creditors after the fire, to pay the farmers or creditors who did not receive anything and then distribute the excess. Can they collect 50% of our hard earned money? Please advise.—Subscriber.

If the association was incorporated, the stockholders are not personally liable for the obligation they assumed when they became members. On the other hand if the association is not incorporated each member is liable to all creditors for the full amount of claims. The obligation can be avoided only by payment or by the members going through bankruptcy.—Rood.

Costs Less Than

2¢

Per Running Foot



My Prices are Lower!

I want to send every man who reads this paper one of my New Cut Price Catalogs. I want you to see how much money you can save on over 150 styles of Fencing (Farm and Poultry), Poultry Netting, Gates, Steel Posts, Barb Wire, Metal and Asphalt Roofing, Furnaces, Cream Separators and Paint. My DIRECT-FROM-FACTORY plan of dealing cuts the cost and saves buyers a lot of money. Not only are my prices lower, but they are FREIGHT-PAID prices. That takes out all guesswork about the freight charges and gives you another big saving. My catalog tells you exactly what your goods will cost you laid down at your nearest freight station and the big saving will surprise you.

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I believe I make and furnish my customers with the Best Quality Fencing (Farm and Poultry), Gates, Steel Posts, Barb Wire, Metal and Asphalt Roofing, Furnaces, Cream Separators and Paint, that it is possible to produce. That's why everything you buy from me carries my personal guarantee—a guarantee that insures you quality and satisfaction. It makes no difference where you live, you can take advantage of this money saving opportunity of buying from Brown's Factories; orders are shipped within 24 hours from my three big factories at Cleveland, Ohio; Adrian, Mich.; and Memphis, Tenn., and about 20 other shipping points; so regardless of where you live you can get goods from Brown without delay. Over a Million Customers now buy from my factories and enjoy the saving that my Direct-from-Factory plan of dealing makes possible.





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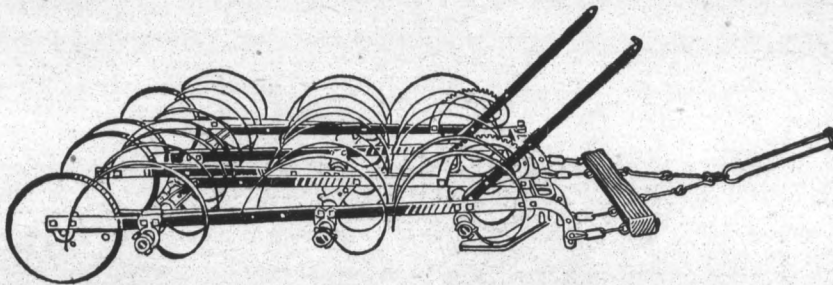
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Please Mention The Michigan Farmer When Writing to Advertisers

Kill your QUACK GRASS and WEEDS!

Don't let quack grass be a source of trouble or worry to you. Use the new Oliver MJ Quack Grass Harrow and you will be surprised at the ease with which this dreaded pest can be controlled. Oliver has built into the MJ Harrow the features that make it the ideal tool for combating quack grass and other weeds.



NOTE THESE POINTS OF CONSTRUCTION: GREAT CLEARANCE FOR TRASH. The frame is placed above the tooth bars producing great room for heavy weeds and trash to pass through. The wheels are placed in the rear of the frame giving added clearance. Farmers who are using this new harrow say it will work in extremely heavy quack without any tendency to clog.

ALSO FOR GENERAL FIELD WORK. You can also use this harrow for general field harrowing. Whether you have quack grass or not you should have your Oliver dealer explain further the advantages of this new Oliver tool.

You can use it with either horse or tractor power and in addition to the quack grass teeth it can be equipped with Alfalfa teeth or double pointed reversible teeth.

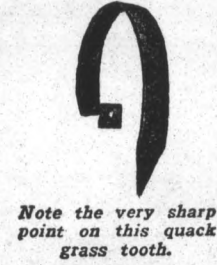
Write for our new literature on the Oliver Quack Grass Harrow.

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OLIVER CHILLED PLOW WORKS

"Plowmakers for the World"

General Office and Works, South Bend, Indiana



Rough and Tumble on Their Way

Across Sahara Desert With Complete Outfit in Two Side Cars

By Francis Flood

ALTHOUGH there were some in Lagos who laughed behind our backs at the idea Jim and I had of crossing Africa on motorcycles, there were many left who felt differently about it—and they laughed freely to our faces. There were reasons too, such as they were. See if you think them important enough to consider.

The trip had never been done before by motorcycle. There were some 4,000 miles of untamed jungle and desert wilderness to be crossed, right through the black heart of Africa itself. There were the bridgeless rivers of the west African jungle, the desert sands of the Sahara, the rough plateaus from the Niger to the Nile valleys—and all within easy sizzling range of the equator.

In addition to the famous Four Horsemen of the Afritropics—Fever, Sun, Drink, and Death—with which we had been threatened even in the cities of the coast, we were now to encounter a whole new troop of horsemen that would make the original Four look like President Coolidge's oatless exerciser.

On the coast, we knew that if we didn't wear our cork helmets every minute in the sun the deadly rays would strike us down—and perhaps even if we did—but motorcycling over the blistering sands of the Sahara we

disease in a country where the infant mortality rate is eighty per cent—and every adult dies sooner or later.

Of the visible, but equally important dangers to be considered there were: (1) Ticks, jiggers, and mosquitoes on the coast, but inland we would also find the tsetse fly, poisonous snakes, and wild beasts. (2) Even in Lagos all water is boiled before drinking, but in the desert we would be lucky to find water to boil. (3) In the seacoast cities there were the deadly trinity, wine, women, and song, and in the bush we would find them just as bad. (4) There were the murderous Bedouins and Tuaregs of the desert and (5) the probability of getting lost in the trackless sand, and (6) the fact that gasoline stations and repair shops are a thousands miles apart.

BY November 10, we had two motorcycles and side cars and I had almost learned to drive. I didn't admit it to our skeptical friends in Lagos, but I had never had hold of a motorcycle before in my life until I started out to drive this one across Africa. Personally I consider this something to boast about, especially if we happen to get across (we're not half way yet), but Jim says I had it easier than learning at home. There I'd have had to stay in the road, and here I've had hardly any roads to stay in. There, if I'd broken up a machine it would have been my own fault, while here the fact that I broke a rear axle, three side car springs, six spokes, and a part of the main frame is due to the roads and not my driving. (Continued on page 358)

Bob wondered if, after all, it was worth the effort. He knew that Burton never would break up a winning combination unless he, too, could really shine in combat. At home, Hal Carson, making only a pretense of doing farm work, was putting in hours with his school mates in play. Indolent and confident, Carson yet was taking no chances. He looked forward to seeing his name blazoned in the county papers as the player whose work had defeated the great Harmon team.

CHAPTER X Bob Fights to Win

IF the earlier months had been busy ones, late spring and summer brought multiplicity of duties. Never had the Bartons attempted so ambitious farming operations, and Father Barton was quite bewildered with the demands upon time and strength. The stand of corn was remarkable, and never before had Bob Barton driven a cultivator where loam rolled like a black ribbon from shining shovels. With two teams constantly in the field it would not have been difficult to cultivate the crop properly, but Bradley Barton found the work as distasteful as when he was tilling sterile ground. The soil of the Jones place was no more fertile than his excuses to "tinker 'round." Moreover, the club and community orchestra was flourishing, and the senior Barton had finally begun to place upon paper the bits of melody which came to him. He had composed a march dedicated to the 4-H clubs, "Hearts and Hands," which made stirring appeal. Now he was at work on an overture, "Plantation Days." Into the old-time melodies Barton was weaving strange new measures of his own.

Recognizing genius, Bradley Barton's neighbors were tolerant. But on the days when young Bob, held by the magic of his father's violin, neglected work, their tongues wagged. It was a sore trial to John O'Neal, who was self-appointed champion of the newcomers. Commending the grim determination with which Bob stuck to his baseball improvement plans, O'Neal could not understand why man or boy could not thrill as well to the beauty of a growing field, recognizing in it, too, his handiwork. Then at height of the season, where every hour's work might well mean life or death to the growing corn, Bob came to the O'Neal home with an amazing proposition.

"We always have a little play spell along about this time," Bob had said. "This year dad wants to drive back to the old home. Mother is homesick for her kinsfolk. We'll be gone about a week. Ted had promised to look (Continued on page 347)

Under the 4-H Flag

By John Francis Case

JOHAN O'NEAL was as good as his word. In a few days he was throwing like a rifle shot, while Bob leaped for high balls or dug desperately after low throws. Then the bat rang as bunted balls showered down to the perspiring baseman. In two weeks there had been noticeable improvement in Bob's handling of low-thrown balls. As Katie watched them, teasing words often upon her lips, Bob tried to discover whether her interest in his progress was merely loyalty to Pleasant Ridge. It was of little avail. The club team had beaten Channing High, Carson starring with a home run, which won the game. Bob, watching, saw that the first baseman's work on bunted balls had improved, due to Burton's coaching. But he still failed on low-thrown or sharply hit ground balls. The task he had set was not hopeless.

Strolling over one evening, Ted Baldwin was directed by Mother Barton to the O'Neal place. It was almost sundown, but Bob, wiping sweat from his face and almost exhausted after a hard day's work, was running bases on an improvised diamond, "hitting the dirt" in a fallaway slide under O'Neal's watchful eye. "That's the way our old 'Ag.' college coach taught me," boomed O'Neal as Ted approached. "You'll be stealing that Harmon catcher's mask and protector if you keep that up."

"Atta boy! Atta boy!" applauded Ted. "What's the deep dark secret, Mr. O'Neal?"

"I'm going to make a ball player out

of Bob if I have to kill him doing it," said O'Neal grimly. "Nobody can beat a Pleasant Ridger if I can prevent it."

"You'd better get ready to call the coroner, Ted," grinned Bob, rubbing a bruised leg. "Mr. O'Neal shows no mercy. I'm getting ready to play first base when we go up against Warford High, for Carson's got to lead his own team. Been practicing on low throws and bunts, too. Coach here thinks I'm coming on."

With a joyful whoop the 4-H captain fell on Bob's neck and embraced him. "I'll tell the world," he declared, "that this infant has some grit. Will we beat the fillin' out of Warford? Boy, howdy! You tell 'em, Katie. What do you say?"

"You might and again you might not," was Katie's enigmatic reply. "We know," she added saucily, "that Warford will have a real first baseman."

"Ouch!" said Bob. "That hurt. Don't hit a fellow when he's down, Kate. You'll discourage your dad."

"You'll see a real first baseman on our club," prophesied O'Neal. "Keep this under your hat, Ted. We want to surprise Burton and a few other folks. Here, Bob, hit the dirt again." The gruelling practice went on until darkness made it impossible to see ball or base lines. "Lucky I've got a hired man to do the chores," commented O'Neal. But Bob Barton still had his work to care for. As he dragged his tired limbs about the barn, then fed his hungry porkers,

A WORD FROM WORLD HIKERS

YOU will be interested to know that we received a cablegram from Flood yesterday, telling of their safe arrival at Khartum and requesting us to send some money immediately, inasmuch as they have lost their letter of credit. The cablegram further advised to mail letters to them at Bombay, India; Colombo, Ceylon; and Singapore, Strait Settlements.

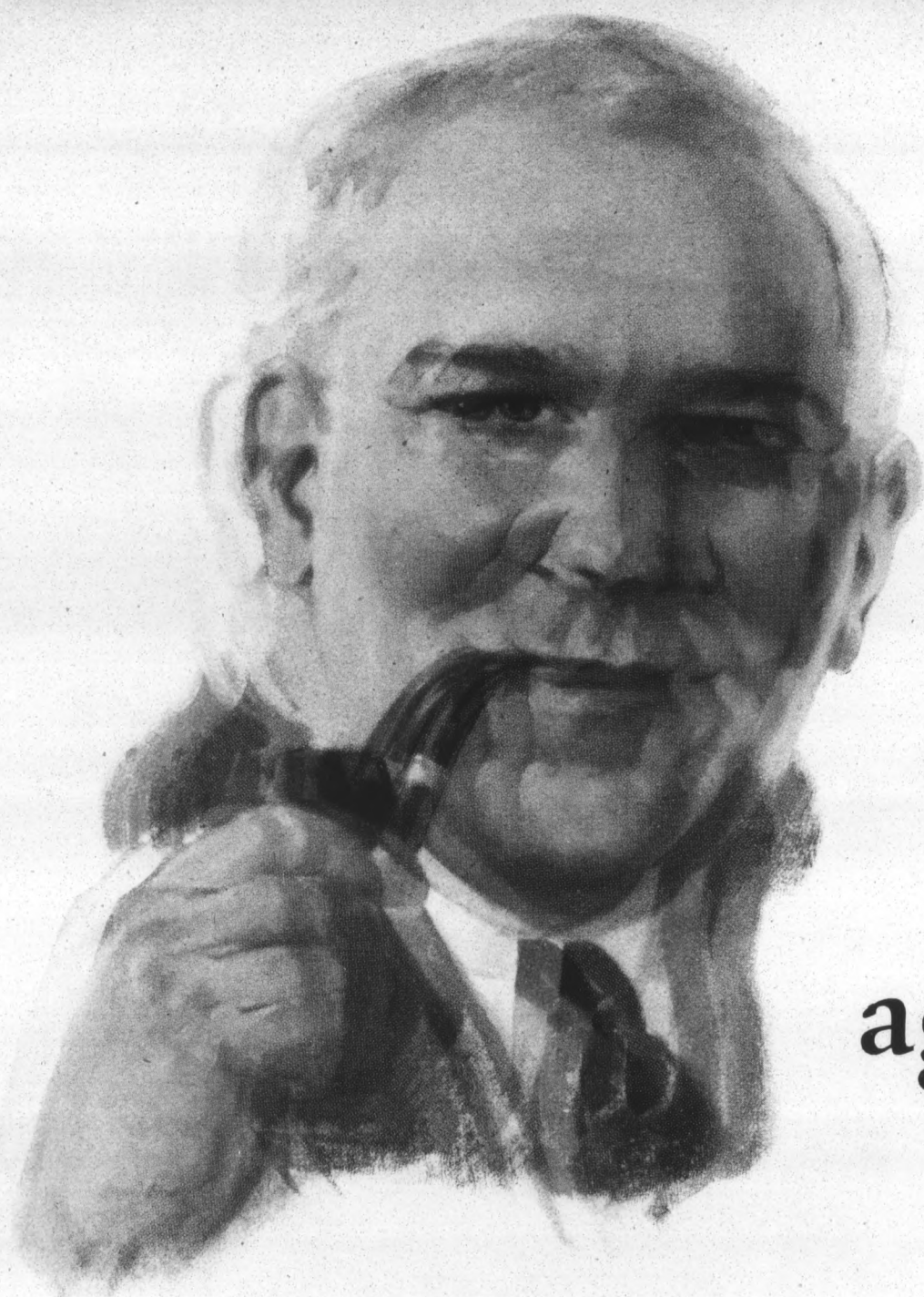
We are hoping to receive some more articles soon that Flood mailed during the trip across the desert, and we hope there will be no further interruption in the series.

must also wear a red cloth inside the helmet and hanging down behind, besides colored goggles, and a sun proof spine pad buttoned to the backs of our bush shirts. We had taken our five grains of quinine every single day to guard against malaria, and had, so far, escaped yellow fever, blackwater fever, and dysentery, but now we were to enter territory where thousands die annually of pneumonic fever, meningitis, smallpox, and leprosy. These were the insidious dangers of

Activities of Al Acres—Slim Bumps Up Against An Old Acquaintance

Frank R. Leet





I'll
back P. A.
against them
all

I SAW P. A. come into the picture some nineteen years ago. I saw it nose out the leading brands of the day. With steady gait, it showed a clean pair of heels to the field. I know and you know that it has maintained its lead ever since. And you and I know *why*!

The minute you open the tidy red tin and let that fragrance fill the air, you're ready to cheer for P. A. Then you load up and light

up. . . . Cool as a judge deciding the winner. Sweet as a blue ribbon for your favorite. Mild and mellow and long-burning.

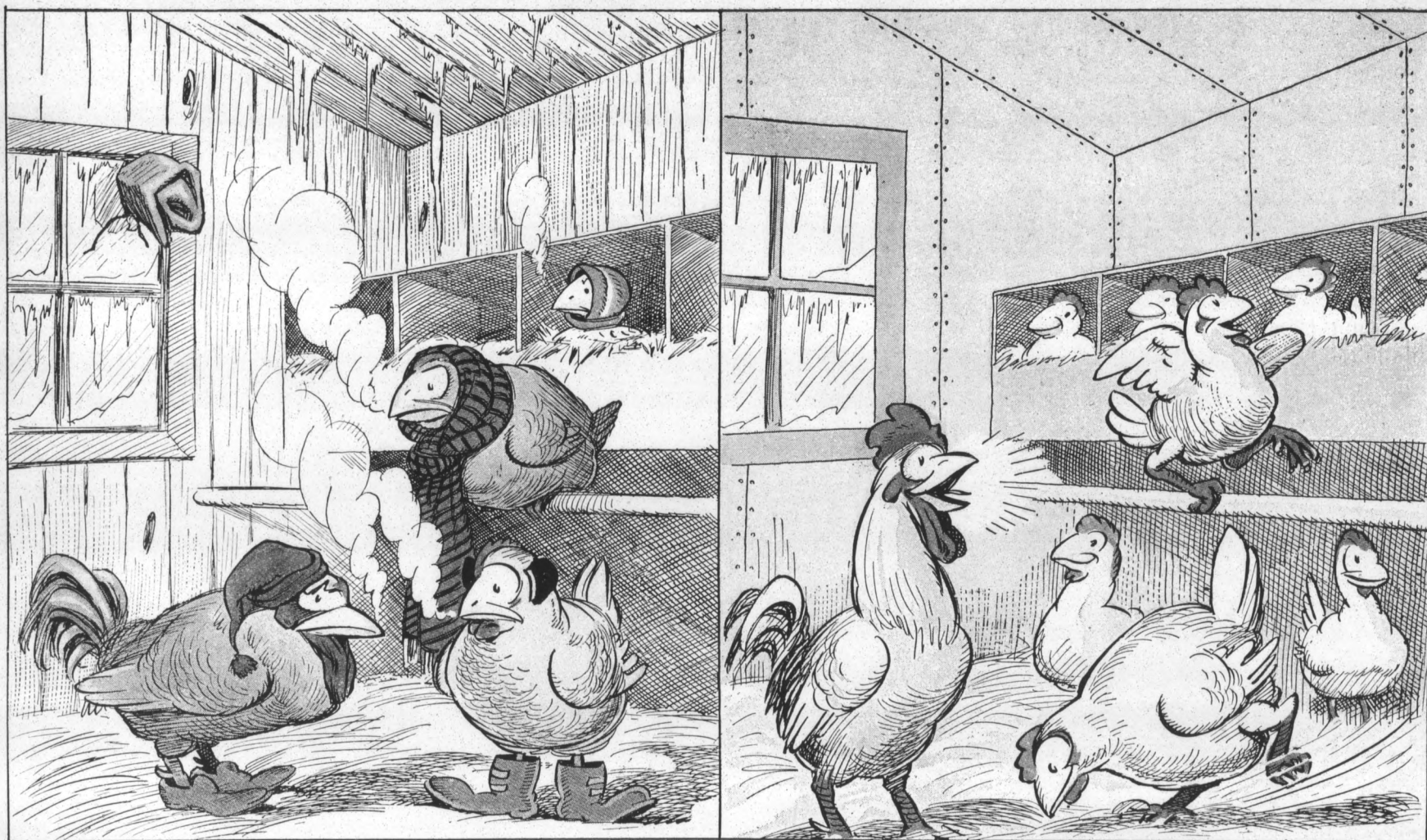
No wonder more P. A. is smoked than any other brand. No wonder Prince Albert counts its friends by the million. If you don't know all this by personal experience, it's high time you found out. Get going today with good old P. A. That's *my* tip, Gentlemen.

PRINCE ALBERT

—no other tobacco is like it!



More for your money in every way—TWO full ounces in every tin.



Learn What Insulation Will Do

The sad faced birds in the chilly, drafty hen house are just existing through the winter, waiting for spring.

Hens can't lay under those conditions. A warm house (insulated) keeps 'em happy and healthy and yields a full egg basket when egg prices are highest.

THE use of insulation is fundamental in modern building construction. It adds comfort and health, makes possible a steady temperature and reduces heating costs.

Your dwelling that is drafty and difficult to heat in winter and hot upstairs in summer, is made comfortable by insulation. Your poultry house, where the hens quit laying from November to March, is made a busy singing workshop all winter. In midsummer it is kept cool and comfortable. Your garage, where the frigid winter penetrates the tightest walls is made snug so it is easy to keep the car warm and ready to start on a zero morning. Insulation does these things, at low cost.



Before you build or remodel, study insulation. Examine insulating materials at your local lumber yard. Look at the thick broad sheets of fiber, or blankets that go between the studding, easy to apply, which keep your house warm in winter and cool in summer. Notice, also, how handy this material is for fixing up the attic, or building a new closet. You will want to keep a supply of it always on hand.

Learn about insulation because it can increase both your comfort and your profits. This publication will be glad to put you in touch with sources of information about practical insulating materials.

This Paper Recommends Only Reliable Merchandise

After 50 Years of Service

FIRST IN 1878

BEST IN 1928

DeLaval

CREAM SEPARATORS

Skim cleaner—Produce better cream
Turn easier—Last longer

50TH
GOLDEN
ANNIVERSARY

De Laval Points the Way to Still... Greater Dairy Profits

See and Try a DE LAVAL

THE best way to judge a new 1928 Golden Anniversary De Laval Separator is to see one, and better still to try it side-by-side with any other. We do not believe anyone can do that and not choose a De Laval. Improvements are:

Beautiful gold and black finish; completely enclosed gears; improved regulating cover and float; turnable supply can; easier starting and turning; oil window, and the "floating bowl."

"Golden Series" machines are now on display by De Laval dealers everywhere. They will be glad to show them to you.

"FIFTY years ago," says Dr. C. W. Larson, formerly Chief of the Bureau of Dairying of the U. S. Dept. of Agriculture, "the dairy industry was undeveloped and relatively unimportant. Today the dairy industry is the largest and most vital industry in the world. It has more far-reaching effect upon the health and prosperity of this country than any other industry."

Last year the farm value of American dairy products was more than three billion dollars, or more than 25 per cent of our total yearly farm income.

Fifty years ago Dr. De Laval invented the first practical centrifugal cream separator, and dairy authorities everywhere now say that the cream separator has done more than any other factor to make modern dairying possible.

1928 "Golden Series"

De Laval Cream Separators

FIRST in the beginning, De Laval Separators have kept the lead ever since, not only in numbers in use but in continued improvement of design and construction. More than four million De Laval machines have been made and there are about as many of them in use the world over as of all other makes.

Now the new 1928 "Golden Series" Separators, commemorating the 50th De Laval Anniversary, mark another step forward. They are the most complete, efficient and beautiful cream separators ever made. They must prove a source of pride as well as profit.

The "Golden Series" machines are made in seven sizes, ranging in capacity from 200 to 1350 lbs. of milk per hour. They may be operated by hand or any form of power. They may be bought for cash or on such liberal terms as to pay for themselves.

The De Laval Milker

THE rapid increase in the use of De Laval Milkers is now causing as great a change in dairying as De Laval Separators did years ago. There are already thousands in use, milking more than one million cows with extremely satisfactory results.

De Laval Milkers permit all dairy production to be placed on a machine basis. Because of their gentle yet stimulating and uniform action De Laval Milkers milk with better results than can be obtained in any other way. They enable one man to milk two to three times as many cows as can be done by hand, and produce cleaner milk. They are simple in construction, easy to operate and to keep in a sanitary condition. Everyone milking five or more cows will find a De Laval Milker a profitable as well as time and labor-saving investment. Sold for cash or on self-paying terms.

