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VOLUME CLVIII NUMBER TWELVE

DETROIT, MARCH 25, 1922

### CURRENT COMMENT

#### THE MICHIGAN FARMER SAYS:

The rolling stone often gathers remorse.

Every important issue is said to have two sides—the wrong side and our side.

The present tax situation puts on us faces long enough to eat oats out of a sap bucket.

It is time that the prodigal father who wasted his energy following inconvenient, awkward and uneconomic ways should return to his younger son, Efficiency.

#### "Filled" Dairy Products

**D**AIRY farmers are confronted with a serious menace to their industry in the growth of the filled milk industry and the manufacture of new butter substitutes in which the fat of cocoanut oil is used as a substitute for butter-fat. The extent of this development is shown by the growth of imports of cocoanut oil, which increased from something like twelve thousand pounds in 1916 to eight million pounds in 1920. The present price of this substitute fat is around twelve cents per pound. It will at once be seen that the substitution of this enormous amount of cheap fat for butter-fat cannot but have a most depressing effect upon the market for all products containing butter-fat.

A considerable amount of this substitute fat is being used in the production of "filled" milk. In the process of manufacture of these filled products the butter-fat is removed from the milk and the fat of cocoanut oil is incorporated with the evaporated skim-milk. One large plant in Michigan is now manufacturing a filled milk, and there is a strong likelihood that unless this practice is prohibited or regulated by law other manufacturers will be forced to follow suit in self-defense. In the meantime these manufacturing interests and the soap manufacturers are said to be making strenuous efforts for a reduction of the tariff on cocoanut oil. Organized dairymen in Michigan and other states are very properly using their influence toward securing the passage of needed legislation for the protection of their industry. They are favoring the passage of the Voigt bill, now before the Senate Finance Committee at Washington, which would prohibit the manufacture of filled milk, as the manufacture of filled cheese is now prohibited.

This is in line with the protection of public health as well as the protection of an important agricultural industry. Filled milk is a menace to both. It is in the same class as filled cheese, and the same good reasons obtain for prohibiting its manufacture.

#### The Eliminator is Broken

**T**HERE is a story going the rounds, as follows: A man in a restaurant orders eggs, potatoes, coffee, etc. His friend says to the waiter, "Bring me the same but eliminate the eggs." In a little while the waiter comes back and asks, "How did you want those eggs?" The man replies, "I want them eliminated?" After another consultation with the cook, the waiter comes back and says, "Sorry, sir, but the cook says the eliminator is broken this morning."

There is no moral to be gained from this joke, but we may well say that in another and greater way an eliminator is broken. And that is with reference to the farmer.

The farmer has been lauded as a sturdy son of the soil, the man to whom the country looks for its food, the foundation rock of American industry. For some reason or other he has been just that. Generally speaking, the business and financial activities of the world have been outside of the sphere of his knowledge.

But recent developments, especially the late deflation in prices of farm commodities, have brought the farmer to the realization that farming is a business as well as an occupation. So through organization and cooperative effort he has made his strength felt throughout the country, and his demands are now being heard and heeded.

The business interests know that they have him to consider on an equal basis with themselves. And the money merchants have come to realize that he is a good customer and must be given accommodation in accordance with his needs. Both business and finance have learned that his success is one of the greatest factors in their successes, and therefore he should be justly treated.

There is much to be done yet but the present tendencies mean that we are in the dawn of a new tomorrow for the farmer. It means not only that but more. It means that we are coming to a greater democracy for the rights and privileges formerly held by the few are being extended to the many.

Thus we believe that one great class and industrial eliminator is being smashed forever.

#### Hubam and the Dairyman

**A**BOUT a year ago a central Michigan dairy farmer conceived the idea of growing Hubam clover with his corn in order to increase the protein content of his roughage feed. By this means he hoped to greatly reduce the amount of concentrated protein feed that he is now called upon to purchase.

With this thought in mind he secured from the Michigan Crop Improvement Association the required amount of seed and drilled it in the rows with his corn. The season was far from ideal for the production of a large tonnage but to the eye it appeared that the corn was somewhat better where the clover was grown than where it was not. The crops were harvested together and put into the silo.