See your De Laval dealer or write nearest office below for full information as to either separators or milkers.

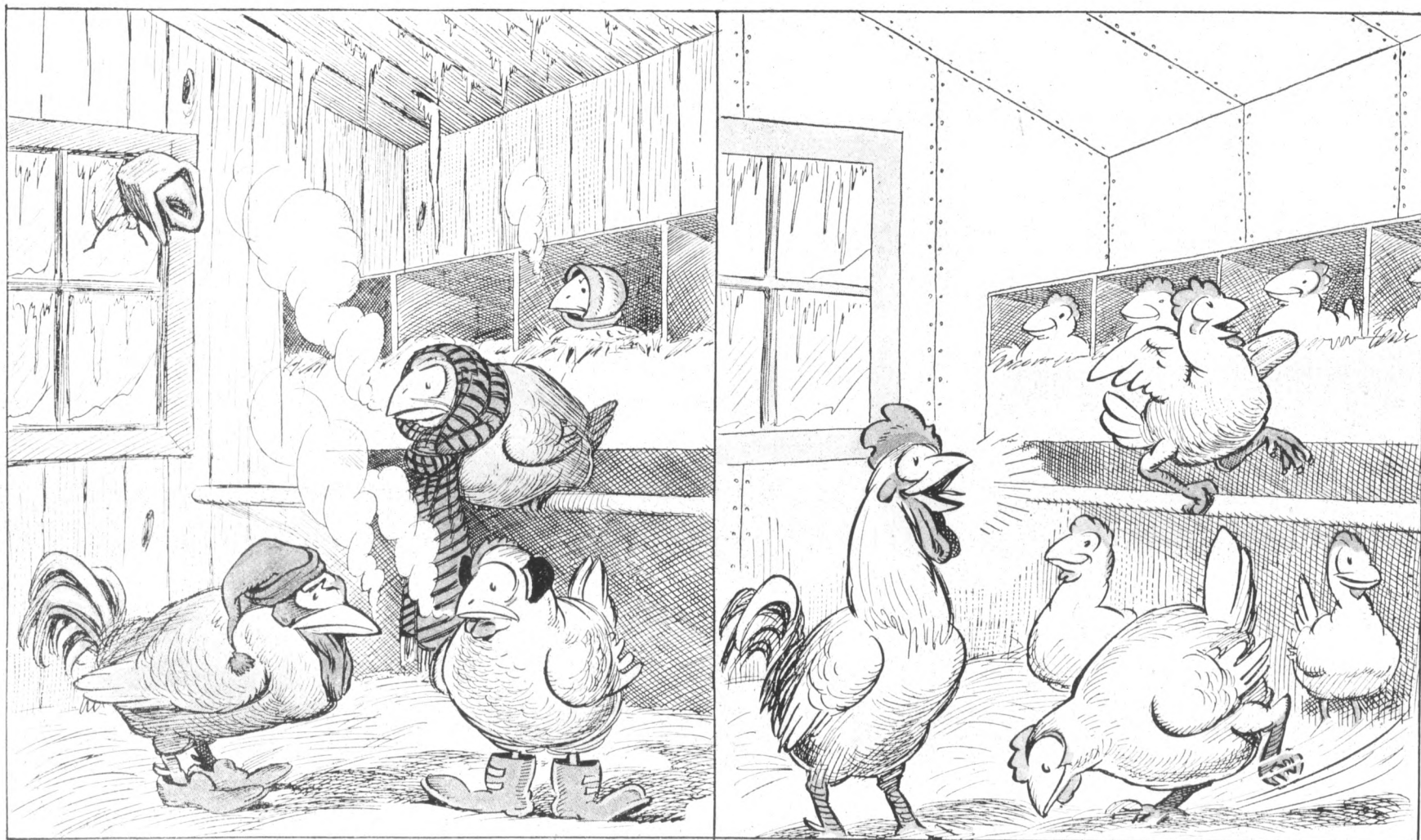
The De Laval Separator Co.

NEW YORK CHICAGO
165 Broadway 600 Jackson Blvd.
SAN FRANCISCO
61 Beale St.

1,000,000 COWS NOW MILKED WITH

DeLaval MILKERS

— saving time and labor
— producing more and cleaner milk
— creating more pleasure and profit



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1,000,000 COWS NOW MILKED WITH

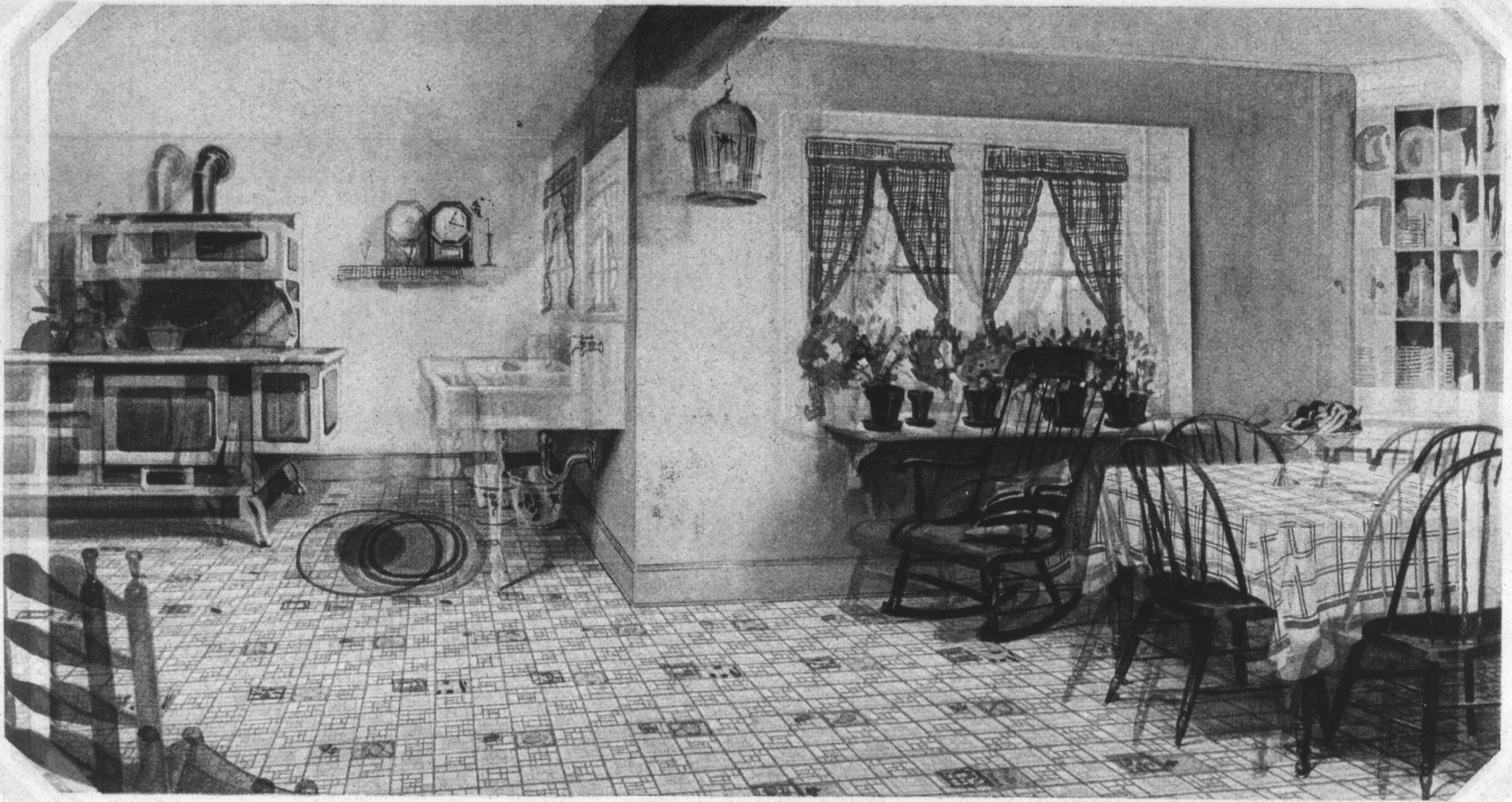
De Laval

MILKERS

- saving time and labor
- producing more and cleaner milk
- creating more pleasure and profit

BEAUTIFUL • INEXPENSIVE

EASY TO CLEAN



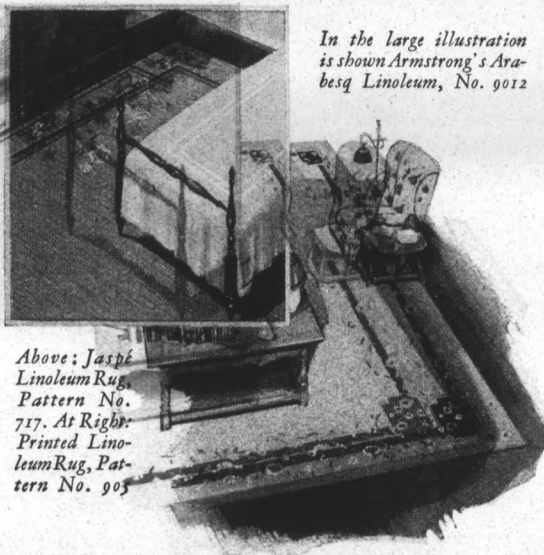
A five minute chat about your floors by

HAZEL DELL BROWN

PERHAPS you are thinking: "Just what will I do with those old wood floors?" No one, now-a-days, wants an old, shabby, splintery wood floor. They are bad looking enough, to be sure. But, the worst of an old wood floor is, it is *drudgery* to keep it clean.

Happily, the *best*-looking floors of today are the *easiest* to care for. Take for instance floors of Armstrong's Linoleum. These are made in the prettiest of colors and patterns—yet just a damp mopping is all that is required to keep them clean. The dirt does not soak into the grain as in wood floors, but remains on top, where it can be whisked away in a jiffy. Linoleum is always so fresh-looking and neat as a pin, and not at all expensive.

Now, suppose you have decided to do something with your floors this spring. What will it be? In Armstrong's Linoleum you have a wide choice of patterns from which you can select a floor covering appropriate for any room in the house. Begin with the kitchen—the most walked-on floor in the house. The lovely tile pattern pictured in the kitchen above is of Armstrong's



Above: Jaspé Linoleum Rug, Pattern No. 717. At Right: Printed Linoleum Rug, Pattern No. 905

In the large illustration is shown Armstrong's Arabesq Linoleum, No. 9012

Arabesq Linoleum. While it is light in color, it is a simple matter to keep it clean and bright. The *Arabesq*, by the way, is one of the newest Armstrong ideas in all-over linoleum. The particular pattern shown looks for all the world like real handcraft tiles. I, myself, could

hardly believe my eyes when I first saw this remarkable effect.

For living-room, dining-room, or bedroom, a rug of Armstrong's *Jaspé* Linoleum is quite appropriate and practical, too. These *Jaspé* rugs, in several shades, with interesting overlaid borders of varied pattern, are really the prettiest ideas in smooth-surface rugs I have ever seen. You must see them in the stores to appreciate what I mean.

While these genuine linoleum rugs are not at all expensive, there are Armstrong's *Quaker-Felt* Rugs at a still lower price. These may be had in many attractive patterns.

Tell me the size and kind of room and describe briefly the furniture and I will help you select the most economical, practical, and attractive floor covering. Enclose ten cents in stamps, and I will send you in addition, "The Attractive Home—How to Plan Its Decoration"—a handsomely illustrated booklet about floors. Simply address your letter to Hazel Dell Brown, Armstrong Cork Co., Linoleum Division, 1023 Jackson St., Lancaster, Pa.

Look for the CIRCLE A trade-mark on the back of the rug



Armstrong's Linoleum

INLAID AND PRINTED IN RUGS OR PIECE GOODS

Under the 4-H Flag

(Continued from page 342)

after my hogs and the teams. We want to know if you folks will look after the chickens and cows."

John O'Neal had been too disgusted to do more than grunt a "Sure, if you must go, we'll look after 'em," but not so Katie. Her plain-spoken, "Bob, you should be ashamed of yourself, running off when your crop is suffering for cultivation. And our Pleasant Ridge community club meeting comes next week. Have you forgotten that you are president?"

But Bob had become familiar with Kate's sisterly scoldings and admonitions. "Why should I work myself to death?" he had demanded. "I've worked five hours this year where I worked one before. The corn is growing, isn't it? Won't it keep on growing while I'm away? As to the club meeting, haven't we a vice-president? I didn't ask for the job. I'm going on this trip, and that's all there is to say."

"Quitter!" Katie had flared at him. "Quitter!" But if there was an uncomfortable feeling that she was right, Bob gave no sign. Neglectful of his work, the young club president was busy in making preparations for the contemplated trip when Ross Burton came calling. Tactful and diplomatic, Burton made no allusion to neglected work nor betrayed knowledge of an impending disregard of duty.

"Fine field of corn, Bob," observed the county agent as they walked down to the field. "Every hour's cultivation counts now. Got to do some hoeing, too. Those last tenants sure allowed the burrs to grow. You can just about finish this job in a week; then you for the hoe. I'm proud of the job you are doing here, old man."

Bob Barton squirmed uncomfortably, and his reply was almost inaudible as Burton asked him about the contest pigs. "Sleek as moles," commented the agent admiringly, "and growing like weeds. By George, you'll have to enlarge that creep hole." Burton laughed uproariously as one rotund porker, squeezing through to join his mates, stuck fast.

"That's 'Stony,'" announced Bob. "Otherwise Stonewall Jackson. He's some pig."

"I'll say he's some pig!" said Burton. "He's a sure-fire prize winner if you can keep him doing as well until state fair time. What you got in the self-feeder, Bob?"

"Corn, ground oats, shorts, tankage, and a little oilmeal," answered Bob. "There's some mineral mixture in that box, too. We are giving 'em all the skimmed milk we can spare. Never fed anything to hogs before but water and corn," and Bob laughed a bit sheepishly. "This ration is exactly what the state leader recommended. I'll say that this club work is opening my eyes and dad's, too."

"Atta boy!" applauded the farm agent, "Atta boy! It's going to take a lot of corn to feed this bunch out, but you'll have it if you keep on as well as you've begun. A sure ton litter here, Bob. The big thrill is going to come when you make your final report. By the way," Burton concluded, "do you realize that you are responsible for the success or failure of a lot of others as well as yourself?"

"What do you mean?" Bob queried. "I'm all alone here. I haven't a thing to do with anyone else."

"Get that out of your head, old man," said Ross Burton as he gripped his young friend's shoulder in a clasp that thrilled. "You have been entrusted with the responsibility of leadership. Every boy and girl in your Pleasant Ridge club has a right to demand that you do your best. It is not enough that you preside at meetings, take part in games, and preach loyalty. You must provide

example and inspiration, especially to the younger boys.

"There isn't much romance or adventure about pig feeding," went on Burton, "when it becomes just a job. That's why hundreds of boys and girls enroll, tire of their work, and quit. It's up to fellows like me and you to show 'em that pork production or any other phase of our work is just a means to an end. That's building better citizenship. Good training, right thinking, loyalty, and idealism is what counts. Unselfishness, too.

"Why," and Burton smashed a fist into his palm for emphasis, "Katie O'Neal had every reason to aspire to the presidency of your club. She'd been a leader last year and inspired her mates, so that one hundred per cent of 'em finished the job. And Ted Baldwin had been a star on the baseball team. He's captain now, but he didn't expect it when with Katie he plotted and planned to make you, a new friend, your club president. There's something finer and far more important about club work, Bob, than just going through the motions, keeping records, and turning in reports. Every boy and girl, especially the leaders, owe their last ounce of loyalty. This may sound like preaching, Bob, but club work gets hold of me. You can't evade responsibility.

"Then there's the question of loyalty to the farm itself," Burton concluded. "Ever think of that? You owe it to old Mother Earth to help her serve you to the best of her ability. You'd despise a quitter on your baseball team, Bob; a fellow who'd back off from the spikes or refuse to go up against hard knocks. Deep in her heart Mother Earth must despise the man or boy who lays down on his job. And she has her own way of punishing."

Bob Barton had stood with downcast eyes, a flush staining his cheeks and mantling to his brow. But now he turned and faced the older man, and in his eyes was the same expression that had come when he took up the hard grind of baseball training. "You've given me something to think about, Mr. Burton," said Bob, "something that I don't think I shall forget. No boy or girl on my club is going to have a chance to feel ashamed of me, and I'll do my best to have 'em go through with their work. As for 'Old Ma,'" and now Bob's grin was boyish and his tone light, "the old girl is going to get mighty weary of me tickling her face. They tell me this farm has had sixty-bushel corn yields. Watch me go 'em ten better or more if the season stays favorable."

"Atta boy!" again applauded the county club leader. "My guess is that there will be two winners on this farm, Robert Barton and Stonewall Jackson. By the way," and there was a twinkle in Burton's eye, "I'm going to play first base on the dad's team when they play you lads' 4-H club day next week. A little bird tells me that I may have real competition as a star first baseman. So long, Bob, keep up the good work."

"Who's been telling you things?" demanded Bob, but the agent only smiled mockingly and went on his way. He was whistling blithely as he passed the O'Neal home. Whatever code message there might be in the wave of a hand we do not know, but a happy smile wreathed the lips of Katie O'Neal as she joined her mother in the kitchen.

(Continued next week)

The practice among Indian mothers of drugging babies with opium to keep them quiet while they work in factories is so prevalent in Bombay that legislation to prevent it is being discussed.

Tough-flexible the result of 75 years' experience in bootmaking



It stretches
five times its own
length

You can stretch a strip cut from the upper of any "U.S." Blue Ribbon boot more than five times its own length! Such rubber means flexibility—stamina—long wear

The "U.S." Blue Ribbon Boots

have sturdy gray soles,
uppers in red or black.
They come in knee to
hip lengths

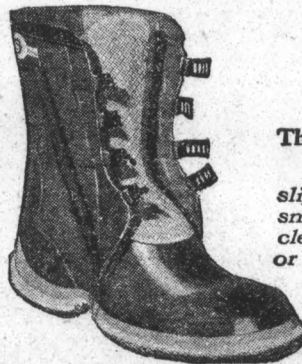
IT takes elastic, tough rubber to stand the constant kicking around a boot gets on the farm. And that's the quality of rubber you find in "U.S." Blue Ribbon boots.

And there's extra strength in the "U.S." Blue Ribbon boot from top to toe. The sole is over-size—as tough as the tread of a

tire. And in the carcass, at every point where wear is hardest, are embedded from 4 to 11 separate layers of tough rubber and fabric reinforcements. No other boot has so many!

"U.S." Blue Ribbon boots and overshoes are as husky as they look. They fit better, look better, wear better. Get a pair and notice the difference.

United States Rubber Company



The "U.S." Blue Ribbon Walrus

slips on right over your shoes. Its smooth rubber surface washes clean like a boot. Either red or black—4 or 5 buckles



Trade Mark

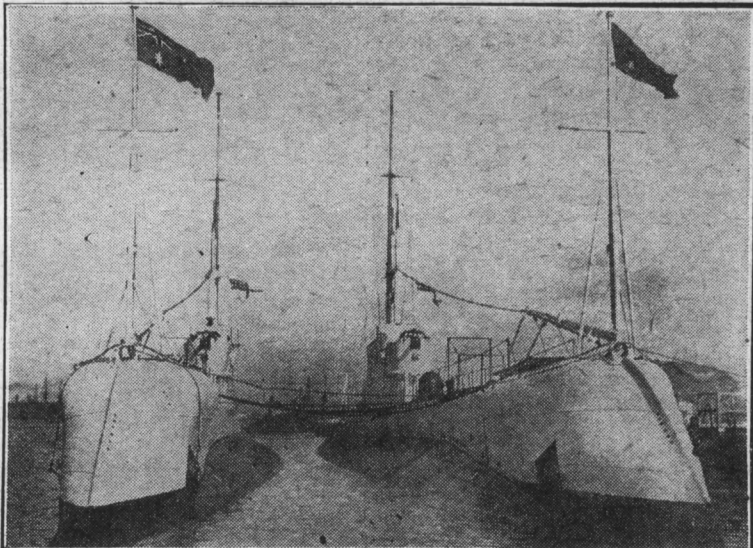
"U.S."

BLUE RIBBON
Boots Walrus
Arctics Rubbers

WORLD EVENTS IN PICTURES



Mellie Dunham, famous fiddler, again taps sugar maple after nearly 70 years.



White whales—two of the latest type of Australian submarines to make the first unescorted voyage from England to Australia, distance of 12,692 miles.



A fiddle for roaring lullabies—it retains wood tone of violin but increases volume.



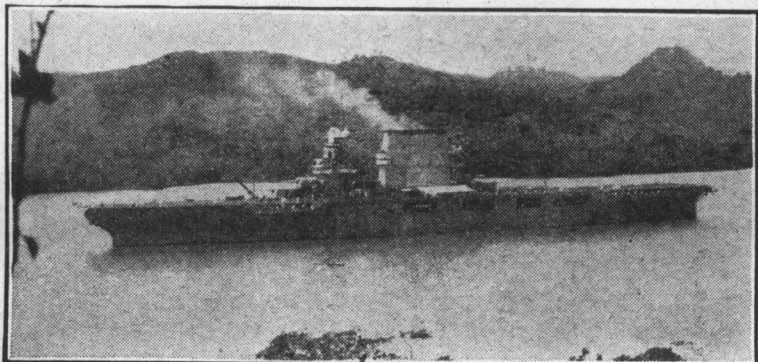
Help! Murder! Police!—But this gruesome sight is only some wax figures on way to repair shop in Paris.



By means of indentifying tags, Government representatives discover that wild ducks travel thousands of miles annually.



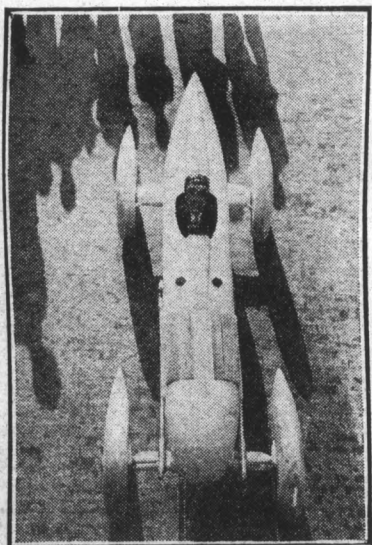
Thomas Edison still knows his dots and dashes on his 81st birthday. He was a telegrapher over 60 years ago.



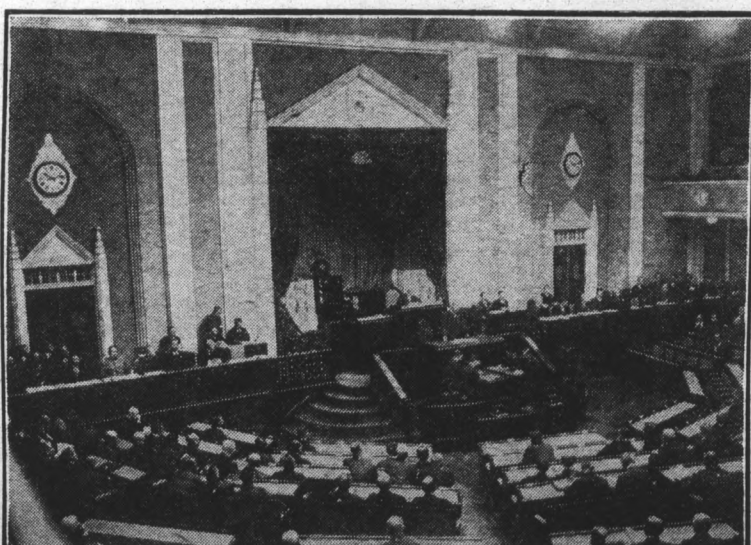
The largest ship to go through the Panama Canal—U. S. S. Saratoga, the world's largest airplane carrier which is over 888 feet long.



All England mourns loss of General Earl Haig. The flag-draped coffin was carried on the first gun-carriage to enter action in the World War.



Bullet-like "Blackhawk" with which Frank Lockhart hopes to beat British speed record.



Baron Gichi Tanaka, Premier of Japan, dissolves the Imperial Diet, or Congress, prior to general election at which time all of the males over thirty will vote.



Porpoise-like "Bluebird" with which Capt. Campbell enters International speed trial.

RURAL HEALTH

By Dr. C. H. Lerrigo

HOW TO TELL MEASLES FROM SCARLET FEVER

IN measles the little patient's eyes are watery; the nose runs; there is an irritating cough; at the beginning the whole thing is much like a bad cold. About four days later the child breaks out with an irregular, mottled rash which usually is a signal for a drop in temperature. In scarlet fever the rash comes without so much notice. It is a smooth, scarlet sheet of eruption, more likely to have sore throat with it than not, and generally preceded by one day of feeling wretched and a spell of vomiting.

Anyone who has seen the smooth, uniform reddened surface of a typical scarlet fever skin will know how to distinguish it from the irregular, raised, and mottled eruption of measles. But the difficulty arises in the fact that neither measles nor scarlet fever are absolutely sure to run true to type. There are cases of measles that look like scarlet fever and mild cases of scarlet fever that may be mistaken for measles. It is a tremendously important thing to avoid any such mistake.

Do not take any risks in these important matters. Have a doctor see the case and settle the diagnosis and treatment for you. Even if it is "only measles" you will have done a better service for your child and the community by calling a physician. After all, measles kills more children than scarlet fever, especially in the more tender years.

Whether measles or scarlet fever the home treatment is much the same. The child must be kept comfortably in bed in a quiet room. It is no use to heap on bed covers with the idea of forcing out the rash. Be sure to avoid drafts and chills but do not make the child uncomfortably warm. Give him all the drinking water he desires but do not let him eat a miscellaneous diet. Very light diet, preferably liquid, is best. If there are any symptoms of eye trouble keep the bright light out of the room. In any event, be sure that the bed is placed so that the light will not glare into his eyes. The complication to avoid particularly in measles is broncho-pneumonia; in scarlet fever it is kidney trouble. Mild types of either disease will get well without medicine under good nursing care. But epidemics vary. The malignant type of the disease may come. Be sure to call a doctor for at least one visit so that you may have his personal inspection and advice.

PROBABLY EYE STRAIN

For years I have had severe pain on top of right side of head about every three or four weeks. And for several months, when I become tired or nervous the nerves of left side of face draw and become numb, also left hand and foot feel like strings tied about them. Is this paralysis or a symptom of same?—T. T.

These symptoms do not indicate paralysis, which quite generally comes on with little if any notice. You should have your vision tested very carefully on the chance that eyestrain may cause the trouble. You need a test of blood pressure, too, so I advise a complete physical examination.

CURE OF CATARRH

I have catarrh and would like it cured. A doctor removed adenoids and my throat has been sore ever since. What shall I do?—E. C.

There is no remedy that will cure catarrh so surely as attention to personal hygiene by forming good daily habits of living. The skin should be kept active by a daily bath, and the bowels and kidneys encouraged to prop-

er elimination by drinking plenty of water and eating green vegetables and other "roughage." For the soreness following your adenoid operation you should go back to your doctor for attention. It may be an infection.

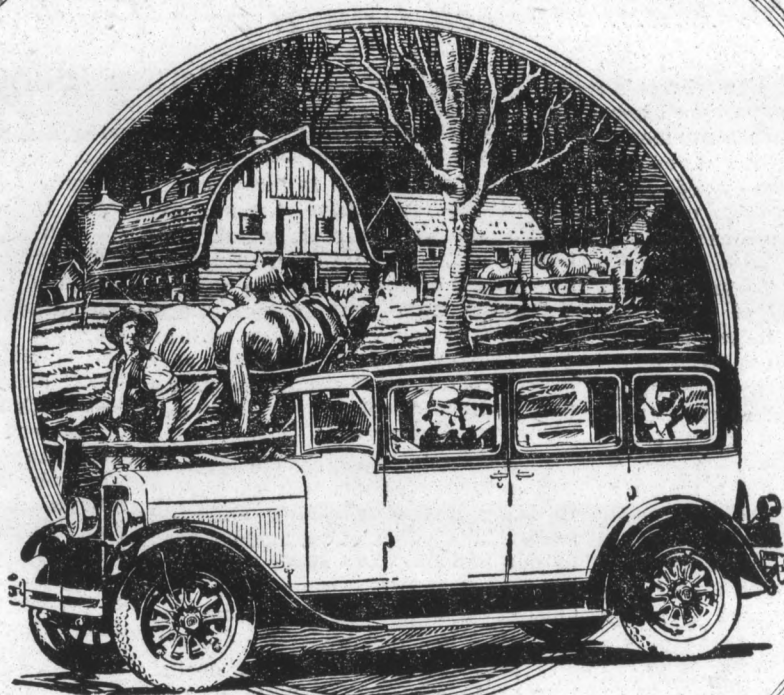
ARTIFICIAL

What about artificial ear drums. Do they do any good to a deaf person?—D.

It depends upon the cause of the deafness. The majority of cases of deafness are due to middle ear catarrh or impairment of the auditory nerve. In such cases artificial ear drums are of no value. I believe that they help a few cases in which the natural drums are ruptured. I have made many inquiries and do not personally know of a single case in which artificial ear drums are of real benefit so I advise intending purchasers to consider other aids to hearing instead.

For Bulletin on Baby Chicks, send self-addressed and stamped envelope to Poultry Dept., Michigan Farmer.

JUDGED BY ALL STANDARDS AMERICA'S *Finest* FOUR



\$875

4-DOOR SEDAN, F.O.B. DETROIT
FULL FACTORY EQUIPMENT

EXTERIOR dimensions that facilitate small-space parking—with the interior comfort of a limousine!

Acceleration that few cars can equal—and the fastest four in America! A dynamic and economical power plant.

Midland Steeldraulic Brakes expanding internally on all four wheels—positive deceleration.

Judged by all standards of style, performance, comfort and low operating cost—America's finest Four.

DODGE BROTHERS FOUR

ALSO TWO LINES OF SIXES—THE VICTORY AND THE SENIOR

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The WOMAN'S INTERESTS

Rejuvenate Home with Spring Colors

By Careful Planning You Can Add a Touch of the Mode of 1928 Inexpensively

By Berton Elliot

I HAVE had a most delightful time lately with the new brushing lacquers. At the same time I have made for the house such a number of beautiful things—mostly out of old things about the house—you'd never believe so great a change could be made in the looks of a home for just a few dollars.

I'll tell you about it—just what I did. You can do any of the things I did, in your own individual way, with your own individual ideas of design and color—and many more things too, for when you get started, ideas seem to come to you from everywhere.

In the first place I did a magazine rack as a "starter." I had never had one of these charming bits of furnishing, although I had always admired their beauty every time I saw one. One day I happened to go by some of the unfinished racks of unusually attractive design in one of the stores, selling for just a dollar. Then and there the urge came over me to decorate a magazine rack for our home.

First, the wood was sandpapered to plate smoothness, and dusted off clean. Then a coat of pure shellac applied, to seal and fill the pores of the porous poplar. (I always have a small bottle of shellac about the house.) After drying about two hours, the surface was again sandpapered smooth—then two coats of lettuce green lacquer applied without sandpapering between coats. Next day the gold trim was put on all around the edges using a small camel's hair "pencil" brush.

The transfer pattern was also applied—really a surprisingly simple operation. You first coat the face of the transfer with quick drying varnish and allow it to get very sticky or "tacky." Then place the transfer in position, sticky side down, on the surface you are decorating. Press down firmly, allow three or four minutes for the adhesive to set, then soak off the paper backing. Now at once wash over the surface with a mixture of half gasoline and half water to remove deposits of varnish and the gummy substance used for temporarily holding the transfer design to the paper backing.

Our next operation was a tilt-top table. This was lacquered in black with a gold edge, and decorated with a rich floral design in deep reds and greens—a most stunning combination against an even-toned, moderately light colored wall background, yet conservative enough for any scheme of furnishing or any place in the room. We placed this little gem on the stairway landing across the room from the fireplace, an alcove that seemed to be just made for it.

Next we carried out a complete refurnishing of the sunroom practically without buying anything new. We had in this room a sort of accumulation of odds and ends of furniture. As a basis, we had two wicker chairs of typical sunroom design but without much character as to color scheme and besides considerable the worse for wear. Then there was a table that did not match the chairs, but nevertheless of a good sunroom type—and a wickerware fernery—and the radio. Green and orange was the scheme we decided upon to enliven this cheer-pro-

voking room, and bridge the various unrelated pieces into a set.

The work was done in lacquer with one of the inexpensive hand spray outfits on the market, which permitted getting into the crevices and low places of the wicker, as well as doing the work very quickly. The orange trim color was put on with an exceptionally full brush and very little stroking, so it would not soften and become discolored by the previously applied green.

Next we looked through various rooms to see what might be needed to bring things up-to-date, and add some little touches of the mode of 1928 to our home—at the same time, taking inventory of various odds and ends about the house which could be converted into desirable art objects.

A preserve jar of graceful design was made into a vase quite beyond criticism, by pouring on two colors of lacquer (lettuce green and black), and letting them run down the sides and blend together, then edging the sides with gold. A bud vase that had long ago been relegated to the top shelf of the kitchen cupboard was pour-coated in plain lettuce green and the base brush coated in gold. These made companion pieces for the mantel.

Some wall plaques were made from colored prints we had been saving for quite some time with a view of doing something with them when the spirit moved us. Suitable plaque shapes were cut from wall board, upon which the prints were mounted with prepared glue, leaving a margin of wall board between two and three inches

wide around the picture. A frame was then built up on the wall-board margin with a gesso composition, made by mixing about one-half pint of whitening, one-quarter pint of prepared glue, three teaspoonsful of varnish, and three teaspoonsful of linseed oil to a plastic consistency that would stay put when applied. The mixture was spread on with an ordinary table knife, and modelled into fanciful effects with swirls and sweeping twists of the end of the knife. When the composition had hardened, the frame was polychromed, this being done as follows—first brushing on a foundation coating of gold bronze; followed, when dry, with various shades of oil colors, corresponding with the tones in the picture, brushed on, and partially wiped off as desired, and with touches of bronze powder in various hues patted on with a soft cloth.

GRANTS THEY ARE NUMEROUS

TALK about mistakes, I've made so many it would take a book to hold them. My mother always thought she could do her own work best which left me without much experience. I had to learn to do many things after I was twenty that I should have known at twelve. I had never made bread at home but had formed the loaves for the pans. One day after I was first married, I tried my luck at making yeast. It did not raise. A kind neighbor explained that I put the yeast cake in the water while it was too hot. Feeling ashamed to ask further questions, I learned by experience until now my bread is as good as any-

one can bake. I have also learned to make many things from bread dough.

My first cookies were like chips. My mother-in-law told me it was all in the mixing, but what did she mean? But I finally learned to mix dough as soft as can be handled and then bake in a hot oven.

But of all the mistakes I made, I think my baby's clothes were the worst. I hemstitched the hems by hand, crocheted and knitted lace, tucked and pleated—and oh, they were so pretty. My mother-in-law was with me when baby came and she thought they must be doll clothes. Baby weighed but five pounds, so they fit in a way until we could hurry up and make some more.—Mrs. A. K., Charlevoix County.

STEALING A MARCH ON GRANDMA

With grandma in the springtime
I heartily agree—
She gives the family rhubarb
To save the doctor's fee.

But why wait till spring? Why not "save the doctor's fee" in winter too?

Perfectly simple. Before the ground freezes, dig up a few clumps of rhubarb, leaving the dirt on the roots. Leave these out-of-doors until they are frozen, then take them into the cellar. Put the clumps in a box, as close together as possible, and sift dirt over the roots until they are covered. Cover the box to keep out light. No further attention is necessary except to water once a week or so.

What happens? The roots begin to send up sprouts in a month or so, and in two months you can begin to pull fresh rhubarb.

Don't despair if the ground has already frozen and you have not dug up any roots. Dig them the first time the ground thaws.

If the weather is against you, and you are kept from digging the roots all winter, then try this stunt:

Set some old barrels (both ends out) over several clumps of rhubarb in the garden. This will cause them to sprout earlier than the clumps not covered, and you can pull rhubarb from the barrels a couple of weeks ahead of the outdoor season.—E. K.

EXTENSION WORK PROGRESSES UNDER DIFFICULTY IN MASON

WOMEN of Mason County are not worried over companionate marriage and other new fangled ideas; neither is the question of their growth, through continued education and better home management, a debatable one.

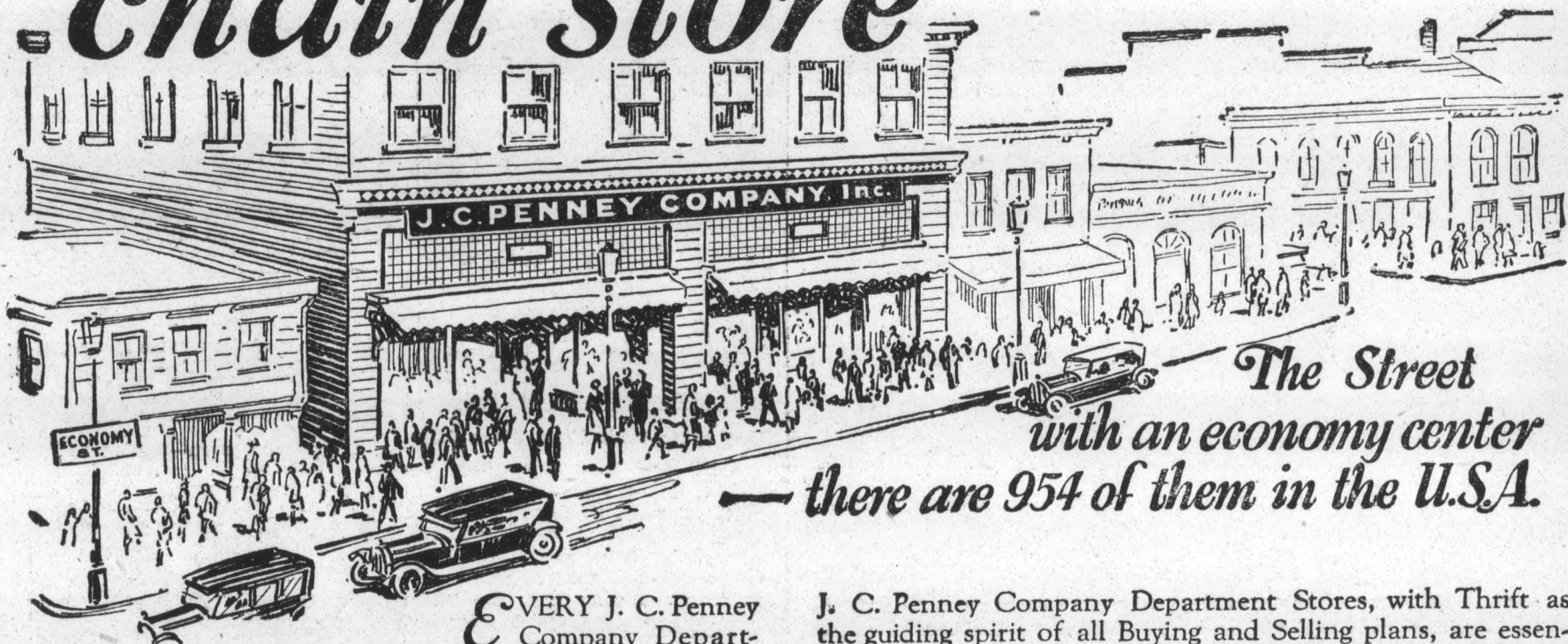
On February 15, 140 women from the twelve extension groups in the county, met at Community Hall, Scottville, for an enthusiastic rally with Mrs. Louise H. Campbell, state home demonstration leader, as speaker.

Having neither county agent nor home demonstration leader, it has been more work for the county officers to keep the various clubs together, but under the enthusiastic leadership of Mrs. Frank Barclay as county president and the splendid cooperation of local leaders, the work of two years in the clothing project has progressed smoothly.—Mrs. G. P. D.



Old Chairs Look Like New When Dressed Up in Right Colored Paint

a different kind of chain store



*The Street
with an economy center
— there are 954 of them in the U.S.A.*

EVERY J. C. Penney Company Department Store is welded to local needs on the solid anvil of Service. Today, as in 1902 when Mr. J. C. Penney opened the first store of what is now a Nation-wide Institution, the policy is to serve the customer well and save him more. Because this policy has been rigidly adhered to throughout the twenty-six years of the Company, it is known as a different kind of chain store.

It is different because the Merchant in charge selects merchandise from a large staff of expert buyers in the world's markets to meet the needs of the people of his community—having a financial interest in his store he naturally is keenly interested in every civic move that will make his community a better business place and a better place in which to live—though strictly local in its Service and interests, it brings to its customers the far-reaching advantages of National buying resources.

Dry
Goods,
Clothing,
Furnishings
and Shoes, for
the Entire Family

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Quality goods at quantity prices,
built to service specifications,
famous for satisfaction given.

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- 445—Silk and rayon full fashioned hosiery, good weight98
- 447—Silk-to-top full fashioned hosiery, medium weight 1.49
- 449—Pure silk full fashioned hosiery, lisle top 1.49
- 455—Sheer silk-to-top full fashioned hosiery, chiffon weight 1.49
- Hand-Bags in leathers, fittings, shapes and colors to harmonize with new Spring outfits,98, 1.98, 2.98

For Men and Young Men:

- Suits in hard-finished worsteds, tweeds and casimeres—desired models, patterns and colors, 19.75 and 24.75
- Work Clothes and Footwear for farm and shop—the kind that helps in the day's work and satisfies the pocketbook.

J. C. Penney Company Department Stores, with Thrift as the guiding spirit of all Buying and Selling plans, are essentially Economy Centers of their individual communities. To see how much can be put into a community—rather than how much can be taken out—is the foremost consideration in the operation of each store.

You will be pleased with the values and you will enjoy its "home town" spirit of neighborly helpfulness.

Our Spring Store News Catalog is ready. It tells an interesting story of Quality and Savings. If you have not received your copy, please write for it.



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"quality—always at a saving"

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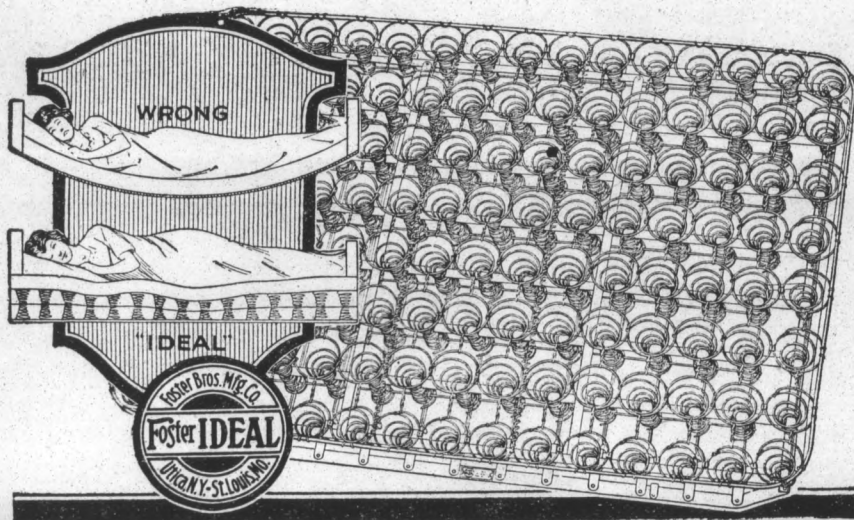
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Sleep is far more important to your nerves than food

PROTEINS may build tissue, but sleep is nerve nourishment without which you cannot live a week.

When you stretch out on the FOSTER IDEAL SPRING you get real nerve rest because you get perfect spine support, and there's a real reason why. It lies in the FOSTER IDEAL's 120 super-tempered spirals and the IDEAL's loose linked buoyant chain top. You will find other springs built like the IDEAL but if you're wise you'll count the spirals, look for the chains and make sure of seeing the genuine FOSTER TRADE-MARK.

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WOOL BLANKETS—and Colonial Coverlets. Send us your wool and we will make beautiful, serviceable products that will give satisfaction both in possession and the service they render. We sell direct. Write for catalog and samples. **WEST UNITY WOOLEN MILLS, 108 Lynn St. WEST UNITY, OHIO.**

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For a limited time we offer to send C. O. D. this \$15.00 burner complete—including flexible fuel supply tubes, regulating valves and galvanized iron tank, ready to install, for only \$6.00.

Fits Any Stove or Range Fully guaranteed against all defective workmanship and material for one year. Any part that proves defective, if returned, will be replaced free of charge.

New 1927 Uni-Hete Burner Outfit vaporizes kerosene or distillate, mixes it with air, producing an intensely hot, clean, smokeless, silent burning flame. Heat can be regulated to any degree by fuel controlling valves. Improves your stove 100%. Have been manufacturing oil burning devices for thirty-three years. We make this offer for a limited time only. Specify if for range or heater.

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Whether your choice be one of the many very comfortable rooms at \$2.50, \$3 or \$4 a day, or one of the higher-priced larger rooms with a view of the city, river and Canadian shore, you will here enjoy a particular sense of value. Every room has a Servidor.

[Garage in connection. Cars called for and delivered without charge.]

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GROWN FROM SELECTED STOCKS
New crop, tested seeds, sure to produce. Sold for 58 years to satisfied customers. Prices reasonable.

Extra packages free with every order. Free—Large catalog with 700 pictures of vegetables and flowers. Send your own and neighbors addresses today.
R. H. SHUMWAY, Dept. 50 Rockford, Ill.

FLOUR BAG PAJAMAS SENT TO PRESIDENT

PAJAMAS from flour bags! This may astonish housewives who have been in the habit of using the discarded sacks simply for dusters and dish cloths, but they will be still more startled to learn that they belong to no less a personage than President Coolidge himself. This is how it came about! The ladies of the Millard Avenue Presbyterian Church in Chicago, had been talking about Mr.



They Were Made From Flour Bags

Coolidge, and how much they approved of his program of governmental economy. Some one suggested writing him a letter of appreciation, another lady improved on this with the proposal that they make a super-fine cake and send it to the White House with their regards. Finally, Mrs. Anna Hayes suggested that they make a pair of pajamas entirely out of used flour bags, and this was agreed upon because of its novelty which at the same time conveyed the idea of practical thriftiness so dear to the New England heart.

The bags were bought for a few cents from a nearby bakery and five of them were used in making the presidential nightwear. The cutting was done so expertly that no visible piecing was necessary. If you don't believe a full sized pair of pajamas can be made this way, try it and see, though the church ladies admit it took some skillful planning. The frogs and buttons were of lavender.

"We took a lot of pleasure in making them," said Mrs. Hayes, "and hope that the President will 'choose' to wear them."—H. F.

Household Service

ANSWER TO BREAD TROUBLES

I HAD the same trouble as Mrs. F. C. G., when I let my bread sponge raise too long. Now I always knead the dough stiff at night the last thing before I go to bed. I start my sponge at noon and it is light by evening. By working the dough at night, it is ready to put into loaves the first thing in the morning.

Occasionally, when I do not get my sponge made at noon, I start it at supper time and let it raise until morning before kneading the dough.—Mrs. B. S.

I am not quite sure what is the trouble with Mrs. F. C. G.'s bread but I have never had poor luck with my method. First, I scald one-half cup sugar and a big tablespoonful of salt, and one tablespoonful of flour with the water in which I boil potatoes. Then I add one cup mashed potatoes and enough cold water to make two quarts. Add the yeast cake which has been dissolved when the mixture is lukewarm. In the morning I set the sponge and by the time breakfast is over it is light. Then mix until smooth and let rise again. When I mix into loaves, I add about two table-

spoonsful shortening, let loaves rise until twice the size and bake about one hour in a moderate oven.