He has not been able to make any accurate tests but he feels certain that his original idea is sound and that here is a crop that will aid materially in balancing up the ration of the dairy cows to the financial advantage of the farmer. Should careful experimentation prove this contention to be cor-

rect there is real promise that Hubam may become an important crop in the program of the dairy farmer. It has already won its way to the heart of the bee man. Consequently we are gradually being led to believe that this new crop may furnish a connecting link in our cropping system that will aid materially in making our land flow with milk and honey.

#### The Farm Tenant

**T**HERE are more tenants on American farms to day than there has ever been in the history of the country. What does it mean? Does it indicate that our rural people are headed toward the level of the peasantry of older countries, or does it mean that a larger and larger number of young men are anxious to be farmers and are taking this course to establish themselves upon farms of their own?

Economic conditions determine quite largely whether there be many or few who seek to enter the ranks as farmers. If these conditions be bad as compared with the conditions surrounding other industries then farm tenancy may be looked upon as a sign of a decaying agriculture—of men who once owned land but who are now gradually going into bankruptcy. On the other hand, if the business of farming shows a reasonable labor income and good interest on the capital invested in the enterprise then without doubt the coming generation will take advantage of the opportunity to rent farms as the first step toward securing farms of their own.

So the mere fact that farm tenancy is on the increase signifies little of itself. We must rather look to the conditions surrounding agriculture. If those conditions are becoming unbearable then we have occasion to be somewhat alarmed, and vice versa. In other words, the question of increase in the number of tenants is an indication of the general health of agriculture showing either that it is coming down with a bad cold or is growing hale and hearty. Although there are many places where considerable adjustment is needed, our opinion is that agriculture is not a bad business for the young man to tie to.

#### The Tax Exemption Evil

**W**ITH the great need for taxes to carry on public work and to care for our war indebtedness, students of economics have come to realize that the biggest hindrance to an equitable taxation is the tax-exempt security. With over thirty billions, or one-tenth of the nation's wealth tied up in this manner sentiment is growing for a constitutional amendment prohibiting the issuance of this class of securities.

Investigation has shown that many wealthy people, by converting their assets into tax-exempt securities, have added thousands of dollars to their net incomes from these assets and have deprived the government of equally as much in tax money.

Government securities are tax free and mortgages and mortgage bonds escape with a single tax of one-half of one per cent. Since the mortgage tax law was made effective in 1912 more than one and one half billions of Michigan money have been made tax free for a number of years, excepting the half of one per cent tax. From this the state has received in ten years only \$3,945,171 when it should have received ten times that amount. Under the bond exemption law over two hundred and two million dollars of Michigan money are invested in outside industry and are lost to the state for taxing purposes.

This subject, it seems to us, is a good one to discuss at Grange and club meetings in order to create public

sentiment, which is necessary to back the correction of an evil of this sort.

#### An Agricultural Policy

**I**T is nearly a quarter of a century since the peak of production of agricultural products per capita was reached in this country. Following that date production kept pace with the increase in population for about a decade when it began to lose ground more and more rapidly until at the present time we are essentially a food-importing nation; that is, we import, as measured by dollars, more sugar, spices, nuts, coffee, tea and tropical fruits than we export wheat and meat.

We certainly desire that our national development continue. It has, however, been the history of older nations that as soon as they ceased to be surplus food-producers the rate of increase in population was rapidly modified. Every person who has given the matter study knows well enough that we have not even approached the agricultural possibilities of the country. It is important to both agriculture and the nation, however, that we proceed to give agriculture a real chance to live before we, as a nation, choose to depend upon food products of countries having lower production costs.

#### Bigger Milk Produceshun

**I**'VE been a readin' lots about increasin' milk produceshun and I know it's good readin' 'cause the inspirashun I got thereby has pleased my cows so much that they are now perfectly willing to pay for their board.

Milk is the universal food of man and beast and I can say without Sophie disputin' me, that it has started many a man on the road to livin' and has made lots o' women able to show the man how to live.

But with all this importance, there's another kind of milk produceshun that is lots greater what is prodigiously neglected. And that is the milk o' human kindness.

Seems like there is tremendous possibilities in this, and you don't have to breed a new kind o' folks to do it. The grade humans and the cross-breeds what is existin' now has facilities for increasin' produceshun considerably.

Like with the dairy cow, there's lots o' ways of increasin' the produceshun of this valuable product. For inst., the subject of balanced rashesun is an important one. There's many a man what hates his wife and lots of others, 'cause she gives him bum pancakes for breakfast. The cook has got what you call a great responsibility in this matter.

Now, they ain't got no milkin' machine for gettin' this out, but there's lots of us what don't give down as much on this kindness milk for some folks as for others. Just like the cow, it depends a lot on who is doin' the milkin'.

And some of us has got lots of it in us, but don't give it to nobody, so it gets caked and hard. When human kindness gets in that condition of affairs, it needs what you call spiritual attention.

Readin' will help in this like in dairyin'. You never can learn too much about subjects what involve you. There's lots of good books on the subject, but there's one what is like Henry's Feeds and Feedin' is on the subject of feedin' stock, and that is the book what you call the Bible. It covers all the ramificashuns of the subject.

Sophie says it's milkin' time, so I gotta go out and manipulate the cows.  
HY SYCKLE.





# Dairymen to Market Products

*Group of Michigan's Cheese Factories Will Follow Wisconsin's Lead*

By W. C. Cribbs

THE farmers of Michigan have made such a success of marketing potatoes and grain through the Michigan Potato Growers' Exchange and the Michigan Elevator Exchange, that the fruit men are getting a Fruit Growers' Exchange ready to take care of this year's crop. The Michigan Live Stock Exchange has taken definite steps to establish commission houses at Detroit and Buffalo. Quite naturally, the dairymen will be looking for some such solution in the near future.

We already have many successful cooperative creameries and cheese factories and seven cooperative whole milk distributing plants. The one at Lansing is nearly ready to begin building, with four hundred of the best dairymen around Lansing signed as stockholders, at forty dollars per cow.

In Menominee county, the section of Michigan where more cheese is made than in any other like area, the farmers are investigating the Wisconsin Cheese Federation, which has done so much for the farmers of that state.

Wisconsin produces seventy per cent of all cheese made in the United States, and quite naturally they would be the ones to first take up the work. We find the cause for the Cheese Fed-

eration of Wisconsin was about the same as the cause for all other farmers' organizations. There never was an association organized by the farmers which was not an outgrowth of dissatisfaction. Where farmers are satisfied with their marketing conditions they cannot be organized for marketing purposes.

The Wisconsin Federation is a farmers' cooperative selling association, owned and controlled by the farmers. The main object of the federation is to increase returns to farmers on their cheese by reducing marketing costs and by advertising and selling on a quality basis.

Before the federation was started, the Plymouth board cheese market was manipulated by dealers. The price was set for each week by auction sales. The dealers agreed among themselves not to bid against each other, thus the price was kept lower than it would otherwise have been. This condition was very detrimental to the farmers who were furnishing their milk to cheese factories.

Some of the factories are new and owned by a cheese maker, and some

are cooperative, but in both cases the farmer pays by the pound for making the cheese, is still owner of the cheese made from his milk, and decides when it comes to the question of how it shall be marketed.

When the Federation entered the Plymouth Board, of course, the men who had divided their territory were not able to conduct their work as in the past. Since that time all cheese has been marketed on a competitive basis, which has bettered conditions for the producers.

This federation was organized in 1914 and has made a very steady growth. The first year they marketed 6,125,480 pounds of cheese and in 1919 14,098,021 pounds. The receipts for the first six months of 1921 were the largest in their history.

At the present time 120 factories are in the association. Factories joining the federation must pay a ten dollar membership fee and sign a contract to sell its cheese through the federation for a period of five years.

They have several warehouses to which the cheese is delivered where it is kept in a cooler until ready to ship.

Here it is tested, weighed, stamped, parafined and boxed for shipment, all grades being pooled separately each week.

In 1920 cheese was shipped to thirty-seven different states.

These warehouses are financed by selling preferred stock to farmers or anyone else who wishes to buy. The common stock is held by the directors of the federation and is the voting stock. By this arrangement their competitors cannot buy up the voting stock and get control of the warehouses.

The federation did not expect to build warehouses when they started because there were several warehouses which were for rent for storage purposes. However, when the farmers wished to rent they found they had all been taken by the cheese dealers, so they were compelled to wait until they could build, before beginning business.

In 1920 the members of the federation were paid patronage dividends amounting to \$64,000 and \$50,000 were put into storage warehouses, with \$15,000 left in the treasury.