I have found that a twenty-four and a half pound sack of spring wheat flour makes four more loaves than the same size sack of winter wheat flour.—Mrs. I. M. C.

RUST SPOTS

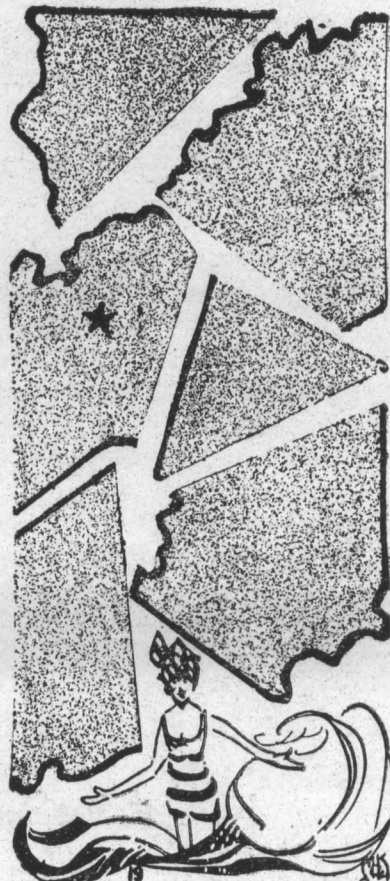
THE most stubborn rust spots can be removed by this method: place a slice of lemon right over the rust spot and hold cloth over hot water so that the steam comes up through the rust spot to the lemon. I prefer the teakettle spout as the rest of the teakettle protects the hands from hot steam.—Mrs. C. H. F.

"Soap it—that will hold it," advised another friend when I discovered a run in my stocking with nothing at hand to stop it.—M. S.

Our Little Folks

STATE SECRETS

Here stars of the movies and fruits of the tree,
With gold from the mountains and fish from the sea;
Conspire all together to make this State be,
A rival to heaven—that's what they tell me!



The pieces of this puzzle when correctly put together, make a map of the state which this verse describes. The star indicates the capitol. When you have solved the secret of which state this is, write me all you can about the state and its capitol.—Aunt Martha.

The answer to last week's secret was South Carolina and its capitol is Columbia.

WHO AM I?

I am a plump little bird just six inches long. My head is black but my back is slaty-blue and my wings and tail have white markings. I do not bore holes in tree trunks but spend my time searching for eggs and larvae that are concealed in the crevices of the bark.

I can go down a tree trunk head first as quickly as I can go up, which is something that Neighbor Woodpecker can't do.

I build my nest in a knot hole or put a new soft lining of leaves and feathers in Downy Woodpecker's last year's nest. Have you ever seen me and can you guess my name?

BABY CHICK LIFE-INSURANCE

Why not buy Baby Chicks that are insured for the first critical thirty days? Send for one of the most amazing propositions ever offered on quality Baby Chicks!

FREE BOOK explains our insurance proposition on White and Brown Leghorns, Barred and White Rocks, Reds, White Wyandottes, Ducks, Geese and Turkeys. Get your copy of this book!

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Baby Chicks

From Egg Bred Northern Grown Laying Stock

Culled for years for higher egg production. Let our new 1928 Catalog tell you ALL THE FACTS about our White Leghorns, Barred Rocks, White Rocks, White Wyandottes, and R. I. Reds.

Send for copy at once. Many orders now being booked for spring delivery. We guarantee your satisfaction, and 100% Live Delivery of your Chicks.

GILT-EDGE POULTRY RANCH
Zeeland, Michigan

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To get our free Catalogue and prices on DEAN QUALITY CHICKS. White Leghorns, Barred and White Rocks, R. I. Reds, White Wyandottes. All Michigan Accredited. Some Certified. Established 1911—Better this year than ever. DEAN EGG FARM & HATCHERY, Box 8, Birmingham, Mich.

S. C. W. Leghorn Baby Chicks

Buy Mich. Accredited Baby Chicks from Michigan's largest poultry farm. We buy no eggs to put in our incubators but produce them on our own farm from selected hens mated with 50% 200 to 336 egg Tancred males, pedigreed. All breeders have been bloodtested for BACILLARY WHITE DIARRHEA for the past 4 years which insures you chicks practically free from this dread disease. No better chicks at any price. Only one grade.

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Quality Breeding Counts

FAIRVIEW Day Old Chicks, 3 Weeks Chicks, Pullets, Hens and Pedigreed Cockerels have paved the way to bigger Poultry Profits for hundreds. Send today for Big New, 1928 Catalog that tells you all about how to raise poultry for profit and get our Live and Let Live Prices. Michigan Accredited. FAIRVIEW HATCHERY AND FARMS, Box M, Zeeland, Mich.

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Chicks. Genuine Tom Barren English White Leghorns, large type, overlapping combs, with egg laying qualities. Non-setters Barred Rocks from M. S. C. stock, 1928 flocks, headed with cockerel whose dams have official trapnested records 203-233 M. S. C. egg-laying contest. Free circular explaining our 1928 special, surprising you, low price.

HILLSIDE HATCHERY, HOLLAND, MICH., R. 3

BOS QUALITY CLASS A CHICKS

From healthy heavy layers of large eggs. S. C. English White Leghorns, Brown Leghorns, Anconas, R. I. Reds and Assorted chicks at reasonable prices. No money down. Pay full amount 10 days before chicks are shipped or C. O. D. Special discounts. 100% live delivery postpaid. Catalogue free.

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CARLETON MICHIGAN ACCREDITED CHICKS

Rugged, vigorous chicks that will live and grow. All flocks and hatchery Michigan Accredited. Send for our free catalog, it tells all about our stock and prices. We hatch B. P. Rocks, R. I. Reds and S. C. White Leghorns.

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WHITE LEGHORNS ONLY SHIPPED C.O.D. ANYWHERE LOW PREPAID PRICES

Egg contest winners for years. Guaranteed and insured. Also cockerels, pullets, hens. Catalog and special price bulletin free.

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Accredited Chicks C.O.D.

See your chicks before you pay for them. Especially selected, accredited stock. BEAUTIFUL CATALOG FREE. Send for details, prices and catalog. Write today. Our chicks are highest quality.

South Kenton Poultry Farm, Box 11-A, Kenton, Ohio.

CHICKS AND DUX C. O. D. Fine pure-bred chicks and baby ducks at prices to fit your pocketbook. Pedigreed males and selected females make chicks of finest quality. Free poultry book and catalog. Get details of our liberal C. O. D. offer. COOPERATIVE BREEDING & HATCHING CO., Box 126, Tiro, O.

Baby Chicks English Single Comb White Leghorns \$10.00 per 100 for March delivery, May \$9.00 per 100. Discount on orders of 500 or more. Live delivery guaranteed. HENRY WATERWAY, R. 6, Holland, Mich.

MICHIGAN FARMER Classified Liners get results. Try one.

ACCREDITING MICHIGAN'S POULTRY HOUSES

IN connection with the accrediting of farm flocks, it is found that the type of poultry house is of great importance and that the accrediting of poultry houses will help to determine the kind of house which is the most satisfactory for protecting the breeding stock that are to produce accredited chicks.

J. A. Davidson, Field Manager of the Poultry Improvement Association, has given the house problem considerable thought and has developed the following score card to be used as a starter in scoring poultry houses. This may be subject to later changes. It allows 5 points for location and 15 for lighting. The ventilation counts 25 and is divided up into 5 for floor space, 10 for temperature and 10 for the ventilating system.

Sanitation is to count 35 points and is divided into yarding 5, floor 8, annual clean-up 4, dropping boards 8, equipment 5 and litter 5. The equipment which counts 20 points is divided into perches 8, feeders 5, nests 3, and water utensils 4. The total amount of points required to pass a house as satisfactory has not been determined as yet.

In discussing the house score card with members of the poultry association during Farmers' Week, the following points were brought out. Too much light makes a poultry house cold but a lot of light is better than no light. A crowded house is hard to ventilate and there should be at least three and one-half square feet of floor space for light breeds and four square feet for heavy breeds. The returns are often greater when there are fewer birds in the house.

The building of twenty-six of the Michigan shed-roof type poultry houses in different sections of the state has proven that the ventilation system in this house is a success. It is found that a concrete floor should always be insulated against soil moisture. Dry mash hoppers should have a minimum of ten feet of feeding space for 100 birds. Fountains should allow three feet of drinking space per 100 birds. This is about equivalent to one good sized pail per 100 hens. One hundred hens should have at least 800 inches of perch space.

THE BUSINESS POULTRYMAN

ACCORDING to A. G. Phillips, former poultryman at Purdue University, the successful poultryman must have fitness for the job. This is a combination of knowledge learned through study and practical experience gained by doing things. The "want to do" is necessary to put the job over. The poultryman must want to do the job and not just think he wants to do it.

Production and selling go together in the poultry business. The poultryman must have sales instinct and be the finest type of salesman. Successful poultrymen must also be good business men.

Lack of resourcefulness and the ability to stick are two causes of failure. The poultry business belongs in agriculture and is economically sound in spite of slumps. Diplomacy and tact are helpful in making sales. Some farmers buy on a rising market and sell on a falling market which causes the other fellow to make the money.

Don't worry about the cost of success. Worry about the cost of failure. It isn't the cost of the chicks that live but the cost of the chicks that die that counts. It isn't the cost of the eggs you produce but the cost of the eggs you don't get that brings losses. Business goes in cycles and has its ups and down. The poultryman should believe in his job, have faith in the business and find the way to do things.

Send for this Valuable information TODAY

There's a handsome yearly profit in raising poultry. Thousands of farmers and rural residents are adding from \$500 to \$2000 a year to their incomes by knowing how to get the money to be made in the poultry business. You have the same wonderful opportunity to realize a fine profit by applying modern methods to poultry raising.



Brooder Stoves

DEALERS: The demand for Ohio brooders is increasing fast. Live dealers wanted in all unoccupied territory. Complete range of sizes. Popular prices. Liberal dealer proposition. WRITE.

THE OHIO RAKE CO., 913 Albany St., DAYTON, OHIO

Dickelman METAL BROODER HOUSES

Every detail in the Dickelman Metal Brooder House has been worked out to provide perfect housing facilities for chicks. In no other brooder house has the matter of ventilation been so carefully perfected. Tests made by practical farmers show that this house actually pays for itself by the extra chicks and better chicks raised to maturity.

Mr. Tibbals, of Rose Lawn Poultry Farm at Dayton, writes that he placed 650 chicks in each of two Dickelman houses, 500 in another type of house, and the loss in the other type of house was far greater than the combined loss in the two Dickelman houses.

97 Per Cent Reach Maturity

Poultry raisers find that in a Dickelman the chicks have perfect ventilation, are kept warm and disease free. They find it easy to raise 97 per cent to maturity. Available in 500 chick size colony house, or in any length desired for continuous brooder system. Shipped knocked down. Easily erected.

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Write for our free booklet on modern poultry housing. You can make your chicks safe from fire, rats, disease, etc. Agents Wanted. Liberal Commission.

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SILER'S Standard Bred CHICKS

FOUR years of blood-testing for bacillary WHITE DIARRHEA. Three years of ACCREDITATION and ten years of hatchery experience coupled with consistent culling and breeding has given us good strong livable chicks, that grow into profitable layers. Two distinctive breeds:

Barred Plymouth Rocks and S. C. White Leghorns

Write for free catalog and prices

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TRADE MARK OF QUALITY CHICKS

S. C. Wh. and Br. Leghorns, Bl. Minorcas, \$12.00 per hun.
Barred and Wh. Rocks, S. C. and R. C. Rd. I. Reds, \$14.00 per hun.
Wh. Wyandottes and Buff Orpingtons, \$15.00 per hun.
Ten per cent discount on orders of 500 or more. Three weeks old chicks add ten dollars per hun. Baby Wh. Pekin Ducks, Geese, and Turkeys, \$1.00 per hun. holds shipping date, balance C. O. D. Order direct from ad. or write for folder.

ARROWHEAD POULTRY FARM

Hatcheries at Montrose, Birch Run and Lapeer, Michigan

for Success with Baby Chicks-use GLASS CLOTH

If you want unusual success with your chicks this year, raise them under GLASS CLOTH. This wonder material admits the life giving ultra-violet energy rays of the sun. (Plain glass stops them.) Science has discovered these rays prevent rickets, softness, leg weakness and many other chick troubles. Death loss from these causes is stopped. Ultra-violet rays promote health and speed up the building of bone and tissue. If you want to raise every chick, if you want early broilers and layers, put GLASS CLOTH in your brooder house and windows and build a GLASS CLOTH scratch shed where the chicks can run and exercise in real sunlight. It is nature's health remedy. Millions of yards in use today. Success everywhere. Experts recommend it. Repays its cost many times a season. Try it. It pays.

IDEAL FOR HOT BEDS

GLASS CLOTH is the cheapest and best covering for hot beds. Violet rays make plants grow stronger and harder. They transplant better, mature earlier and yield bigger crops. Holds heat. Resists cold. Very durable. Try it on your hot beds this year. See special trial offer.

Bladen, Nebr. Dept. 4216
TURNER BROS. Wellington, Ohio



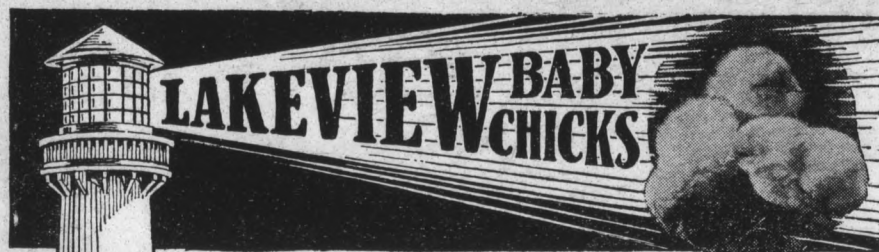
A letter from Mrs. Emil Anderson says: "Have had remarkable success this year with Glass Cloth. Have lost only 10 out of 400 chicks. This is much better than we have ever been able to do before. The chicks have grown faster and are much healthier. They will be laying by October if they keep on at this rate. Will use Glass Cloth every year now."

SPECIAL TRIAL OFFER

\$5.00 brings big roll 45 ft. long and 36 in. wide. (Covers scratch shed 9x15 ft.) If, after 10 days' use you do not find it better than glass or any substitute, return it and we will refund your money. Common sense instructions, "Success with Baby Chicks," samples and catalog, free on request. If your dealer does not have GLASS CLOTH, order from us direct.

TURNER BROS., Dept. 4216
Bladen, Nebr. Wellington, Ohio

Name _____
Address _____
Town _____ State _____



Quality-Bred and Quality-Hatched

Lakeview chicks grow rapidly into real money. We win and hold our customers by supplying only stock bred for profits.

The Best Strains of Money-Making Breeds

are represented in our laying flocks. Dependability and production proved by test. Official Records up to 252 eggs at Michigan egg contest, 1925. Our Barred Rocks won silver cup, Holland Fair 1927. 215 egg hen at Natl. Egg Laying Contest, Mountain Grove, Mo., 1927. All our flocks are Michigan Accredited and regularly approved by authorized state inspectors. Chicks are Smith-Hatched, lively and vigorous. 100% live delivery guaranteed.

Get Our Big FREE Catalog

It tells all about the famous strains from which Lakeview chicks are hatched. S. C. W. Leghorns for egg production. Your choice of standard heavier breeds; prize-winning Barred Rocks, White Rocks, Buff Orpingtons, White Wyandottes, or S. C. Rhode Island Reds—all high grade stock. We will ship C. O. D.

Don't delay your reservations—1¢ per chick books your order. Write TODAY for catalog and special price list.

LAKEVIEW POULTRY FARM

M. J. KOLE, Prop.

Box 6 Holland, Michigan

Member International Baby Chick Association

A Solid Foundation for Success with Poultry



DILIGENT CHICKS DID IT

and will do it for you.

Your DILIGENT CHICKS became DILIGENT LAYERS and beat them all in our neighborhood, enter order for 500 March delivery, a customer just wrote us. Do not hesitate to send your order. You will be satisfied. Thirteen years of honest dealing behind us. Pulletts after May first. Please note our NEW LOW postpaid prices:

	50	100	200	500
Single Comb White Leghorns.....	\$5.75	\$11.00	\$21.50	\$52.50
Barred Plymouth Rocks.....	7.25	14.00	27.50	67.50
S. C. Rhode Island Reds.....	7.25	14.00	27.50	67.50
Mixed (Heavies Only).....	6.25	12.00	23.50	57.50

DILIGENT HATCHERY AND POULTRY FARM

Harm J. Knoll, R. R. No. 4 HOLLAND, MICHIGAN

HIGHLAND LEGHORNS



Every breeder carefully selected for size, type, and egg production. Mated to males of 200 to 300 egg pedigree ancestry.

CHICKS SHIPPED C.O.D.

See your chicks before you pay for them. We know you will be pleased and we are willing to take all the risk. This assures you of 100% live delivery and shipment exactly when you specify.

SPECIAL DISCOUNT NOW!

On all orders for chicks booked this month we give a big discount. Get our new valuable catalog which gives complete details. Write for copy today.

Highland Poultry Farm, R. 9, Box C, Holland, Mich.

WOLF SELECTED CHICKS

CHICKS C. O. D. SEND ONLY \$1.00

Our chicks are from leg-banded stock selected by expert poultryman. You can feel safe for you know every chick is up to highest standard for egg production and breed type. Get our special wholesale price on brooder stoves when bought with chicks. SEND FOR OUR BIG CATALOG. It tells all about our pedigree males and special pen matings. Also gives details about our high producing utility birds. Valuable book free with each order. Prices reasonable. Write today.

WOLF HATCHING & BREEDING CO.

BOX 42

GIBSONBURG, OHIO

Babion's Pure Bred Chicks

Trapnested Matings add 3c; Blue Ribbon Pens add 4c Each.

	25	50	100	500
100% Live Delivery guaranteed, and Postage paid on				
White, Brown & Buff Leghorns.....	\$3.50	\$6.50	\$12.00	\$58.00
Barred, White & Buff Rocks, Minorcas and Anconas.....	4.00	7.50	14.00	68.00
White & Sil. Wyandottes, and Orpingtons.....	4.75	8.50	16.00	78.00
Mixed all heavy Broilers, No Culls.....	3.50	6.00	11.50	55.00

BABION'S FRUIT AND POULTRY FARMS

Lock Box 354-C

Flint, Michigan

ACCREDITED WHITE LEGHORN CHICKS

Hollywood and Hollywood sired from 200 to 290 egg stock and commercial stock

	50	100	500	1,000
Star Matings.....	\$7.75	\$15.00	\$72.50	\$140.00
Utility Matings.....	6.75	13.00	62.50	120.00
Commercial Matings.....	5.25	10.00	47.50	90.00

Left Overs \$8.00 per 100. Order direct from advertisement. Send 10% with order, balance one week before shipment. We guarantee 100% live delivery by prepaid Parcel Post. Prompt shipment on date desired.

M. D. WYNGARDEN

R. 4, Box 40

ZEELAND, MICH.

SERVICE	PURE BRED BABY CHICKS	QUALITY
100% Live Delivery Guaranteed.	Send for Free Catalog and Price List	
Prepaid Prices for	25 50 100 200 500 1000	
White Leghorns, Black Minorcas.....	\$3.50 \$6.50 \$12.00 \$23.50 \$57.50 \$110.00	
White, Barred and Buff Rocks.....		
Single and Rose Comb Reds.....	3.75 7.25 14.00 27.50 67.50 130.00	
White Wyandottes, Buff Orpingtons.....		
S. S. Hamburgs, 16c. Assorted Breeds, 10c. Member A. B. C. P. A. Our 22nd Year	BOX D	TIFFIN, OHIO

THE LANTZ HATCHERY

R. 8 Varieties
O. P.
CHICKS

Our Pure Blood

—SELECTED CHICKS
—BIG EARLY ORDER
—DISCOUNTS—15 VARIETIES

This year we introduce to you our Record of performance pedigree male matings up to 316 egg records direct from British Columbia and Ontario, Canada, including bloodtested, trapnested pedigree White Leghorn matings, 220 to 313 egg records. Winners of many prizes. Every bird standard culled. Get FREE circular of chicks, hatching eggs, and brooders before buying elsewhere. Broiler chicks 9c up.

Beckman Hatchery, Box 57, Grand Rapids, Mich.

Poultry House Essentials

Found in Foreman Type House

By E. C. Foreman

THIS type of laying house has been designed to provide a certain condition within the house and is not merely a shelter against the elements. This house is a departure in design from the common types of poultry houses and is both a home and workshop, embodying those features that safeguard health, provide comfort, and stimulate production.

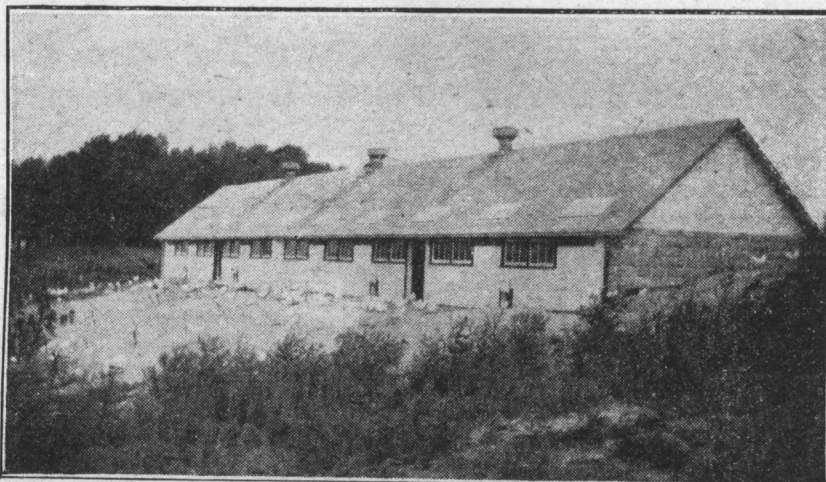
Briefly summarized, a satisfactory poultry house should be dry, well lighted, comfortable under wide extremes of temperature, and providing at all times adequate amounts of pure fresh air. The incorporation of those features in construction that will provide these conditions as economically and efficiently as possible has been our objective in designing the Foreman All Year Poultry House.

Twenty years ago no one expected hens to lay in winter. Today the win-

is exhaled in breath or excreted in droppings. Add to this the water from other sources such as capillary moisture that gains entrance through the floor, rain from leaky roofs and windows, spillage from inadequate and unsanitary drinking vessels, moisture of condensation, and air humidity.

The control factors affecting the rate of evaporation are the available heat and proper ventilation creating air movement over the litter and carrying off the damp vitiated air. The litter should not be over four inches deep and should be frequently turned to release its moisture more readily.

Capillary or floor moisture can usually be corrected by painting the surface of the floor with asphalt paint. In building the floor, it is usually advisable to select a high knoll as a building site and the floor should be at least eight inches above the ground



A Foreman Type House Provides Healthful Living Conditions

ter egg yield is the financial barometer that spells success or failure. Winter eggs, when eggs are in greatest demand at highest prices, are not produced by chance, but are the result of a combination of important factors including careful breeding, healthy, well-grown stock, culling, feeding, and proper housing. Slower progress has been made in improving housing conditions than in breeding, culling, and feeding.

It is common knowledge that very few poultry houses operate satisfactorily under the variable weather and temperature conditions experienced in Michigan. The moisture problems of fall and winter are difficult of solution. Excess dampness is a menace to the health of the birds and retards production. Poultry houses that register wide daily and seasonal temperature changes are not conducive to consistent laying as sub-zero temperatures are a shock to the birds, over-taxing their limited digestive capacity and causing production slumps and molting. The opposite condition of extreme heat of summer requires careful ventilation for health and well sustained production. Hens do not have sweat glands and close, hot roosting quarters usually force on pre-seasonal molting as Nature's only method of relief.