One cheese section in Minnesota has formed a cheese company comprising thirty-three factories. This company has built a warehouse and cooler from (Continued on page 381).

# A Michigan Consolidated School

*And How the Movement is Spreading in Other States*

HASLETT'S Rural Agricultural School is now in progress, enjoying the great benefits derived from rural school consolidation.

The school board who has so wisely managed this project consists of: R. G. Smith, president; B. W. Code, secretary; J. G. Marsh, treasurer; C. C. Foster and Burr Smith, trustees.

The faculty consists of Mr. T. L. Ingersol, superintendent; Mrs. Gertrude Prindle, principal; Mrs. Alma Archer, seventh and eighth grades; Miss Nellie Demaroy, fifth and sixth grades; Miss Rachel Taylor, third and fourth grades; Mrs. Bertha Aldrich, primary department.

The pupils from the country enjoy motor-bus transportation. Three busses bring about one hundred children. Classes have the regular forty-five minute schedule. Teachers and pupils aloke enjoy the hot lunch served at noon. The drinking fountain and lavatories furnish opportunity for practicing duties toward good health.

The boys and girls have organized their respective community clubs which are conducted by interested pa-

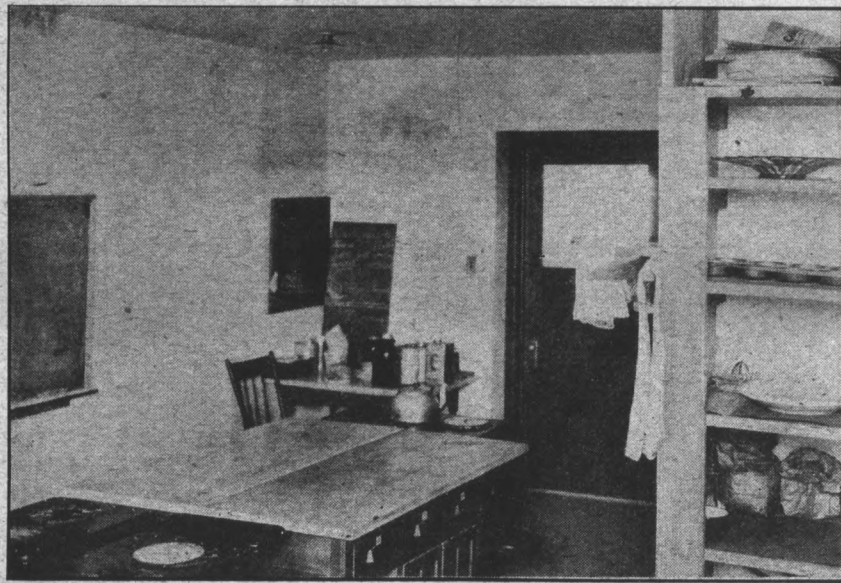
trons. The parents and teachers have their club organized under the name of "My Neighbor and I."

All patrons of this school agree that

rural consolidation is the only salvation for the one-room school in order to have city advantages and yet be truly rural.

Here is what is happening in other states. Of the 12,500 one-room schools in Iowa, over 3,300 have been abandoned. In Indiana 4,000 have been closed, and there are 4,853 left. North Dakota has taken 25,000 farm children out of one-room schools in the past seven years. Oklahoma has two whole counties without a single one-room school. In the past year Utah reduced the number of one-teacher schools eighteen per cent. One hundred and forty-four consolidations of districts with one-room schools were made in 1919-1920 in Texas. And so on in every state we find that consolidation is gaining foothold and proving its advantages over the one-room school every day.

Already more than two million country pupils are attending consolidated rural schools. Consolidation means a high-school education brought to the door of every farm home. It means an education that faces boys and girls toward the farm, teaches them in terms of home-making, teaches them to live, and live well, on the farm, and to love life in the open.



Where the Girls of Haslett Learn Domestic Science.



Where the Boys Make the Chips Fly Turning Out Useful Articles.



The General Science Laboratory in the Haslett School.



# Late Agricultural News

## Mr. Automobile Owner

Mr. Automobile Owner, do you realize that in 1921 there were 15,000 death cases and 150,000 personal injury claims caused by automobile accidents? In many of these claims settlements were made for from one to five thousand dollars but few automobile owners could stand such serious losses. With traffic on the increase, with good roads, with the congestion of automobiles upon many highways, it is unwise to go without automobile insurance. You are able to obtain your insurance in a mutual company at a very reasonable rate.

You should select a company that has an organization throughout the state so that if you are traveling in any part and have a serious accident, by wiring to the company you can obtain the name of the local agent or attorney who will give you assistance. Select a company that is complying with the request of the insurance department by building up a liability reserve.

If you are not insured or if you would like an agency to write insurance, it will pay you to write to

**The Citizens' Mutual  
Automobile Insurance Co.**  
Howell, Michigan



### SILO BARGAINS

The Big 3 among silos—cheapest of their class in price—best in construction and improvements—most satisfactory in service. CHAMPION erected silos for lifetime service. NEW ROSS constructed for those who want 25 years of service for least money. INDUCTO Metal Silos for those who want an improvement over tile or concrete for less money.

### Lowest Prices Easiest Terms

One of these silos will suit every need, fit every pocketbook. Prices down to rock bottom. Champion silos \$200 cheaper now. New Ross silos, 10x30, \$235. Inducto Metal silos are much cheaper than masonry.

Agents Wanted on open territory.

### ROSS

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## ABOUT FARM LOANS.

AS several banks are requesting local associations in their districts not to send in any more applications for loans until they can take care of applications now on file, Judge Lobdell was asked why bonds were not issued more frequently to meet the demands for loans until they can take care of sell bonds unless you have something back of them. The federal government is not back of farm loan bonds, their basis being the real estate mortgages and bank capital. He maintained that the board was issuing bonds just as frequently as the necessary backing was available. In this discussion the point was brought out that over sixty per cent of the loans made last year were for the purpose of refunding the loans to save farmers to their owners.

Another interesting item given out was the information that farmers in some parts of the country have borrowed money from the Federal Farm Loan Board to bet on horse races and also to buy fake stocks.

## ANOTHER TRIUMPH FOR MICHIGAN SEED POTATOES.

MICHIGAN grown certified seed potatoes were given first place over all other seed potatoes in the matter of yield per acre in Pennsylvania tests recently when County Agent Charles S. Adams, of Berks county, Pennsylvania, said that Michigan seed potatoes gave the highest yields in his county. Other Pennsylvania county agents have said the same and Michigan certified seed potatoes stand equally high in Ohio and Indiana, says the State Farm Bureau. Mr. Adams said: "Last year the average yield of potatoes grown from disease-free Michi-

gan seed was 24.6 bushels per acre greater than the average yield of all potatoes in the county and 68.7 bushels per acre more than the average for the state. On sixteen farms the Michigan seed outyielded all other potatoes, and on only two farms was the yield less than that of other potatoes. "Seven hundred bushels of Russets were brought into Berks county, Pennsylvania, last year. Seventy farmers planted this seed with highly satisfac-

several carloads of disease-free seed this spring."

Recently at a meeting of the Michigan Potato Producers' Association at Cadillac the Michigan Potato Growers' Exchange and the State Farm Bureau Seed Department were authorized to develop a cooperative method for marketing Michigan seed potatoes.

## TUBERCULOSIS CAMPAIGN.

THROUGH the efforts of the American Farm Bureau Federation and other farm organizations, \$728,000 was put into the appropriation to pay indemnities on cattle tested and found to have tuberculosis, more than was proposed by the committee. The appropriation also provides \$850,000 for testing and administrative work. To date 82,200 herds have been tested in cooperation with state authorities and accredited as free from tuberculosis. The disease has been practically eliminated from 100 counties in twenty-three states and has resulted in the gradual decrease in amount of tuberculosis in herds that are being tested.

The county unit plan is working satisfactorily. Last year the first county was officially declared to be free from tuberculosis. In Michigan twenty-nine counties are engaged in the work and four others are ready to begin under this system.

## SOME NEW FEDERAL HIGHWAY BILLS.

TWO highway aid bills are being considered by the house committee on roads. One introduced by Representative Woodruff, of Michigan, calls for an appropriation for the fiscal year ending June 30, 1923, or \$50,000,000; for the next year, \$60,000,000, and for the next \$75,000,000. It continues the fifty-fifty federal and state arrangement with \$20,000 maximum federal aid per mile. The other bill introduced by Congressman Dunn, of New York, chairman of the roads committee, would appropriate \$40,000,000, \$50,000,000 and \$60,000,000 for the next three years respectively, and cuts the federal appropriation to twenty-five per cent of the cost of the highway, limiting the expenditures to \$7,500 per mile.