These various factors are brought to your attention for a fuller appreciation of the fact that in building or remodeling a poultry house, we should have in mind the production of certain conditions within the house rather than building according to "fancy" and trusting that it will operate satisfactorily.

Moisture Problems

Undoubtedly, the greatest problem in proper housing is the elimination of moisture. One hundred Leghorn hens in twenty-four hours in winter will consume thirty-three and one-half pounds of moisture in the form of feed and drink. Practically all of this

level. By filling with coarse stones, the capillary movement of moisture is checked. Soil water will travel from seven to eight feet through sand or gravel and from twenty-one to twenty-four feet through clay. Whenever possible, select a sandy or gravel ridge for the building site with good air and water drainage in all directions.

Ventilation

The slow interchange of air is most desired in a poultry house, as a more uniform temperature can be maintained at all points within the house. Too free a circulation usually creates cold air pockets and causes huddling. This is not conducive to constant exercise nor does it get the desired response from the hens. An air movement of from five to six feet a minute creates no perceptible drafts and furnishes the hens with a constant supply of pure, sweet, fresh air. The modified King system of ventilation, which introduces the air into the building from a point several feet from the floor with all inlets arranged on the south wall and which draws the air off the floor through metal or box flues, is possibly the most satisfactory of all. The inlet and outlet flues should bear a definite and equal opening ratio. Ordinarily, one twelve inch outlet flue will care for a twenty by twenty foot house or an eighteen inch outlet flue for each thirty running feet of house having a depth of from eight to twenty feet. A suction or vacuum cap should cover each outlet flue for best results. The outlet flue should come within eighteen inches of the floor and should be centrally located to exert an equal pull from all sides.

Insulation

The gable type of roof is preferable, because it lends itself better in controlling extremes of temperature. Many poultrymen build their houses entirely too low and defeat the very objective they are working for. The

front and rear wall should be from six to seven feet high. This provides the proper volume of air for freedom of movement and eliminates that close, stuffy condition so characteristic of low shed roof houses. Either straw or insulating material can be used for spanning from front to rear plate in the gable type of house thus providing a dead air space above, which is important in holding and maintaining uniform temperature conditions. This eliminates the problem of condensation and dripping from ceiling and walls. Overhead and rear wall insulation is all that is really required and the rear or north wall only needs to be ceiled to a point even with the dropping boards.

The most efficient lighting arrangement is a combination of overhead or roof lights and front wall lights. The

mistake frequently made in using roof lights is placing the lights too high up on the roof or in using too much lighting space. Skylights placed near the peak do not permit ceiling overhead or the use of a straw loft, but in placing them along the lower margin of the roof this insulation feature can be incorporated and at the same time the light rays enter at the proper angle to cover floor with sunshine.

STANDARDS AND GRADES FOR EGGS

(Continued from page 330)

hole in the side. Cloth can be pasted around the edges of the hole. A light bulb is then dropped in the can. This is safer than using a shoe box as it avoids some fire risk. A 40-watt bulb gives good satisfaction.

For your FARM FLOCK

Superior Commercial mated chicks are especially adapted. These rugged, easy to raise chicks have the ability to make heavy layers. They have established an enviable reputation on commercial poultry farms and as farm flocks. The male birds used in these matings are from known record hens. They are also Michigan Accredited.



Here are the Big Values

100 for \$13.00 500 for \$62.50 1000 for \$122.50

We guarantee 100% live delivery at the above prices and stand squarely behind every transaction. We also have a special grade. Our big 64 page catalog fully describes our modern breeding plant. The largest in Ottawa County. Superior Michigan Accredited chicks will make your poultry income safe. Write today.

Superior Poultry Farms, Inc.,
Box 360, Zeeland, Mich.

WOLVERINE S.C. WHITE LEGHORN BLOOD 100% SAFE ARRIVAL WILL GUARANTEED TELL MICHIGAN ACCREDITED



FOR WINTER EGG PRODUCERS

Get our Large Leghorns, the birds with large combs that produce the Large Chalk White Eggs

SEND FOR OUR 1928 CATALOG

Tells all about our chicks and breeding stock
EGG BRED SINCE 1910
For 18 years we have specialized in the production of S. C. White Leghorns, and breed no other variety. All our time, thought, and energy in selecting and mating has been devoted to our Leghorns. You are assured of very desirable stock.
We can deliver chicks to most points in from eight to ten hours.
100% LIVE ARRIVAL GUARANTEED

WOLVERINE HATCHERY AND FARMS
H. P. WIERSMA, Owner and Breeder, Dept. 3, Zeeland, Mich.

SMITH QUALITY CHICKS

Many Smith customers write and tell us of 50 to 70% winter egg yield with Smith Quality Chicks. Write for FREE catalogue. Pure-bred 100% live delivery postpaid.

	100	200	500	1000
White & Brown Leghorns	\$10.50	\$20.50	\$47.50	\$ 95.00
Barred & White Rock, R. I. Reds				
Anconas	12.50	24.50	57.50	115.00
White Wyandottes, White & Buff				
Orpingtons	13.50	26.50	62.50	125.50
Assorted all breeds	8.75	17.00	40.00	79.00

Terms: \$1.00 deposit with each 100 chicks, balance 10 days before shipping date. Reference, Bank of Berne, Berne, Indiana

SMITH BABY CHICK CO., Box 5 **BERNE, INDIANA**

HUBER'S RELIABLE CHICKS

Our 19th Year For 18 Years we have culled our flocks for egg production and quality.

If better chicks could be hatched for the money we would be hatching them. There are reasons why we have thousands of satisfied customers, and that we have never been able to supply all the demand for our chicks in the past eighteen years. Our Reliable Chicks possess high egg producing qualities. Every bird in our breeding flocks banded and record kept. Fine Illustrated Catalog free. Send us your order and you will be another one of our satisfied customers.

Chicks Sent C. O. D. if You Wish. Get Our Plan
Get our special combined offer on chicks, brooder stoves, and brooder-houses. We hatch twelve varieties. Fifty thousand chicks per week. Valuable Book on Chicks and Poultry free with each order of \$10 or more.
HUBER'S RELIABLE HATCHERY, EAST HIGH STREET, FOSTORIA, OHIO

Michigan Accredited Chicks—Every breeder approved by authorized State Inspectors.

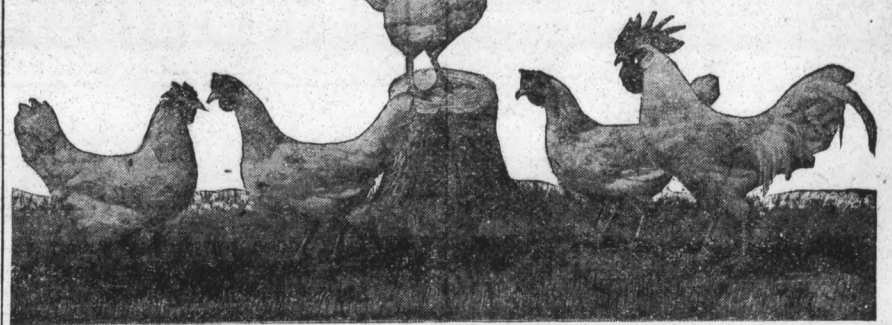


Meadow Brook

Take time to investigate one of Michigan's oldest hatcheries. Twenty-six years in business. Every chick hatched from proven blood lines and from rugged free range breeders. The above winning was made in Production and Exhibition classes in strong competition. Our biggest share of our business is to satisfied customers. Get our big free catalog today. It's free. 100% live delivery prepaid guaranteed.
H. DePree Sons, Proprietors
Meadow Brook Hatchery Box F **Holland, Michigan**

S. C. Wh. Leghorns
S. C. Buff Leghorns
(Dr. Heasley Egg Basket Strain)
Barred Rocks
R. C. and S. C. R. I. Reds

GRANDVIEW'S PRODUCTION LARGE TYPE LEGHORNS



GRANDVIEW'S PEDIGREE SIRED CHICKS

The Right Seed for a Big Egg Crop

Grandview's Large Type Production Bred Leghorns are real Commercial Layers. Tested and Proven in Official Contests, and Trapnested and Pedigreed for years, they are consistent heavy winter layers, producing a fine, large, white egg that brings premium prices on any market.

Every bird of long, deep, wedge shaped production type. Mated to 200 to 290 Egg Pedigree and R. O. P. Males, having the Egg Laying Contest Winning Blood Lines bred in them through many generations.

Baby Chicks for Immediate Delivery

Our Baby Chicks are easy to raise, fast growers, and mature early into Profitable Layers. Chicks are available for delivery when you want them. Large production makes this possible.

Write today for information and prices, stating the number of chicks you want.

Our Poultry House Plans, Methods of Brooding and Feeding, Catalog and Poultry Guides will give you a complete Poultry Course for profitable egg farming. Get these books before you buy your chicks. They'll help you cash in on Grandview's 20 years' experience.

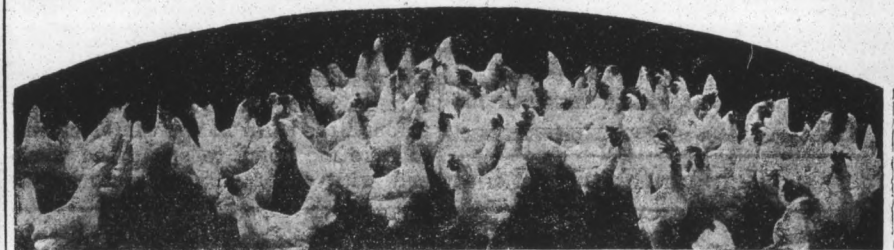
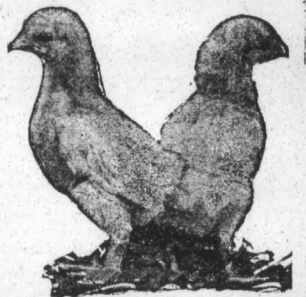
Grand View Poultry Farm, Inc.

ZEELAND, Dept. 11 MICHIGAN

1928 CATALOG TELLS—

All about Grandview's Famous Winning Strains, with 1927 Official Contest Records for 10 bird pens.
TEXAS, 1st Pen, 52 weeks, 2534 Eggs.
MARYLAND, 2335 Eggs, 51 weeks.
MICHIGAN, 1st Pen, 10th Mo. by Customer, 2231 Eggs.
FLORIDA, 2068 Eggs in 51 weeks.
SOUTHEASTERN Egg Laying Contest, 2372 Eggs in 51 weeks.
Also winners in ILLINOIS, WISCONSIN, ALABAMA, and NEW JERSEY.

Profit with Grandview Leghorns this year in your own flocks.



Get Our 1928 FREE Catalog

PURE HOLLYWOOD WHITE LEGHORNS

Egg Bred From Nationally Known Blood Lines
MICHIGAN ACCREDITED. 1926 Contest Pen Averaged 239 Eggs each. Customers profit \$3.00 per bird.

We Also Breed Anconas and Barred Rocks
WYNGARDEN FARMS & HATCHERY, Box M, Zeeland, Mich.

Chicks Eggs Pullets Hens

LOOK CHICKS! CHICKS! CHICKS!

Can ship at once at reduced prices
Barred, White and Buff Rocks, Reds, Bl. Minorcas 13½¢. White Silver Laced Wyandottes, Buff Orpingtons, 15¢. White, Brown, Buff Leghorns, Anconas, 11½¢. Light Brahmans 18¢. Heavy Broilers, 11¢. Light mixed 9¢. Grade "AA" chicks 5¢ per chick extra. If less than 100 ordered add 50¢ extra. Send this adv. in with order and get 4 FREE chicks with every 100. WE GUARANTEE THESE CHICKS TO SATISFY! Send for Free Catalog of R. O. P. Chicks

Lawrence Hatchery Tel. 72525 **GRAND RAPIDS, MICH.**

HOLLAND HATCHERY

It will pay you to investigate one of Michigan's oldest and best hatcheries. Twenty years' experience. Every chick hatched from rugged free range breeders officially accredited by inspectors supervised by Michigan State Poultry Improvement Association. Large percentage of business to satisfied old customers. White Leghorns (English type and American), Barred Rocks, Anconas.

"Never a Bum Lot in Sixteen Consecutive Years"
so writes a customer who has been purchasing chicks from us for sixteen consecutive years. Some record, you'll agree. Your Michigan Accredited chicks bought of this old reliable concern with an established reputation for square dealing are sure to please. Get our Free catalog that tells all.

Holland Hatchery & Poultry Farm Van Appledorn Bros. R 7C **Holland, Mich.**

Town Line POULTRY FARM

Hollywood and Tancred Strains and English Type, S. C. White Leghorns

Also Brown Leghorns, Anconas, and Barred Rocks. All large type Production Bred birds. Bred for 15 years for heavy commercial egg production. Every bird individually banded and inspected by an authorized inspector. In breeding up the Famous Townline Egg Laying Strain, we have bred, not for a few high record hens only, but for HIGH FLOCK AVERAGES. Our Direct from Farm to You Method, saves you 5 to 10 cents per chick on this High Quality Stock. FREE CATALOG tells how we hatch, breed, cull, inspect, and raise our stock. Tells what to feed and how to be successful. Full instructions on the Care of Baby Chicks. A genuine Poultry Guide. Write us.

TOWNLIN POULTRY FARM, Route 1, Box 207, Zeeland, Michigan

Pine Tree Pete says—
"Here's one sign of good crops that never fails"



Look for the Sign

There are four good reasons why the PINE TREE Sign of Good Crops points out the best place to buy seeds. Here they are:

- 1 Only the cream of the crop selected for PINE TREE brand.
- 2 Cleaned and re-cleaned to the famous PINE TREE standards.
- 3 Every bag SEALED so you get what you pay for.
- 4 KNOWN ORIGIN. Certificate with every bag.



Sold by Good Dealers Everywhere

THE ALBERT DICKINSON CO.
 Chicago Minneapolis
 Buffalo New York
 Pittsburgh Boston

SEALED BY
 DICKINSON
**KNOWN
 ORIGIN**

Try a Michigan Farmer Liner

When

you buy a tire made by this Company, you are dealing with a concern that is one of the five largest tire manufacturers in the world; a company that makes its own "Fillerless" Cord from the raw cotton; that has its own crude rubber buying offices in London and Singapore. Its two big tire manufacturing plants have a daily capacity of 35,000 casings and 40,000 tubes.

If you need a good low-priced tire for a light car or a Rugged Tread Heavy Duty tire for hard service, we have it. They are distributed through over 140 stock controls directly to our dealer organization; this means fresh stock at all times with overnight service to any point.

Let your next tire be a Fisk and whether it is the low-priced one or the Rugged Tread Balloon, you have all the Company's prestige and reputation back of it—and this means your money's worth, and more, every time.

FISK

TIRES



Facts About Fathers

M. C.'s. Discuss Their Dads

WHAT does my father mean to me? Just about everything! In his hands lies my success.

More than I am able to express in words, more than I can ever repay in money and more than I could ever expect to contribute by the way of accomplishment, am I indebted to him.

He has been responsible for my interest in education, through which I am gaining a broader range of thought and a more definite ambition.



Mary Kanka Enjoying Her Favorite Sport

True, a father is not in any sense a character to replace a mother's tender companionship, yet while mother leads the soprano of the harmony that thrills the very depths of my soul, father's influence, with proper beat forms the bass, the more substantial part of life's harmonious strain.

It is always father who travels through the snow in the winter storms to take me home to spend the weekend with the family. Father is, as

I am proud to say, the true, honest, responsible type of father who remains always the same. As you see him today so you see him always, and as such he is, though far from perfect, to me "the best father a girl ever had."—Zola M. Marsh.

As you said you would not tell my father what I say in this letter, I will tell you what he is. He is taken for a good man, but when he gets to doing good and making much money he runs off with other girls. Well, I must not tell everything I know. He was a father to me when he was with me, but he ought to have been the kind of man Abraham Lincoln was.

A real father is a man who thinks his wife and children are the best people on earth. He should be willing to give his life for them and not for other girls. A father is not a drunkard or flirt but he is all to his family. A father who does his best to keep out of trouble and supports his family is a man. If he hasn't the most money he is the same person for the money isn't the father; but a man with a good character, a clean heart and head is a real father to his family and he will get his pay for his kind deeds done on this earth.

I wish I had a real father like I have.

OUR LETTER BOX

Dear Uncle Frank:

I was deer hunting this fall; sure had a marvelous time. We took pictures and roamed through the woods from morning 'till night. My brother got a two hundred pound buck. It sure was large. One day I saw thirty-nine deer. Will send you some pictures of some deer also one of myself.—Elsie S.

Am glad you had a happy hunting time. When are you going to send those "deer" pictures?

Dear Uncle Frank:

About this controversy of placing Lindbergh in front of God, I would say in my most customary boldness that they must not think much of their Saviour. Lindbergh is a type of man that stimulates hero worship. He truly has done a great and majestic deed in spanning the continents, also has done lots to improve world peace and help smooth out difficulties between this country and the European powers. But Lindbergh has not, and probably will not, and cannot equal to this country the wonderful service rendered by the great Abraham Lincoln. As I am on this subject, I will announce herewith my list of the ten world's greatest men based on actual service in bettering conditions in the world: Abraham Lincoln, Benjamin Franklin, D. L. Moody, Charles Lindbergh, George Washington, Calvin Coolidge, Robert Fulton, Isaac Newton, John Hancock, Herbert Hoover.—A Critic.

Your list is worthy of consideration though many may dispute it. Leaving Jesus out is probably a wise move as He should not be classed with other men.

Dear Uncle Frank:

I am writing to tell you that I received the Golden Circle pin and card which you sent me some time ago and to say that I appreciate them and I thank you very, very much for them. They are lovely in themselves, and the honor which they represent means much to me. I did not expect you to send them to little me, for I thought only scholars like "White Amaranth" could win them. Please excuse me for delaying so long to write, Uncle Frank, for I shall try to do better next time. I hope to be

able to write a longer letter soon so I'll say good bye for now. With best wishes and love, your niece, Elsie Collins, Fenton, Mich.

It is gratifying to know that the G. C. honor is appreciated and enjoyed. Come again when you can.

Hello Uncle and Cousins: Every week when we get the Michigan Farmer the first thing I do is to hunt up Our Page. The arguments on cats, prohibition, rouge, powder, etc., I have enjoyed very much. I am even surprised in many cases to see how some of the M. C.'s can bring out their ideas.—Dagmar.

I, too, am surprised at the way ideas are brought out so well. But I believe that there are many others who could do equally as well if they tried.

Dear Uncle Frank: I am very busy with high school work especially reading books for book reports, but I thought I would write you a few lines. I love to read your page in the Michigan Farmer. I take time to do that if nothing else.

Let him keep up his good reputation and I will thank him.

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Evelyn Barber Poses With Her Dog

Oh, say, Uncle Frank, would you like me to join the M. C.? I would be very glad to belong to it as I think it is a nice place to get acquainted with other girls of my age and size.

Well, I will have to get busy.—Doris Horney, Carleton, Mich.

I hope you will soon become an M. C. I know high school work keeps one busy because I am reviewing my high school work with my boys; that is, I am going to high school again by helping them.

A LATE HOME-COMER

I AM an ex-Merry Circler and simply neglected to write my Home-Coming letter. I am a junior in high school and expect to be a nurse some day. All the Home-Coming letters certainly were interesting. Some of these particular Home-Comers have excellent talents and I am sure if some practice with all their ability, they surely will accomplish something very great in their life which will be admired by others.

Our Page is very interesting and many good lessons are learned from it. I am sure if we try and do the best we can, we are surely going to accomplish some things to be admired in our life. If we take life serious and take all good clean things into consideration and especially try to obey the rules, our minds will not wander to the evil doings of this world. Try to develop a good clean character. This Home-Coming letter is getting rather lengthy so I will close. Love to all.—Just me.

ADD A LETTER CONTEST

SO few understood this type of contest last time, so I think it well to try it again. We will start with the letter O. Add a letter to make a word, then add another letter to those two to make another word. Keep on until you can't make any more words. You can rearrange the letters but do not use any other letters than those you have added. For instance, with A you could have a, am, may, yams, etc. If you can make about a dozen words, you will be fortunate. Try O and see what you can do with it.

The ten prizes for the best answers will include fountain pens, dictionaries, and clutch pencils. Don't forget to put your name and address in the upper left hand corner of your paper, and M. C. after your name if you are a Merry Circler. Write your letters

on separate sheets. This contest closes March 15th. Send your papers to Uncle Frank, Michigan Farmer, Detroit, Mich.

CONTEST WINNERS

The interesting thing about this contest was the mistake we made regarding the letters in number four. We accidentally left out the letter C, but it was very gratifying to have so large a number of the young folks tell me of this error. It showed that they were observing. Nearly all had correct answers, so the following were picked blindly from the pile of papers as the lucky ten.

Fountain Pens

William J. Tompkins, R. 1, Custer.
Viola Double, Johannesburg, Mich.

Note Books

Elizabeth Fisher, Crystal, Mich.
Irene Kemppainen, R. 1, Box 23, Pelkie, Mich.

Olive L. Fisher, R. 1, Homer, Mich.

Clutch Pencils

Esther Nykanen, Box 157, Ewen.
Anna Shaffer, Almont, Mich.
Marion Sanders, R. 4, South Haven.
Howard Tompkins, R. 1, Custer.
Sherwin V. Hungerink, R. 4, Zeeland, Michigan.

HIGH SCHOOL AG SHOW

THE Sixth Annual Ag-HE Exposition which was recently held at Hastings High School, Hastings, Michigan, was a decided success. This Exposition is recognized as a leader of its kind in Michigan and in the country, and has gradually grown in both quantity and quality of exhibits. The exhibits this year totaled close to 1,500 and an estimated attendance was 3,000 people.

It is sponsored by the Agricultural Club of the High School, consisting of sixty members, under the direction of Mr. T. N. Knopf, Agriculture instructor, and Miss Ruth Marks, Home Economics teacher. It has grown to be a county wide proposition showing the excellence of Central Michigan agriculture and home products, for which suitable prizes are given.

Those knowing its value consider it a fine educational feature. The chairman, Louis Brown, and his assistants, Miss Rachel Cain, Leland Stanton, and Lowell Whittemore, backed by the Ag. Club, High School, and business men, have set a record for which Hastings is justly proud.

HUNDERMAN CHICKS

Our Chicks are Hatched from Free Farm Range Breeders

Every chick is Michigan Accredited which means it is from breeders that have passed the official inspection of poultry specialists under the supervision of Michigan State Poultry Improvement associations. Refer you to State Commercial Saving Bank. Order from this ad.

S. C. White & S. C. Brown Leghorns.....	\$3.25	\$6.25	\$12.00	\$57.50	\$110
(Heavy Type)					
Barred Rocks.....	5.00	9.50	16.00	77.50	150
S. C. Reds.....	4.00	7.75	15.00	72.50	140
Light Mixed.....	3.00	4.50	8.00		
Heavy Mixed.....	3.75	6.50	12.00		

10% down books your order—100% live delivery prepaid. Get our free catalog. It tells all about our special mated grades. Write for it.

HUNDERMAN BROTHERS
R. R. 3, Box 50 - - - - - ZEELAND, MICH.

NOW IS THE TIME TO BUY BROILERS

FREE Get your copy of America's finest poultry manual. Elaborate book given with every order. Write.

Don't Wait—Order Early

Michigan Accredited—Blood Tested State Inspected Stock.

	100	500	1000
S. C. White Leghorns, Red Star Mating	\$15.00	\$72.50	\$140.00
S. C. White Leghorns, Select Mating	13.00	62.50	120.00
Barred Plymouth Rock, Select Mating	15.00	72.50	140.00

RICHARDSON HATCHERY
"Chicks with a Future" Dundee, Box B Michigan

DUNDEE MICHIGAN ACCREDITED CHICKS

STOCK ALL BLOOD-TESTED FOR WHITE DIARRHEA FOR THE PAST FOUR YEARS.