The American Farm Bureau Federation and state highway commissioners are in favor of the Woodruff bill.

## INCREASE IN TRUCKS AND AUTOMOBILES.

THE nearly 10,000,000 trucks and automobiles traveling our highways represents a tremendous amount of property which should be protected as much as possible from deterioration as well as expediting its travel. In 1910 the trucks numbered 14,000, in 1918, 250,000, and in 1921, 1,346,000. This shows that in the past five years the number of trucks used for transportation has increased over 1,000,000. When we realize that only 12,000 of these trucks are used in the country to take children to school, that hundreds of motor express lines with regular schedules have been established, that 6,000,000 head of cattle were transported by truck in 1921, and that the farmer has just begun to use the truck to carry his products to market, it is easily discernible that the use of the highway for this mode of transportation is in its infancy. The number of automobiles in this country in 1910 was 437,000. In 1916 it had increased to 3,263,000. Within the next five years it made a leap to 8,404,000, an increase in five years of considerably over one million cars a year.

## Who Has a Repair Shop?

HAVE you a repair shop on your farm? If so we would thank you to write us a letter telling whether or not such a shop is worth while to the average farmer. In other words, would you advise the farmer to go to the expense of providing a suitable place and equipping it to do his repair work at home? What kind of work could the average farmer expect to do, had he the proper tools? What tools will he need? Any other information will be passed along to the readers of this journal. Address your letters to the Farm Mechanics Department, Michigan Farmer, Detroit, Michigan.

tory results. Of this number, eighteen checked on their yields.

"If good seed, free from disease, will outyield all other seed on the average by twenty-four bushels or more per acre, in an unfavorable potato year, we can expect even more of an increase in the average potato year. The farm bureau is planning to bring in



Wednesday, March 15.

UNITED STATES troops were on guard at the Detroit post office during the last-day rush of income tax payers.—Washington gives up hope of halting the miners' strike to start April 1.—The British government arrested 2,200 rebels in its efforts to put down the rebellion in South Africa.—Professor Friday arrives in East Lansing to make preparations for assuming the presidency of M. A. C.

Thursday, March 16.

CUTS in army appropriations make it necessary to reduce the United States standing army to 126,000 men.—Charlie Sobb, of Birmingham, Ala., sixty-one years old, is the father of thirty-six children.—J. A. Doole, deputy commissioner of agriculture, has had a conference with the governor of Minnesota on the eradication of black rust in wheat through the destruction of the barberry.

Friday, March 17.

TWENTY-SIX cement manufacturing companies have been indicted by the government for violation of the anti-trust law.—A Chicago high school has added floor scrubbing to its course in domestic science.—A West Virginia boy was asked by his teacher to gather some cat tails. The next morning he came in with the bloody tails of seven house cats.

Saturday, March 18.

SALVATION ARMY workers in the famine district of China report that parents sell their daughters at prices

ranging from \$1 to \$100 in order to buy food.—Detroit income tax receipts are estimated to be forty per cent below those of last year.—The general office of the Chicago, Burlington & Quincy Railroad were destroyed by fire, involving a loss of \$15,000,000.

Sunday, March 19.

FLOODS are menacing points along the Ohio, Arkansas and Mississippi rivers.—The navy department has requested the government to take over the Alaska coal fields to provide the navy with coal.—Commissioner of Agriculture Halliday has been tendered the position of secretary of the Agricultural college to succeed A. M. Brown, recently resigned.—The February United States exports are nearly twenty million dollars below those of a year ago.

Monday, March 20.

NEARLY ninety-one thousand took part in the father-and-son week meetings and banquets February 12-19.—Ignace Paderewski, the noted pianist, is being groomed for the presidency of Poland.—Detroit has a sure sign of spring; there is a big increase in boys "playing hooky" from school.

Tuesday, March 21.

MEXICO will pay its foreign debts regardless of whether the United States recognizes the Mexican government or not.—President Harding has cut the cost of running the White House from \$25,000 a month to \$15,000.