You can save money by ordering Dundee Pure-Bred, Mich. Accredited and Blood-Tested Chicks. We hatch B. P. Rocks, R. I. Reds, and S. C. White Leghorns. Write for 1928 Catalog giving all details of our matings and full directions on how to raise baby chicks for greater profits. We guarantee 100% live delivery.

DUNDEE HATCHERY & POULTRY FARMS — DUNDEE, MICHIGAN

BIG PROFIT PRODUCING CHICKS

B. P. ROCKS LEGHORNS R. I. REDS

Michigan Accredited Chicks that are bred from proven blood lines. Every breeder wears a sealed leg band indicating official approval by authorized state inspectors. Immediate shipment.

BIG DISCOUNT NOW! PAY \$1.00 DOWN—BALANCE C. O. D.

Pay for your chicks when you get them. Send \$1.00 and we will ship C. O. D. Get our big new catalog. It is free. It will help you. Your choice of three profitable breeds. 100% live delivery guaranteed. Hatches every week now.

BRUMMER FREDRICKSON POULTRY FARM, Box 20, Holland, Mich.

BIG HUSKY CHICKS

WINSTROM POULTRY FARMS and HATCHERY

Proven Layers. Michigan Accredited. Heavy Laying Type English and Tancred White Leghorns, Brown Leghorns, Anconas, Barred Rocks and S. C. R. I. Reds.

Also Mixed Chicks. Order now for preferred delivery dates. We guarantee 100% Live Delivery. Free Circular gives full details. Write for copy and learn at first hand about these Big Profit Producers.

WINSTROM HATCHERY, Box C-6, Zeeland, Michigan



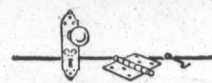
Your Spring fix-up!

PAINT



It is a good idea to paint your buildings in the spring to protect the surface against summer rains and heat, and repair damage that winter may have caused. We have selected those paints that are time proven in your territory, picking them out to give you the utmost value for the least possible money. It will pay you to buy them at our "tag" stores.

Builders' Hardware



If you are building or making repairs this spring, you will need builders' hardware.

You cannot judge hinges, locks, barn equipment, and many other such things, entirely by appearance. The safe way to save disappointment is to let us tell you all about them and help you pick out the kinds most suited to your needs. This service costs you nothing.

Oils and Greases

Get in your supply now for tractor and automobile. We will supply you with the right grade for your needs.

Chicken Supplies

Talk to us about incubators, brooders and poultry supplies of all kinds. You will find it to your advantage to do so.

Fencing

A good farm is always well fenced. We can furnish you all kinds of field, poultry, hog and yard fence. Priced right. Thoroughly dependable.

—and

of course we have all of the little odds and ends, the tools to work with, that you will need for your spring fix-up.

Your Farm Service HARDWARE STORES



Look for the Sign of the "tag" in the window.

NITROPHOSKA

Small Amounts Give Big Results

NITROPHOSKA is a new, complete air-nitrogen fertilizer. It contains 15% nitrogen (equal to 18.2% ammonia), 30% available phosphoric acid and 15% potash.

Because *Nitrophoska* is concentrated, a small amount produces wonderful results. 300 lbs. per acre for potatoes and vegetables gives astonishing increases in yield.

NITRO- PHOSKA

is { COMPLETE
EFFECTIVE
CONCENTRATED
AVAILABLE
ECONOMICAL
CONVENIENT
SAFE
PROFITABLE

Try some of this new synthetic (air-nitrogen) fertilizer on potatoes or vegetables. *Nitrophoska* has more crop growing power in less bulk than any other fertilizer. 300 lbs. per acre is more than equal to 1000 lbs. of many common mixed fertilizers. Use it broadcast, or in the row, apply before planting and mix well with soil. Excellent results are certain.

If your dealer cannot supply *Nitrophoska* we will ship, freight paid, to any railroad station in Ohio, Indiana or Michigan, on receipt of price, at \$6.00 per 100 lbs. Lower price on carlots. Fill out form below and mail at once with P. O. Money Order to the

SYNTHETIC NITROGEN PRODUCTS CORPORATION
285 MADISON AVENUE, NEW YORK

ORDER COUPON

Date.....

Ship me bags of *Nitrophoska*.

Ship to (give full name, plainly written).....

P. O. Address..... State.....

My freight station is.....

(WRITE PLAINLY)

on railroad.

Enclosed is \$..... to pay cost at \$6.00 per bag.



"It's Nitrogen from the Air"

TRY a Michigan Farmer Liner to sell Your Poultry, Real Estate, Seeds and Nursery Stock and Miscellaneous Articles. See Page 365 for Rates.

1,000 DEATH CLAIMS

About 30,000 Personal Injury Claims by
Automobiles in Michigan each year

Mr. Automobile Owner, the death rate by automobiles in Michigan and the United States averages about one per thousand, and the personal injuries average thirty per thousand. Therefore, about one thousand are killed by automobiles each year in Michigan. In case you have a serious accident, causing personal injuries or death, it is important to be insured in a company that specializes and has its home office in the state. About twenty thousand claims were settled last year by this company without litigation. A local agent and adjuster will give you service on all small claims. If it is of sufficient importance, you can drive to the main office within a few hours and know that your matter is receiving proper attention by experienced men.

Assets over \$900,000. Insure today.

It pays to know the

**Citizens' Mutual Automobile Insurance
Company, of Howell, Michigan**

And its agent in your neighborhood

Rough and Tumble on Their Way

(Continued from page 342)

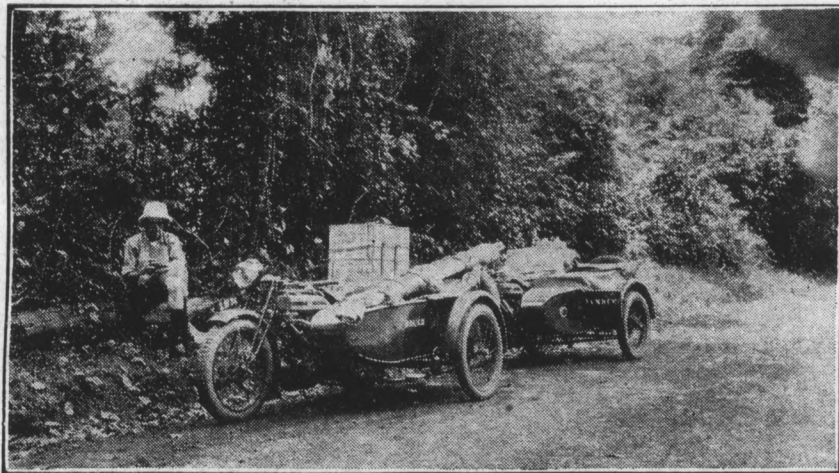
ing. In fact, he says that even though I've manhandled the old bus over a thousand miles of bush trail, I don't know how to drive a motorcycle yet, and never will. Well, I've three thousand miles more ahead of me, deo volente, and so maybe I'll learn yet.

I've always considered it proper for my wife to boast that she first learned to drive a car right in the heart of the Rocky Mountains on a steep, rutty, one-way road in Yellowstone Park. We were on our wedding trip. I had been attacked that morning by a big black bear, and my right leg completely paralyzed, making it difficult for me to drive our old jitney Oscar II. My wife didn't know one pedal from the other but she learned then and there and drove old Oscar over the Continental Divide, her first morning behind the wheel.

I've always envied her that achievement but now she can boast—and I hope she will—that the first time her

We knew it would be necessary to carry all our gasoline and oil for a thousand mile jump across the desert and we wanted to find out first, whether we could or not. So we left Lagos with each bike carrying two cases of gasoline, or four five-gallon cans, and now, at the end of the railroad, after a trifle more than a thousand miles of crashing through the west Africa bush we still have a little of the original supply left in our tanks. We can now start on our thousand mile jump across the desert with another equal supply and feel fairly sure that we'll reach semi-civilization on the other side.

In addition to our gasoline supply we left Lagos with six gallons of oil a half-dozen canteens of water, eighty pounds of motion picture and still picture equipment, a pole and canvas bed which we made ourselves, our blankets, tarpaulin and mosquito net, cooking and eating tackle, two big .45 revolvers and a high-powered big



Rough and Tumble on trek across Africa. This part of the road has been chopped through the jungle and it is impossible to penetrate fifteen feet into the jungle without an axe.

husband ever tackled a motorcycle he drove it across equatorial Africa from the Atlantic to the Red Sea. I shall see that she doesn't forget it.

We named the two machines "Rough" and "Tumble" and Jim painted the names in bold, big letters across the side car doors. At first, we called them "Chills" and "Fever," and "Try" and "Do It" were considered—as well as "Heads" and "Tails," because the whole stunt was something of a gamble—but it has been rough and tumble aplenty so far. I ride "Rough" ahead and Jim "Tumbles" along behind, eating my dust and picking up the bolts and nuts and pieces of broken springs and mechanical oddments and general gadgets that forever seem to be jolting off our motorcycles.

THESE are English-made machines, selected for two good reasons: There were no American motorcycles in stock in Lagos when we bought ours, and, second, I don't believe we'd have bought them if there were. The English motorcycles, like the European automobiles, are built on a lighter basis than we make them and are very sturdy for their weight. A heavy, comfortable, substantial American machine is undoubtedly much better for many purposes, but we needed a rig that would not only go almost anywhere under its own power, but be light enough to push or carry, if necessary, where it couldn't climb by itself. Ours are rated at 4.9 horsepower under the English system and this is equivalent to less than four horsepower under our system of reckoning. They are simply a little, single-cylinder machine, weighing only 250 pounds each and yet they have each pulled a side care loaded to the gunwales, besides ourselves, and 150 pounds of gasoline on the luggage carrier behind the driver.

game rifle and ammunition, carbide for our headlights, 75 pounds of spare parts and tools including everything from a hack saw to a soldering torch—all of which we've had occasion to use already—and a few clothes, and Jim's eternal and infernal banjo.

AS for clothes we bought a bush shirt and a pair of shorts each, with one "spare" outfit between us. I always wear the spare while my regulars are washed—and Jim says he is going to wear it when he has his washed. When our spare is worn out, if we want to change clothes, we'll simply have to change with each other—if we've anything left.

The question of "shorts" caused a brief mental struggle; they looked almost indecent in their brevity, little khaki panties like basketball trunks, reaching hardly to the knees. But in spite of sunburn and bow legs we adopted them as the customary bush trekkers outfit. Our legs reddened fiercely at first, either from shame or the sun, but now they look like a pair of elephant trunks—and they're not white elephants either. A bush shirt is simply a rough, heavy shirt with a double back and a red-lined spine pad buttoned on behind for protection against the sun.

Thus equipped we set off for our trans-Africa trip and made 65 miles to the home of our American missionary friend in Abeokuta that evening, he who first suggested the idea. It struck me as a very rough road, good only for the liver perhaps, but Jim, old "Bad Roads" Jim, growled something about, "If the roads are as good as this all the way to the Nile river, there's no use of our making the trip."

They weren't. And something about our rough going through the first stage of our journey will be described next week.

LIVE STOCK AND DAIRYING

Better Hog Sanitation

Would Increase Profits

CLEANLINESS is the hog man's salvation. Clean pigs are profitable. Wormy pigs are liabilities. But little work is required to prevent pigs becoming wormy. However, the returns from this are large.

A decade ago Drs. B. H. Ransom and H. B. Raffensperger of the Bureau of Animal Industry, United States Department of Agriculture, made a thorough study of the common roundworm of hogs, the cause of much of the loss and unthriftiness among pigs. In this work, they studied the life cycle and reproduction of the roundworm.

From their studies, they devised a system of roundworm control which was tried out in 1919 on the farm of G. C. Johnstone of McLean County, Illinois. The same plan was continued the following year and in subsequent years through the cooperation of the McLean County Farm Bureau, and thus in this way the "McLean County System of Swine Sanitation" developed. Of what does this system consist?

The Requirements

First, cleaning all manure and filth from the farrowing house and pens and scrubbing them with boiling lye water. The lye aids in removing dirt, while the boiling water kills the roundworm eggs with which the house is infested. Drs. Ransom and Raffensperger found, in their studies, that ordinary chemical disinfectants would not kill roundworm eggs.

Second, washing the sows with warm water and soap before putting them into the cleaned farrowing quarters, in which clean litter had been placed after scrubbing.

Third, keeping the sow and pigs confined to the clean quarters until the pigs are one to three weeks old. The sow and pigs must not be allowed out of the pen during this time.

Fourth, hauling the sow and pigs to fresh pasture—"clean ground"—on which no hogs have been kept for at least a year previous.

Fifth, keeping the pigs on this "clean ground" until they are four months old, after which danger from worm infestation is very slight.

How It Works

In all of these steps, the main object is to prevent the young pigs from coming in contact with roundworm eggs. Some opponents of the system state that it will not work because the sows will drop roundworm eggs which can be picked up by the youngsters. This is true, but it is a well known fact that roundworm eggs must go through a period of about three weeks outside of the animal body, during which partial hatching takes place, before they will cause any worm infestation if taken into the intestinal tract of the young pig. For this reason, the statement that infestation can occur from the recent droppings of the mother hog is unfounded. Infestation can occur only when eggs that have gone through this partial hatching are taken into the body. These eggs are found on the teats and udders of unwashed sows, in filthy, unwashed farrowing houses and in filthy lots.

But to get back to the results secured by Illinois Farmers through the use of this system! During 1925, there were 154 farmers in Illinois who cooperated with the state extension service in keeping farrowing and weight records on litters produced

under a sanitary system of production and seventeen also kept records on production under the old system.

Among these 154 farms, as many pigs as usual were raised by the clean grounds system from twenty-eight per cent fewer sows. On the forty farms where losses were most severe under the old system, one-third fewer sows produced the same number of pigs as had been produced under the old system. This meant that the average number of pigs raised per litter under the clean ground system was two more. Among the 154 farms reporting there was an average of only one runt to each one hundred pigs where the clean ground or sanitary method of production was followed. Where the old system was followed on seventeen farms, there was an average of eighteen runts in each one hundred pigs.

This Man Was Disgusted

Under the sanitation system as outlined, these 154 farmers raised ninety-eight per cent of the pigs saved at farrowing time. In these comparisons it was found that the "sanitation pigs" averaged twenty-eight pounds more at four months of age than did the pigs earlier than the pigs raised under the old system. The sanitation pigs were also ready for market seven weeks earlier than the pigs raised under the old system. Pigs raised in the clean ground way were much more uniform in weight and condition when marketed, too, according to these Illinois cooperators.

The experience of Martin Vanderhaar is interesting. Here was an extreme case of heavy losses under the old system. In 1924, Mr. Vanderhaar had ninety-two pigs farrowed from fourteen sows on his farm. At the age of two weeks they began to get sick and die, one or two at a time, until by the first of November, he had twenty pigs left. In order to get rid of ten of the poorest, he sold them for three dollars each. The other ten were sold the next March, at one year of age, at an average weight of slightly over 200 pounds. Not much profit in that kind of pork production under the old system of filthy ground hog raising, was there?

Naturally, he became disgusted with the hog business. As a consequence, he kept only five sows for spring farrow in 1925. But he followed the McLean County System in managing them. These five sows saved thirty-seven pigs which weighed 250 pounds at six months of age. In other words, he produced 8,250 pounds of pork from five sows in six months; whereas, he had produced only 2,600 pounds of pork from his fourteen sows in a whole year, the year previous.

Another Example

In the spring of 1924, Otto Schoubroe raised the pigs from eleven sows by the clean ground method. From these eleven sows he raised eighty-three pigs that averaged 240 pounds at six and one-half months of age. He also had sixteen sows from which pigs were raised under the old method. From these sixteen sows, he raised sixty pigs, which weighed ninety pounds at five and one-half months of age. The pigs produced by the eleven sows sold for \$2,475 at marketing time while those produced by the sixteen sows under the filthy ground method sold for \$1,713. Both lots of pigs had alfalfa pasture and were fed

(Continued on page 361)

AMCO 24% DAIRY



Gives
you the best buys
on the feed market

THE business dairyman varies his feeds within the limits of sound feeding practice to keep down his costs. He used to do this by shopping at the local feed store and mixing his purchases at home. Now Amco Feed Mixing Service shops for him in the markets of the world and gives him the advantages of its good buys in perfectly balanced, ready-mixed rations.

Amco also mixes feeds of unchanging formula, such as AMCO 24% UNIVERSAL, for those who prefer it.

For Michigan dairymen, Amco mixes on this plan AMCO 24% DAIRY, a complete grain ration; and AMCO 32% SUPPLEMENT DAIRY, to mix with home-grown grains.

Selecting ingredients to make use of those that are most economical, and combining them in mixtures that change from month to month with the market but remain the same in feeding value is a distinctive Amco service. The feeder is always advised of the change because the formula is open.

Amco, with its modern feed mixing plant and great volume of purchases, can perform this service for you better than you can do it yourself. And more cheaply, when you consider quality of ingredients, protein variety, palatability, digestibility, and correct mechanical condition.

AMCO 32% DAIRY

is a supplement to mix with home-grown grains. It furnishes all the milk-producing qualities these grains lack.

AMCO

FEED MIXING SERVICE

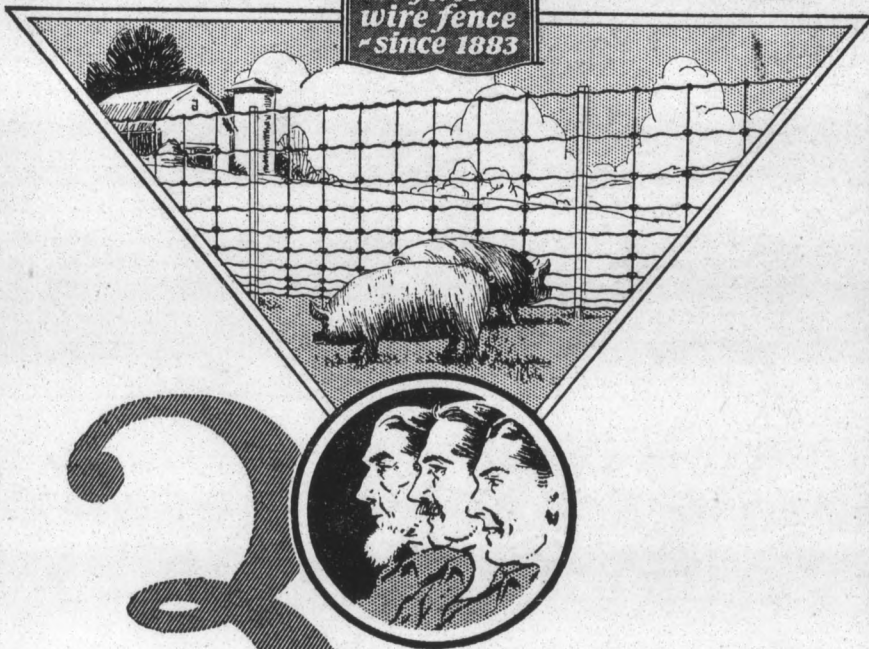
AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.

Plants at: PEORIA, ILL.; OMAHA, NEB.; OWENSBORO, KY.
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America's
first
wire fence
since 1883



3 generations profit with

For 45 years Page Fence has helped farmers earn more per acre—crops are rotated, fields are pastured, and lost grain is turned into high-priced meat.

Page quality assures lowest fence cost—it is made of uniform wire, heavily galvanized, in either staple tie or hinged joint type of knot. Your dealer will show you the pattern you need.

It's free

—an interesting folder describing Page Fence in detail. Write for it today.

PAGE STEEL and WIRE COMPANY

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District Offices: Chicago New York Pittsburgh San Francisco
An Associate Company of the American Chain Company, Incorporated
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Mention the Michigan Farmer When Writing to Advertisers

PAPEC

Non-Clog Ensilage Cutters

Cut Your Silo-Filling Cost

"FILLED my silo without a hitch of any kind"—that is the almost universal report of Papec users. No pipe-clogging, no expensive delays or "hitches." Over 50,000 customers can testify to the Papec's rapid, dependable, trouble-free performance. It isn't due to any ONE feature—it's a 27-year blending of perfect self-feeding, powerful blowing, uniform quality, slow speed, light running features that spell SATISFACTION.

The Papec, in actual farm practice, is still the lightest running cutter made. It runs at slowest speed for non-clog elevation. Hence, it is especially adapted for use with small power electric motors. Even the powerful No. 127 runs with Fordson or similar power. Papec up-keep is very low. One farmer writes, "Have used Papec for 13 years and have never spent one cent for repairs."

Send for 1928 Papec Catalog. Tells how to cut your silo filling cost. Ask for Grinder Folder No. 28 telling how to reduce your feeding cost by grinding both grains and roughage at home. No obligation. Send today. A postal will do.

Papec Machine Co.
150 Main St.
Shortsville, N. Y.

Hammer-Type Feed Grinders

Hammer Out More and Better Feed

KEEP your tractor busy earning winter profits—with this AMAZING new Papec Grinder. It will pay for itself—will save you money—will grind your own feed (grains or roughage, any kind) BETTER and FASTER and CHEAPER than you can get elsewhere.

"Rapidly paying for itself Thursdays on custom work for neighbors," writes one. Customers say its performance exceeds all claims. "Capacity away beyond expectations." "Handles cracked corn, soybean hay, clover and alfalfa hay, sheaf oats, corn stalks, etc." "A great machine as to price, capacity, power and fine grinding." Sure death to corn borers.



The Name Guarantees The Quality

DAIRY COOPERATIVES PROSPER

THE dairy cooperatives handled dairy products to the value of \$640,000,000 in 1927, according to reports received by the Division of Cooperative Marketing of the Bureau of Agricultural Economics. Of this sum the creamery associations are credited with handling \$250,000,000; milk bargaining associations, \$205,000,000; milk distributing associations, \$140,000,000; cheese factories, \$33,000,000, and cream stations \$12,000,000.

A number of extensive cooperative dairy products industries have been developed. Sales of dairy products by the Turner Center System, Auburn, Maine, amounted to \$7,200,131 in 1927. The Land O' Lakes Creameries, Inc., of Minnesota, during 1927, transacted a business amounting to \$46,315,079. Three cooperative dairy organizations in California report business transactions in 1927 amounting to \$11,528,180. The Chicago Equity Union Exchange made butter sales amounting to \$2,038,443 in 1927.

Heavy gains in the volume of business handled were made during 1927 by the cooperative creameries and milk-handling associations. One group of creameries in the Minnesota-Wisconsin dairy section reported sales for the year more than \$6,000,000 larger than for 1926.

MICHIGAN LIVE STOCK EXCHANGE CELEBRATES

AROUND four hundred and fifty managers, members, and friends of the Michigan Live Stock Exchange attended a banquet and business meeting at Lansing on February 21. It was a most enjoyable occasion, as all attested.

The Michigan Exchange, which is now a member of the National Producer Association, has been steadily growing in the amount of business done since its organization in 1922. Last year, according to the report just issued by the organization, they handled over forty per cent of the live stock sold on the Detroit market, or an aggregate, in round numbers, of nine million dollars of live stock handled. The total commissions paid since organization total \$446,350; profits, \$92,000; savings returned to farmers, \$63,000; surplus on hand, \$27,000.

This exchange consists of 275 shipping associations scattered over the state. These local associations have a total membership of around 30,000 members, states the president, Mr. E. A. Beamer of Blissfield, Michigan, who is also president of the Producers Cooperative Commission Association of Buffalo.

MANY HOGS OFFERED

WHILE receipts of hogs probably have passed the winter peak, the run has continued heavy until later in the winter than usual. Possibly the rise in corn may be causing some liquidation. Arrivals at eleven leading markets in the last six weeks were about forty-five per cent greater than a year previous. Including the break early in the last week, prices have dropped close to or slightly below an average cost of eight dollars at Chicago six different times since early in December, rallying sharply each time.

Domestic demand for hog products is active so that the accumulation in storage, although heavy, is not proceeding as rapidly as might be anticipated from the number being slaughtered and the moderate exports. Clearances of lard and bacon from January 1 to February 12 were about the same as a year previous while exports of hams and shoulders were about fifty per cent smaller.

Large litters of healthy pigs make profits possible.

Makes the MILKINGS Easy



Part of the "knack" of making money from dairying lies in keeping a constant watch of the udder and teats. If the delicate tissues of these important organs are always normal and comfortable the milk flow is free and generous—the job of milking is made easy.

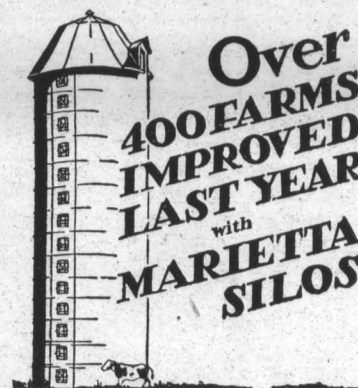
Bag Balm is a wonderful healing, penetrating ointment—prepared especially for the care of injured or stepped-on teats, cuts, inflammation, caked bag, bunches or cow pox, Bag Balm has no equal. Healing begins at once; irritation disappears.

Bag Balm is clean and pleasant to use—cannot taint the milk. Big 10-ounce package goes a long way and has hundreds of uses for all animal sores, harness galls, etc. 60c at feed dealers, general stores, druggists. Mailed postpaid if hard to obtain locally. Booklet "Dairy Wrinkles" sent free.

Dairy Association Co., Inc.
Lyndonville, Vermont



Just Try a Michigan Farmer
Liner for Quick Results.



DURING 1927 more than 400 wise farmers improved their farms and increased their earning power with Marietta Silos. Crops planted too late to mature can be saved by a good silo. Even the dread Corn Borer holds no terrors for the farm that is Marietta Silo equipped. For perfect Ensilage that means better and more productive stock erect a Marietta Concrete or Wood Silo. Get our free transportation, free erection and easy payment plan. Mail the memo now. The Marietta Silo Co., Dept. M, Marietta, Ohio

MARIETTA SILOS

Memo to Marietta Silo Co.,
Dept. M, Marietta, Ohio.

Send me complete information on Marietta Silos and "pay out of profits plan."

Name

St. or R. F. D. No.

Post Office

HOLSTEIN BREEDERS GET TOGETHER

ONE hundred thousand dollars worth of cattle, mainly grade Holsteins, were sold out of Newaygo County in 1927, according to County Agent Stinson. These went to six states, one carload even going to Wisconsin.

With such a stimulus to the Holstein game, no wonder the Newaygo breeders turned out in force at the annual county Holstein Association meeting held February 23 at Fremont.

Local interest manifested itself chiefly in planning for the big dairy day which has become such a popular summer event in Newaygo County. All breeds are represented in a judging tournament; the Holsteiners, although in the minority in the county, are growing fast and aim at a healthy show of black-and-whites. To help the county agent arrange for Dairy Day, a committee was appointed: R. Vantil of Fremont; Raymond Kempt, Fremont; Hanson Brothers of Howard City.

Boosting calf club work is another project bit off by the Newaygo bunch. Enthusiasm for backing the boys ran high, for did not La Verne Zerlaut of Fremont show a heifer to Junior Championship last year, locally and at West Michigan State Fair? Sure he did! And furthermore the dam of this heifer recently broke the Michigan state record for milk, producing as a junior two year old 19,677 pounds in a year. La Verne's heifer freshened in January with a bull calf, sired by a son of the American yearly butter champion; and she is now on test in D. H. I. A. milking around the fifty pound mark.

Officers elected: President R. Vantil, Fremont; Vice-President Raymond Kempt, Fremont; Secretary-Treasurer Jas. McCallum, Holton; other directors, Hans Hanson, Howard City, John Meyers, Grant. Vantil was retained as Sales Manager. La Verne Zerlaut was elected as associate Junior member of the Board.

BETTER HOG SANITATION

(Continued from page 359)

in the same way on the same feeds. That these differences are differences in environment is shown by the experience of George H. Larson. In the spring of 1927, he divided his brood sow herd into two groups. One group of twenty was handled under the McLean County system, farrowing 131 pigs. The other group of eighteen sows was handled in the old way, and farrowed 122 pigs. This shows that so far as the size of litters was concerned the pigs produced in filthy lots had just as much chance as those produced on clean ground.

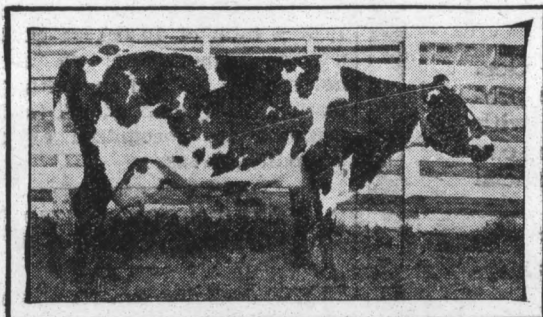
Results in the fall were different, however. At that time, 125 of the clean ground pigs weighed 200 pounds each. Pigs raised in the filthy lots weighed seventy-five pounds each; that is, the fifty that were left weighed this. Both groups received the same care so far as warmth of quarters and feeding was concerned. The difference was in the fact that one group was practically disease free while the other was heavily infested with worms.

This system is practical whether the sow herd be large or small. In either case, the gain in pork produced per brood sow is much more than enough to offset the slight amount of additional labor involved in scrubbing the pens, washing the sows and hauling the sows and pigs to clean ground. The labor requirement is very small and when this labor means an increase of as much as one hundred per cent or more in the amount of pork produced from each sow in a normal growing and fattening period of six to eight months for the pigs, the return from this labor is very much worthwhile.

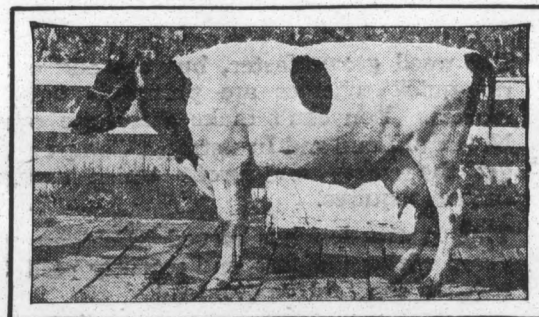
BULLETIN

Milk Production Record of Two Cows for 10 Months

Research Farm, Dr. Hess & Clark, Inc., Ashland, Ohio



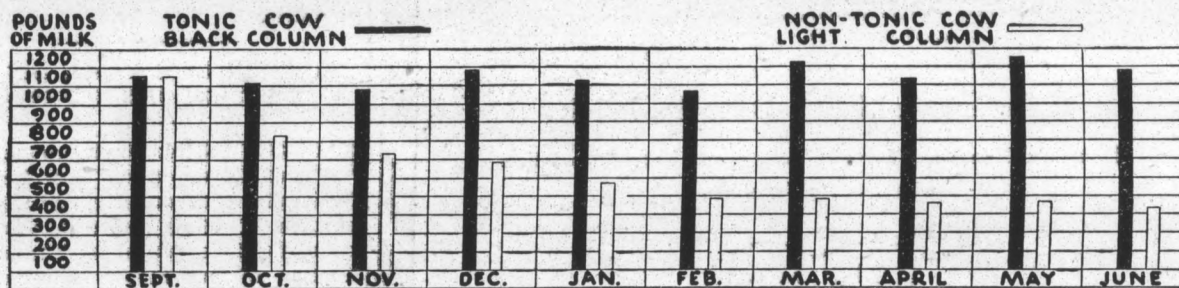
This is just an ordinary milker, getting ordinary care and feed—ground oats and corn, bran with oil meal added. She freshened in August and began to receive Dr. Hess Improved Stock Tonic in her ration in September. This continued for ten months. This cow and the one at right were rated equally good milkers, there being but two pounds difference in production in September when the test began.



This cow might well be in the same class as the cow at left. She was of the same age and condition. She got exactly the same feed and care. She freshened the same month. No reason is apparent in age, condition, feed or care why her production should not equal the other cow. But she did not receive Dr. Hess Improved Stock Tonic at any time, either before or during the test.

THE above two cows were placed in competitive milk production test beginning September 1st and continuing ten months.

For better comparison, the milk production records for both cows are given month by month in the graph below.



The outstanding feature of the test is the sustained production of the Tonic cow. Instead of falling off the usual 10% a month after freshening, as the other cow did, she maintained her milk flow until the end of the test.

Production for the ninth and tenth months was greater than the first month after freshening. Compare the graph records of the two cows closely. The Tonic cow's total production was 10,493 pounds—that of the non-Tonic cow, 5,234 pounds.

The Tonic cow was kept in better milking trim, in

condition to do her best, remained longer in full milk than the usual course, and thus was able to produce a little more than double the milk of the cow not receiving the Tonic.

The average butter-fat test for the Tonic cow was 4.67%, for the non-Tonic cow, 3.73%.

The average monthly profit from the Tonic cow was \$21.10, for the non-Tonic, \$3.55. The total profit from the Tonic cow over and above the feed cost was \$210.97; total profits from the non-Tonic cow, \$35.46.

Dr. Hess Improved Stock Tonic

APPETIZER—REGULATOR—MINERAL BALANCE—all combined in one product

PRICES: 100-lb. drum, 10c per lb.; 500 lbs. 9½c per lb.; 1000 lbs. 9c per lb.

Ton lots 8½c per lb. (Except in extreme West and Canada)



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If your local dealer does not handle the Detroit Mower, write or wire us direct for special field representative plan.

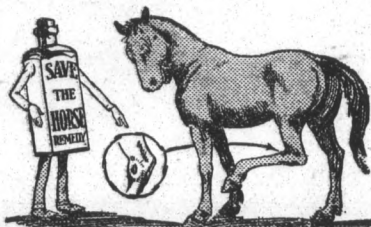
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45 lbs., Bags extra 25c each, 20 per cent clover.
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CATTLE

GUERNSEYS

I have for sale at reasonable prices a number of young bulls, the use of which should improve the type and production of your herd. Also a few heifer calves. John Endicott, Birmingham, Michigan.

Wallinwood Guernseys

SONS OF BROOKMEAD'S SECRET KING for sale.
F. W. WALLIN, JENISON, MICH.

GUERNSEYS either sex, whose sires' dams have official records of 15-109.10 milk, 778.80 fat, 19,460.50 milk, 909.05 fat. T. V. HICKS, Battle Creek, Mich., R. 1.

Guernsey Dairy Heifer Calves, practically pure bred \$25.00 each. We ship C. O. D. Write L. Terwilliger, Wauwatosa, Wis.

For Sale —Reg. Guernsey cows and a few bull calves, sire by Imp. Coro Honor. JOHN EBELS, Holland, Mich., R. 2.

FOR practically pure-bred GUERNSEY or HOLSTEIN calves, from heavy, rich milkers, write EDGEWOOD DAIRY FARMS, Whitewater, Wis.

SERVICEABLE AGE

REGISTERED HOLSTEIN

Bull Calves at prices the owner of a small herd can afford to pay. The sire of many of these calves is a Son of the highest record (30 lb.) two-year-old daughter of Creator. His sire is King Segis Alcartra Prilly, an undefeated Show bull with 70 A. R. daughters. Others sired by a 5 times 1200 lb. Champion Bull, the famous K. P. O. P. breeding.

Bred cows and heifers served by these sires are available for foundation stock.

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Northville, Michigan

Telephone: 344
Reference: Northville State Savings Bank

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Nearly Ready for Service

At Traverse City State Hospital
Born May 10, 1927

Sire: Prince Echo Rauwerd, a son of Champion Echo Sylvia Pontiac and out of a 34-lb. 3-year-old daughter of a 1,113-lb. cow with a 30-lb. 7 day record.

Dam: Traverse Segis Netherland 2nd, a 27.97-lb. Jr. 4-year-old daughter of a 33.35-lb. cow with 1,160 lbs. butter in a year.

Write for Pedigree of Tag No. 694

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Animal Industry**
J. E. Burnett, Director
Lansing, Michigan



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SEED CORN Early Clargie and White Cap. Excellent yielders and never fail to ripen. Choice seed as low as \$2.75 bu. Also barley, grass seed, soy beans, etc. Write for circular and samples.

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TB. WORK PROGRESSES

THE Bureau of Animal Industry reports that the work of tuberculin testing has been going forward with unusual rapidity in recent months. Close to a million cattle a month have been tested, and there is a large number of cattle on the waiting list, indicating that live stock owners are desirous of availing themselves of this means of ridding their herds of tuberculous animals. At the beginning of 1928 a total of 19,299,094 cattle were under supervision; in accredited herds, 2,024,505 and on waiting list for testing, 4,103,396 head. A total of 436 counties are recognized as modified accredited areas.

FOREIGN COMPETITION IN ANIMAL PRODUCTS

THE declining exports of meats and animal fats from the United States is due to the increasing European competition, say trade specialists of the Department of Commerce. In 1925 fourteen of the more important live stock producing countries of Europe had 50,881,000 hogs and 77,791,000 head of cattle, and in 1926, 52,616,000 hogs and 79,433,000 head of cattle, an increase over 1925 of 3.3 per cent in the number of hogs and 2.1 per cent in cattle.

FOREIGN LIVE STOCK DEPENDENT ON CHEAP FEEDS

EUROPEAN live stock production is partially dependent upon imported feedstuffs, consequently when a large surplus of cheap corn in producing countries is exported to Europe, production of live stock is stimulated, provided European crops are normal. This was the case in 1927, when a record importation of corn was absorbed. Before the war Europe imported an annual average of 250,000,000 bushels of corn; for the crop year 1925-26 imports totaled 262,000,000 bushels; and for the year 1926-27 they reached a record of 387,000,000 bushels. It is said that conditions in Argentina this year point to another bumper crop. Should this materialize a still further expansion in European live stock may be expected, provided normal crops are harvested in Europe.

STEER PRICES HARD TO HOLD

WHILE the decline in steer prices which started a month ago was brought to another temporary halt in the last few days, they lack the rallying power displayed during the fall and early winter. Both the action of the market and the supply and demand situation suggest that prices are unlikely to regain in the next few months much of the ground lost recently.

Receipts of cattle at leading markets have been about five per cent lighter than a year previous. The difficulty of maintaining steer prices three dollars higher than at that time without a substantial reduction in supplies is obvious. Dressed beef trade has shown a little tendency to clog up recently and it is probable that consumers are being attracted by the cheapness of pork. The willingness of cattle feeders to curtail loadings on the breaks may have been shaken by the fact that the downward tendency in steer prices has been in evidence for several weeks and by the advance in corn.

The decline in steer prices has necessitated some downward revision in prices of fat cows and heifers in the face of the fact that receipts in this division are scanty and the normal tendency is for prices to advance at this season. They have declined fifty cents to one dollar from the post-war peak reached early in February. Veal calves established a new peak level since 1920, but they have declined

Power for Pumping Water

NEXT to the sun, the wind is the greatest power for raising water. The sun lifts a tremendous quantity of water every day which is scattered in mist to the ends of the earth. The wind, with a few simple pumping devices, will lift fresh water from beneath the surface of the ground and put it right where you can have it when you want it. With modern equipment for pumping water there is no good reason why any family should be without an ample supply of fresh running water at very small expense.

Of all the devices for pumping water the Improved Auto-Oiled Aermotor, the genuine self-oiling windmill, is the most economical and most reliable. It runs for a year, or more, with one oiling and requires practically no attention. Just put it up and let it run day and night. The gears run in oil, in a tightly enclosed case, and every moving part is constantly lubricated.

The Auto-Oiled Aermotor runs in a breath of wind, but is so strongly built it can be safely left to run in the severest storms. The Auto-Oiled Aermotor of today has important added improvements which make it more decidedly than ever the best of its kind.

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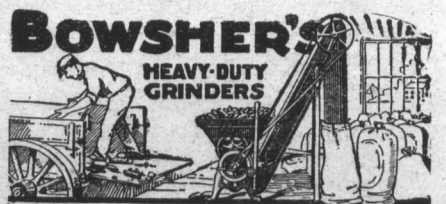
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The reliable liniment,
counter-irritant and blister.

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HEAVY-DUTY
GRINDERS
FOREMOST AMONG BETTER GRINDERS
Crush and grind all the grains that grow; fine for hogs or coarser for cattle feeding. Corn in husk, Head Kaffir, and all small grains.
Strength, Durability and Service radiate from every line of these Masterful Grinders. Simple, yet effective in adjustment. Last a lifetime.
LIGHT RUNNING — LONG LIFE — EXTRA CAPACITY
CONE-SHAPED BURRS
10 sizes—2 to 25 H. P. or more. Also Sweep Mills.
It pays well to investigate. Catalog FREE.
The D.N.P. Bowsher Co., South Bend, Ind.



From way out at Jay Em, Wyo., S. M. Foote writes:

"I could have borrowed money at 10% interest and still be ahead if I had fenced when I started."

A \$250 team of mares and five horses frozen to death in a blizzard—his only cow gorged to death in a cane field—a valuable Holstein bull altered by ranchers—jennets bred to a neighbor's scrub stallion—two Holstein heifers strayed away—200 chickens killed by coyotes—10 acres of cane mowed clean by range cattle—these are a few of Mr. Foote's losses before he fenced.

RED BRAND FENCE "Galvannealed" Copper Bearing

will not only save losses like this for you but make enough extra profit to pay for itself, over and over again, in the many years of service it will give.

RED BRAND can't help but last for many years. Copper in the steel keeps long life in; extra heavy "Galvannealed" coating of zinc keeps rust out; picket-like stay wires, wavy line wires, can't slip knots, help keep it straight, trim, hog-tight and bull-proof.

What has been your experience with or without good fence? We will pay \$5 or more for each letter that we use. Write for details, catalog and 3 interesting booklets that tell how others have made more money with hog-tight fences.

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CATTLE

Watch this paper for details of Big Sale of Pure Bred Holsteins from herd of Blythefield Farms.

For Sale Registered Holstein Bull, old one old enough for heavy service. Also my herd sire, 4 yrs. old, son of a 32 lb. 4-year-old heifer. Also a few females of milking age, some with semi-official records. Vernon E. Clough, Parma, Mich., R.2.

20 Pure Bred Herefords

and herd sire Model Jr. No. 1380131 by Model Fairfax No. 1019461 out Modesty 20th and Anxiety bred cow. Blood lines of herd Anxiety breeding, Fred Bright, Able, Beau Franklyn, Harris Repeater, Fred Real. Prizes won, 8 firsts and 2 Grand Champions at Fair. Spring crop of calves just coming on, some by side of cows now. This is a chance to buy a pure bred registered herd practically at beef prices, the big bone and muscle, the kind that weighs and sells. Address DR. W. G. JENNINGS, R. 4, Plymouth, Michigan.

88 Hereford Cows

Big wide back kind, dark reds, dehorned. Bred to extra good Hereford bulls to calve about April 1st. Will sell you choice car load. Also 22 Hereford cows and calves and 24 heavy springers. Also other bunches. All T. B. tested. Also yearling and 2 yr. old stockers and feeding steers sorted even in size and quality.

VAN S. BALDWIN, Eldon, Iowa

FINANCIAL KING JERSEYS

We have for sale a most excellent selection of bull calves ranging in ages from 4 mos. to one year old. These calves are sired by Financial King Sensation and Financial Ford and out of Register of Merit Stock. Prices reasonable. COLDWATER JERSEY FARM, Coldwater, Mich.

CREEK FARM JERSEYS Have type and production. Write for catalog, if you need Foundation Jerseys. C. C. Creek, Montpelier, O.

For Sale Choice Jersey Bulls, grandsons of Sybil's Gamboge of Whitehall. SMITH & PARKER, Howell, Mich. R. No. 4.

JERSEYS Registered bull calves, one ten mos., solid color, from high producer, cheap. Peter H. Douma, Holland, Mich., R. 2.

Red Polled A few choice calves of both sex for sale. ROYSTAN STOCK FARM, Will Cottle, West Branch, Mich.

FAIRFIELD SHORTHORNS Attractive prices on service bulls, sired by Wilkinholm Monarch. H. B. Peters & Son, Elsie, Mich.

Registered Brown Swiss for sale, cows 10 and 11 yrs. old due in Feb. 2 bred heifers. Also bulls of serviceable age. A. A. FELDKAMP, Manchester, Mich.

HOGS

DUROC SOWS

Sold at a sacrifice. Never a better time to start in the hog business. The longer the market stays down, the higher and faster the come back. We guarantee satisfaction. LAKEFIELD FARMS, Clarkson, Mich.

sharply since. They may rally and surpass this level but a downward tendency is certain to start in two or three weeks. The decline in fat steers and higher corn prices have checked demand for feeder cattle, and prices have dropped fifty to seventy-five cents in the last two weeks.

Veterinary.

Wound Infection—Young cow got hurt so her hips were lower on her right side. She also had bloated and we had to probe her. This at the time healed nicely, but now continues to fester and puffs up. What should we do? L. C.—Infection occasionally occurs where cows are punctured to relieve bloat. It would be advisable to have your veterinarian open the wound to allow the pus to escape. The wound can then be syringed out once daily with a warm solution of cresol or lysol—one tablespoonful to pint of water.

Founder—Horse 16-years old is stiff in all four legs. Humps his back up when he walks, trying to get his feet as close together as possible. Joints seem to be sore. L. B.—Your horse has been foundered. This can not be seen at first by any change of the feet. Keep in a warm, well-bedded box stall and cover with two warm blankets. Fold a grain sack lengthways, saturate with cold water, then tie around the ankle so that it will hang down over the hoofs and wet frequently with cold water. The front feet only need to be treated. Make it walk for ten minutes, twice daily. Give one tablespoonful salt peter twice daily. Discontinue grain and give warm mash, twice daily.

Contagious Abortion—Have a three-year-old heifer that lost her calf two months before time. Will it be all right to breed her? Will this spread to the other cows? C. C.—A cow should not be bred sooner than sixty days following abortion, nor until all vaginal discharges have ceased. Others may abort at any time after two or three weeks. It is advisable to isolate aborting cows for the same periods mentioned above. The barn should be thoroughly cleaned, then sprayed with a 5% cresol solution. Also clean up the barnyard and do not store manure in the barnyard or places frequented by the cows. Dead calves and membranes should be removed from barn in a water tight container and either burned or buried deeply. This is done in order to prevent the spread of infection all over the premises.

Calves Have Cold—Calves when a week old began breathing heavy and at times would get wet all over body as if water had been thrown upon them. Are lively and seem to feel good, but do not seem to fatten up as they should. They suck cows morning and evening. What can I do for them? C. S.—Your calves have evidently caught a little cold. The moisture on the hair is due to cold and dampness in the barn. They should be kept in a warm, dry, well-ventilated barn and given plenty clean, dry bedding. Since they are lively and feeling good, there is no reason why they should not pick up in flesh.

Irritation—Horse rubs roots of tail. Can this be cured? W. Y.—This condition is frequently due to parasites. Wash and scrub the skin thoroughly with soft soap and hot water, when dry rub in a mixture of four ounces sulphur and eight ounces heavy engine oil. Apply every third day.

Convulsions—Young dog has worms. We have tried several remedies without good results. What can we do to rid him of these worms? F. F.—These spells are due to various causes, as worms, indigestion, constipation, eating too much starchy food—bread and potatoes and not sufficient meat. We usually advise treatment for worms. The diet should be watched and one meal daily should consist mostly of meat, he should also not be fed too much at one time. Constipation can be corrected by giving a tablespoonful castor oil once a week. Young dogs usually eat all kinds of foreign matter, this causes irritation of the bowels as well as indigestion which is often the cause of these fits or convulsions.

Cough—Mare seven years old has cough. It comes in spells. D. M.—Take Guaiacol three ounces and raw linseed oil one and one-half pints, mix and give one ounce three or four times daily. Reduce the amount of hay and dampen before feeding.

SAVE MILK -and earn a Double Profit!



WHY raise your calves on milk when the market value of dairy products is so much more favorable? Thousands of farmers have adopted this better and far more profitable way of raising their calves.

By feeding RYDE'S CREAM CALF MEAL you are assured of two profits: one from the milk sold and the other from the grown animal raised, as compared to the high cost of dairy cows when purchased.

Aside from that, you take no chances with the home-grown animal which has been raised under your care.

Ryde's Cream Calf Meal

(with concentrated sweet skim milk)

is an economical milk substitute on which your calves will thrive and grow. Calves like it, and eat it in preference to any other food you may place before them. Prepared from choicest materials (not a "by-product") especially milled and steam-cooked for easy digestion. Has proteins, fats and minerals in abundance for rapid, normal growth.

Think of the saving, 100 pounds make 100 gallons of rich, nutritious milk substitute! We guarantee complete satisfaction.



For sale at your dealer's in 25, 50 and 100-pound bags.

"More Chicks Will Be Chickens." Push your poultry along, from newly-hatched chick to laying hen. Feed these well-known feeds which contain elements adapted to every stage of growth—choicest granular grains, whole seeds with natural oil retained, special meat scraps and dried buttermilk. At your dealer's in 25, 50 and 100-pound bags, or write us. Satisfaction guaranteed.

FREE Children and grownups alike say the Ryde Chick Game is the best ever! This interesting and instructive game, including play board, spinner and model chicks, will be sent FREE (worth 75c) upon receipt of your name and address. Include 10c to pay postage and packing. Address Ryde & Co., Mfrs., 5434 W. Roosevelt Rd., Chicago, Ill.

Wonder Healing Compound FOR MAN & BEAST

-It's CORONA Soothing, Healing Ointment that works like magic

Corona Wool Fat is made from the oil extracted from sheep's wool. It heals and soothes but will not blister the most sensitive wound. For sore teats on cows, caked udders, sore shoulders and necks on horses, collar boils, split hoofs, scratches, cuts, wounds, burns of any kind on man or beast it is unequalled.

LIBERAL SAMPLE FREE Corona is sold by nearly all druggists or direct from us on receipt of price—8 oz. tins 65c, 20 oz. tins \$1.25, postpaid. If you will send your name and address, we'll mail you a liberal sample and our 32-page book of uses free. We want you to see for yourself the wonderful healing properties of Corona.

CORONA MFG. CO. 257 Corona Bldg., Kenton, O.



FOR SALE—Duroc Gilts of type and quality, bred to High Orion No. 265227. Also a few spring boars at right prices. Shipped C. O. D. on approval. W. E. BARTLEY, Alma, Mich.

O. I. C. HOGS on time Write for Hog Book Originators and most extensive breeders. THE L. B. SILVER CO., Box 196, Salem, Ohio

Registered O. I. C. Fall Pigs best of breeding from prolific sows. Shipped on approval. H. J. HUDSON, R. 2, Romulus, Mich.

O. I. C's. Good last spring pigs, not akin also fall pigs, recorded free. OTTO SCHULZE & SONS, Nashville, Mich.

For Sale—Reg. O. I. C. April & May Pigs best of breeding. Shipped on approval. FRED W. KENNEDY & SONS, R. 1, Chelsea, Mich.

Registered O. I. C. Gilts bred for April and May farrow. H. W. MANN, Danville, Mich.

Large Type Poland Chinas Fall pigs ready to ship, sired by my two great herd boars, L's Big Wonder, by Siever's Smooth Wonder and Big Stratton by The Redeemer, and from my best sows. Priced reasonable. W. E. LIVINGSTON, Parma, Mich.

FOR SALE Poland China boars of March and April farrow. Also some choice bred gilts, due to farrow in March and April. Every one immuned for cholera. WESLEY HILE, Ionia, Mich.

LARGE TYPE Poland China bred gilts, also fall boars and gilts. JAMES G. TAYLOR, Belding, Michigan.

FOR SALE Poland China Bred Gilts and Milking Shorthorn—bull calves. CLAIR I. BROWN, Kalamazoo, Mich., R. 10.

SHEEP

A FEW bred Karabul ewes for sale, the right fur bearing kind. ANGUS HOME STOCK FARM, Davison, Mich.

FOR SALE 200 yearling ewes bred to lamb after May 1st. A. C. HAYES, Muir, Mich.

HORSES

For Sale Rising Three-Year-Old BELGIAN STALLION Prince de Rubis. Sorrel in color, weight 1,900, sired by Rubis. Full brother to Manilla de Rubis 10770. Grand Champion Mare at 1927 International. He is also a half brother to the famous Pervenche 9030. Dam of Prince de Rubis now owned by Michigan State College. JAMES LYNCH, Coral, Michigan.

FOR SALE We are offering for sale another pair of Black Reg. Percheron mares, gentle, sound, weigh about 3,600, and bred to a son of Etudiant. A good pair of brood mares. R. E. WHITNEY, Onondaga, Mich.

FOR SALE A roan Belgian Stallion 5 yrs. old. V. J. GILBERT, 1424 Portage St., Kalamazoo, Mich.

\$500 and service fees buys a fine pair of grade Belgian mares, coming 5, Wt. 3,400. A. FLEMING, Lake, Mich.

FOR SALE—Matched team, 7 & 8 yrs. old, weight 3,800 lbs. Sound. E. H. ROWE, Lyons, Mich. R. 1, Portland phone 335 2 L 2 S.

MULES

WANTED the best mule team in Michigan. Prefer mares. Must be young, sound, gentle, and honest pullers. Weight around 1,200 pounds apiece or more. Address BOX 141, Michigan Farmer, Detroit.



THE LATEST MARKET REPORT



GRAIN QUOTATIONS.

Monday, March 5, 1928

Wheat.

Detroit—No. 2 red at \$1.62; No. 2 white \$1.61; No. 2 mixed at \$1.61.

Chicago—March \$1.37½; May \$1.37½; July \$1.36½; September \$1.35½.

Toledo—Wheat, No. 2 red at \$1.62½ @ \$1.63½.

Corn.

Detroit—No. 2 yellow \$1.05; No. 3 yellow \$1.02; No. 4 yellow \$1.00.

Chicago—March 94½c; May 98c; July \$1.01½; September \$1.01½.

Oats.

Detroit—No. 2 Michigan 64c; No. 3 white 62½c; heavy oats 2c premium.

Chicago—March 57c; May 57½c; July, old 53½c; new 54½c; September, new, 50c.

Rye.

Detroit—No. 2 \$1.24.

Chicago—March \$1.18; May \$1.17½; July \$1.11½; September \$1.04½.

Toledo—\$1.24.

Beans.

Detroit—Immediate and prompt shipment \$8.05 f. o. b. shipping points.

New York—Pea domestic at \$8.00 @ \$8.50; red kidneys \$8.50 @ 9.50 to the wholesalers.

Chicago—Spot navy beans, Michigan choice, hand-picked, in sacks at \$8.50; dark red kidneys \$10.50.

Barley.

Detroit—Malting \$1.01; Feeding 97c.

Seeds.

Detroit domestic seeds:—Cash clover \$17.00; October \$13.00; March \$17.00; cash alsike \$15.95; March \$15.95; timothy at \$1.90; March \$1.90.

Hay.

Detroit—No. 1 timothy at \$13.00 @ \$14.00; standard \$12.50 @ 13.50; No. 2 timothy \$10.00 @ 11.00; No. 1 light clover, mixed \$13 @ 14; No. 1 clover \$11.50 @ 12.50; wheat and oat straw \$10.00 @ 11.00; rye straw \$11.00 @ 12.00 alfalfa hay, alfalfa choice at Chicago, \$15.00 @ 25.00.

Feeds.

Detroit—Winter wheat bran at \$43; spring wheat bran at \$42; standard middling at \$42; fancy middling at \$45; cracked corn at \$45; coarse corn meal \$43; chop \$38 per ton in carlots. Poultry feeds with grit \$49.00; without grit \$54.00 per ton.

WHEAT.

While wheat prices have not made much progress in the last week on the forward move which started early in February, the market retains an appearance of strength. Holders of wheat in domestic markets are not offering urgently, crop reports and estimates of reserves of old wheat are attracting speculative demand and foreign markets are not yielding under pressure from increasing arrivals of southern hemisphere wheat and the large stocks afloat.

The course of the market in the next few months will become increasingly dependent on new crop developments. The winter has been hard on the crop both in this country and in Europe and the sentimental effect of

reports of injury will have a firming influence on prices even though the acreage that will be left for harvest will be comparatively large. The soft winter wheat territory in the Ohio Valley has been damaged considerably. The yield of this variety was small in 1927.

RYE.

Export demand for rye has been fairly prominent recently and prices have advanced to a new high point for the season. Part of these sales are for shipment after the opening of lake navigation when stocks will dwindle rapidly. Domestic milling demand has been fairly good recently also.

CORN

Corn prices have been hovering near the high point reached two weeks ago. Receipts increased moderately in the last ten days and demand from foreigners and from elevator interests failed to follow the preceding advance. Buying by industries and feeders has continued fairly active, however, and the last visible supply report showed a moderate decrease. Private reports show about 100 million bushels less corn on farms on March 1 than a year previous, indicating unusually large winter disappearance.

OATS.

Oats prices advanced to a new high point for the season in the last few days. Demand for high quality heavy-weight grain is fairly active and some buying of seed oats is reported at terminal markets. The visible supply of oats is small and the season when it usually begins to diminish rather rapidly has arrived. Farm reserves on March 1, according to trade estimates, totalled 369 million bushels compared with 422 million bushels last year and the smallest since 1912.

SEEDS.

Demand for seeds continues listless although the usual season of active trade is at hand. Weather conditions

generally have been unfavorable for planting and farmers have put off buying. Dealers likewise are not building up their stocks, so that the demand for seed still in the hands of growers is slow. Red and alsike clover seed declined again last week without causing any improvement in trade. Alfalfa seed remains firm following the recent advances as remaining supplies are not large and demand is fair to good. Timothy seed was marked fractionally lower last week.

FEEDS.

An active demand for by-product feeds, particularly bran, keeps feed markets steady to strong. Production is on a moderate scale and offerings are moved without difficulty. Strength in the coarse grain market is reflected in the heavy feeds. Demand is largely for prompt shipment as prices are relatively higher than at the corresponding time in 1927, and with the approach of the season for lighter feeding, buyers are little interested in offerings for deferred delivery.

Chicago—Bran, \$36; standard middlings, \$36.50; hominy feed, \$37; gluten feed, \$38.70; old process oil meal, \$52; tankage, \$65; cottonseed meal, 43%, \$52.50.

HAY.

Good dairy hay is scarce and offerings meet a ready sale at firm prices. Other grades of hay, however, are hard to sell and prices are no more than steady. Much of the hay yet to be marketed is of only fair quality which is not wanted except at a discount. With the approach of the pasture season, farmers will probably ship heavily and prices except for fancy quality are not likely to show much improvement.

EGGS.

Fresh egg prices have rallied from the low point reached late in February and now average several cents a dozen higher than at the corresponding time last season. Supplies are increasing rapidly and receipts at the

four leading distributing markets during February were nearly 10 per cent larger than in the same month in 1927 when the season was unusually early. Retail stores are featuring eggs at reduced prices and consumption is on a healthy scale. Some buying for storage account has already appeared and reports generally indicate dealers view the new egg deal favorably. It is possible prices may stabilize somewhere around present levels unless production exceeds general expectation.

Chicago—Eggs: fresh firsts, 27c; extras, 34 @ 35c; ordinary firsts, 26c; dirties, 25c; checks, 24½c. Live poultry: Hens, 25c; springers, 29c; roosters, 20c; ducks, 28c; geese, 18c; turkeys, 28c.

Detroit—Eggs: Fresh candled and graded, 28 @ 28½c. Live poultry: Heavy springers, 31c; light springers, 24c; capons, 36 @ 37c; heavy hens, 27c; light hens, 24c; roosters, 18 @ 19c; ducks, 27 @ 29c.

BUTTER.

The butter market staged a rapid comeback when receipts failed to increase as much as expected and the supply of fancy butter failed to meet the demand. Taking the country as a whole, production is about stationary. Receipts at New York, Chicago, Boston, and Philadelphia during February were only slightly larger than in the same month a year ago. Retailers have passed along to consumers the lower wholesale prices of butter and consumptive demand has shown marked improvement. The "surplus" in storage stocks of butter has not been reduced any further, but much of the remaining stock is of ordinary quality and will not compete with the fresh goods. Until receipts become more plentiful, butter prices probably will remain firm.

Prices on 92 score creamery were: Chicago, 48½c; New York, 49c; Detroit, 44½ @ 47c per lb.

POTATOES.

Following the moderate advances early in February, the potato market has had a sharp upturn in the past week which carried prices above the corresponding period a year ago. Available supplies of good table stock are rapidly diminishing and dealers are ready buyers of all potatoes farmers have for sale. Remaining stocks in the western states are larger than at this time last season, but in the east, holdings are from 10 to 25 per cent smaller. Present prices probably will attract heavier shipments as well as put a check on consumptive demand, and if markets were to become oversupplied, values would work lower. Northern round whites, U. S. No. 1, bring \$2 to \$2.10 per 100 pounds, sacked, in the Chicago carlot market.

WOOL.

Wool prices continue extremely strong. Mills are not ready to pay the advances asked recently by dealers except to cover immediate requirements but the amounts compared with the supplies available appear sufficient to place holders in a strong position, especially in view of the firmness in foreign markets. Prices have been gradually rising since early last summer but since new clip wools will not begin to reach the seaboard in volume until well along in May, the most severe pinch in supplies is still to be experienced.

DETROIT CITY MARKET

Apples, \$1.50 @ 5.00 bu; beets 50 @ 90c bu; cabbage 40 @ 75c bu; carrots 40 @ 75c bu; celery, local 50 @ 65c doz; eggs, wholesale, white, 30 @ 31c doz; brown 28 @ 30c doz; retail, 35 @ 40c doz; dry onions 75c @ \$1.50 bu; root parsley \$1.25 @ 1.75 bu; parsnips \$1.00 @ \$1.50 bu; potatoes 65c @ \$1.40 bu; poultry—hens, wholesale, 25 @ 30c lb; retail 30 @ 32c lb; broilers, wholesale, leghorns, 24 @ 27c lb; rocks 26 @ 32c lb; retail 30 @ 35c; ducks 26 @ 30c lb; dressed poultry, retail, 35 @ 38c lb; ducks 35 @ 40c lb.

GRAND RAPIDS

Potatoes, \$1.20 @ 1.25 bu; onions, \$1.10 @ 1.25 bu; cabbage, 30 @ 50c bu; parsnips, \$1 bu; leaf lettuce, 10 @ 11c lb; radishes, 50c doz. beets; rhubarb, 18c lb; apples, \$1.50 @ 3.50 bu; beans \$7.40 cwt; wheat, \$1.40 bu; rye, 90c bu; barley, \$1 bu; buckwheat, \$1.50 cwt; pork, 9 @ 11c lb; beef, 12 @ 13c lb; lamb, 18 @ 21c lb; mutton, 10 @ 13c lb; hens, 16 @ 25c lb; chickens, 18 @ 25c lb; butter-fat, 50c lb; eggs, 27 @ 29c doz.

Live Stock Market Service

Monday, March 5, 1928

DETROIT

Cattle.

Receipts 845. Market opening steady but slow.

Fair to good yearlings dry-fed \$11.00 @ 12.50
Fair to good heavy steers, dry-fed 11.00 @ 13.00
Handy weight butcher steers 10.50 @ 11.50
Fair to good heifers 9.50 @ 10.00
Common light butchers.. 8.00 @ 9.50
Best cows 8.50 @ 9.00
Butcher cows 7.00 @ 8.00
Cutters 6.25 @ 6.50
Canners 5.50 @ 6.00
Light butcher bulls 3.50 @ 9.75
Bologna bulls 7.50 @ 8.25
Stock bulls 6.50 @ 8.25
Feeders 8.00 @ 10.00
Stockers 7.00 @ 10.00
Milkers and springers.... 75.00 @ 115.00

Calves.

Receipts 654. Market steady.
Best \$16.50 @ 17.00
Others 6.50 @ 16.25

Sheep and Lambs.

Receipts 980. Market steady.
Bulk good lambs \$16.00 @ 16.25
Best lambs 16.00
Fair lambs 12.50 @ 14.00
Light lambs 10.00 @ 12.00
Yearlings 12.00 @ 13.25
Fair to good sheep 6.00 @ 8.50
Buck lambs 7.50 @ 12.25
Culls and common 3.00 @ 5.50

Hogs.

Receipts 2,040. Market 20 @ 25c lower.
Pigs \$ 6.50
Mixed hogs 8.35
Lights 7.75
Roughs 6.65
Good Yorkers 8.75
Stags 5.50
Extreme heavies 7.00 @ 7.75

CHICAGO.

Hogs

Receipts 85,000. Market mostly 10 @ 15c lower than Saturday's average; light hogs active; heavy butchers slow; packers topping 25c lower; bulk good 170-220-lb. average \$8.15 @ 8.30;

tops \$8.30; 230-260-lb. butchers \$8.00 @ \$8.20; 280-340-lb. average \$7.70 @ 7.95; 140-160-lb. weight up to \$8.25; bulk medium to good pigs \$6.00 @ 7.00; packing sows \$6.75 @ 7.25 largely.

Cattle

Receipts 15,000. Market largely steer run very early, sales good; heavies to shippers steady; early tops \$16.50; bulk held higher; undertone weak to low on general run; fat steers scaling 1,200-lbs. down; she stock scarce, strong tops higher; bulk uneven, mostly steady; light vealers \$12.00 @ 12.50 to packers; small killers up to \$14.50; steady to weak trade; few feeders here.

Sheep and Lambs

Receipts 15,000. Market bulk fat lambs slow, about steady; few better handy weights early to outsiders, strong to 25c higher; tops \$16.50; several decks to traders \$16.25; bulk of run Colorados, 95-lbs., around \$15.40 @ \$15.75; lighter bids lacking finish within same price; sheep steady; feeding lambs unchanged; few good 61-68-lb. \$14.50 @ 14.75.

BUFFALO.

Hogs

Receipts 12,000. Hold over 1,065; market 10 @ 25c lower; pigs unevenly steady; bulk 180-210-lb. \$8.80 @ 8.90; few \$9.00; 240-280-lb. \$8.60 @ 8.75; light pigs \$6.75 @ 7.00; 125-150-lb. \$7.25 @ \$8.25; packing sows \$6.75 @ 7.25.

Cattle

Receipts 1,700. Market active, strong, 25c higher; bulls slow, 25c lower; good 975-lb. steers \$13.50; medium 1,100-lbs. down \$11.50 @ 13.25; few heavies \$13.00 @ 13.50; yearlings \$11.00, others \$9.00 @ 10.25; fat cows \$9.00 @ 10.00; common and medium \$6.50 @ 8.75; all cutters \$5.00 @ 6.50; bulls \$6.50 @ 8.50.

Calves

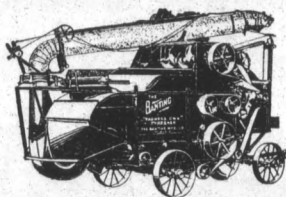
Receipts 1,900. Market steady; good \$17.00; culls and common \$11.00 @ 13.50.

Sheep and Lambs

Receipts 5,800. Market active, steady, good to choice lambs, 80-90-lb. \$16.50; throwoffs \$14.00 @ 14.50; few clipped lambs \$13.50; fat ewes \$8.00 @ \$9.50.

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In wholesale markets, February prices for fancy bacon were 15 per

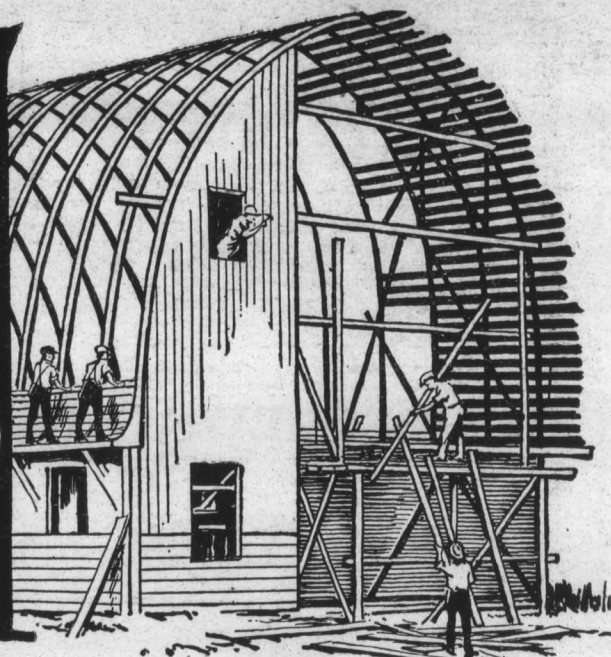
The finish of lambs fed oats and those fed corn were the same, but the financial returns favored the feeding of oats.

SITUATIONS WANTED

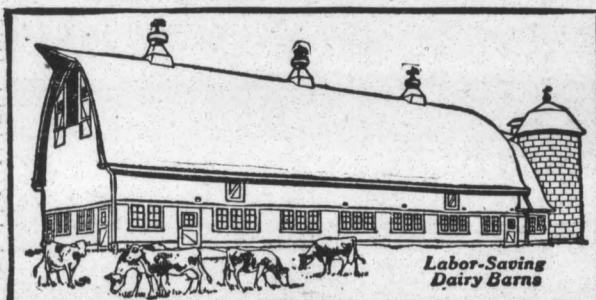


H. D. James
PRESIDENT

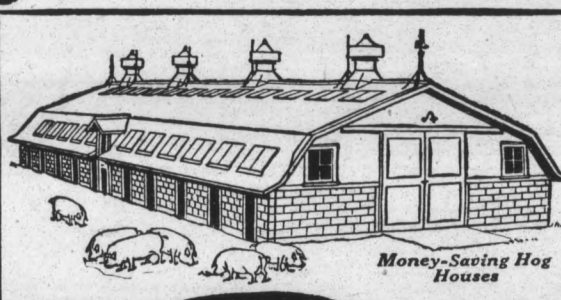
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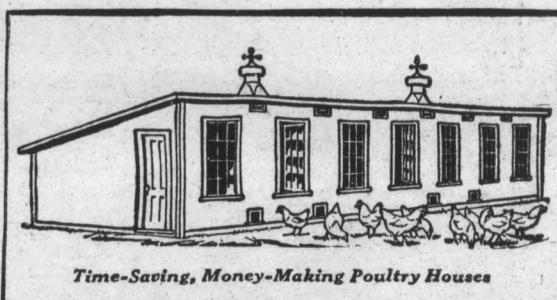
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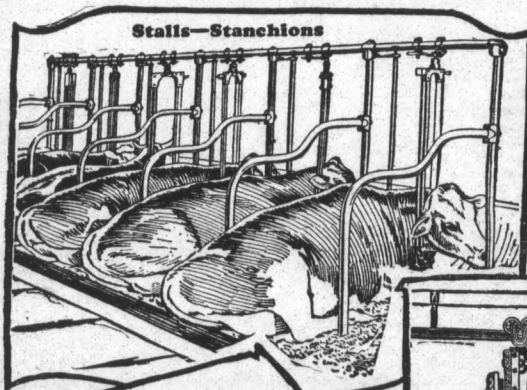
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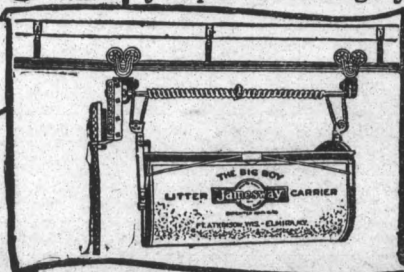
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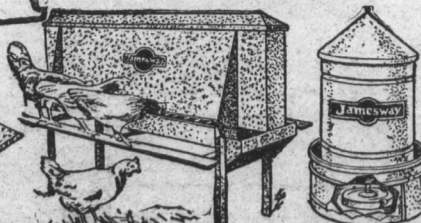
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