# An Early Home Garden

By W. A. Freehoff

There is nothing quite so aggravating as to have to get your vegetables out of a tin can in spring, when all your neighbors can go into their gardens and get appetizing greens, radishes, and other good things in profusion. The rather solid diet of winter combined with the severity of the weather puts the system into that condition so that the first fresh, green things upon the table taste like a million dollars. Of course, one can go to the corner grocer and get a few wilted, expensive substitutes, but few farmers do, and I don't blame them.

The early vegetables not only taste the best, but if there is a surplus, bring the most money. For this reason, anybody who can possibly do a little fussing in the house or with a cold frame will be repaid handsomely for all the trouble taken.

It is not necessary to have a greenhouse to insure early vegetables, or

den. The boxes may be as shallow as two and a quarter inches, but an inch or two more is better. Be sure that there are holes in bottom for drinking.

Filling the box any old way will not bring the best results. The most successful gardeners fill the boxes loosely and then scrape the earth level with the top with a stick, and then press the soil down with a small piece of board, leaving the top of the soil about one-half inch below the top of the box. A better stand of plants will usually result if the last half-inch of soil put into the box before pressing it down is sand. The seed should be sown in this layer of sand and close to the soil beneath.

Sowing the seeds in these indoor boxes is quite an art. If they are sown too thickly there is great danger of rotting off, and if sown too thin, valuable space is wasted. Make a shallow trench about a quarter of an inch deep crosswise of the box with the finger or



A Hotbed or a Cold Frame is Indispensable in Growing Early Vegetables

otherwise few farmers would ever get them. A hotbed is desirable, but because of the difficulty in getting the proper material for heating the hotbed, and because of the care needed to operate it successfully, it is considered of questionable value to the man with a small garden, to the beginner, or the farmer.

In place of the hotbed the cold frame is a good substitute. The cold frame is merely a box or frame covered with glass, having the south side somewhat lower than the north. It can be inexpensively made by using storm sash. Lettuce and radish can be grown to maturity in it, while it is a very handy device for securing early plants for setting out later.

It has always been my plan to start as many plants indoors as possible. Sometimes I would hurry up matters by buying greenhouse plants, but as a rule results were better by using the hardier cold frame plants. I have also found that if the seed is sown in boxes in the house, then transplanted to the cold frame, and then to the garden, that crops could be secured almost as early as with the hotbed. Of course, all through this article I am speaking in terms of the home garden, because commercial gardeners cannot transfer their preliminary operations to the house.

The man who has once gone into his garden in early March to secure soil for his boxes, cold frame, etc., will be more forehanded the next time, and gather it in fall before the frost comes. However, if you did not collect the soil last fall, get the soil some sunny day and let it thaw indoors. Mix a little sand with it if possible, and also use a thin top layer of sand in the seed box. Before starting the seed box, let the soil warm up and dry until it does not pack in a hard lump when squeezed by hand.

Three or four small boxes will be enough to start all the lettuce, cabbage and tomato plants for the average gar-

dener. A trench marker may be used, of course. The distance between the rows is usually from one and a quarter to two inches.

Immediately after seeding, enough water should be put on the boxes to moisten the soil but not to make it muddy. If the boxes are placed in the sink when they are watered, and the moisture allowed to run off, no damage will be done to furniture and rugs in the house. A pane of glass should be put over the boxes to prevent loss of moisture, and they are then set in a warm place. This cover should be removed as soon as the plants break through the soil.

Do not keep the boxes where it is too warm, because that causes soft and spongy plants. Unless plenty of light is furnished, the plants will be yellow and spindly. Do not water the plants often with little dabs of water, or less frequently with large quantities, but give them just enough so that the soil is moistened through. Do not water again until the surface appears lighter in color. Too frequent watering causes choking of the plants, and too much water drowns them.

The plants cannot remain in these boxes very long, or they will begin to crowd and become long-stemmed. According to Professor J. G. Moore, of the Wisconsin College of Agriculture:

"Four boxes for transplanting, one for tomatoes, peppers and egg plant (if the latter are grown), one for lettuce, one for cabbage and cauliflower, and one for celery, will meet the demands of the average gardener. A box twelve inches square will hold thirty-six plants set two inches by two inches, or sixty-four when planted one and a half inches by one and a half inches.

Plants started indoors often die when set outdoors because they are not "hardened off" properly. Too sudden changes are fatal. Setting the boxes outside for a few minutes daily until transplanting time will prevent much of this trouble.

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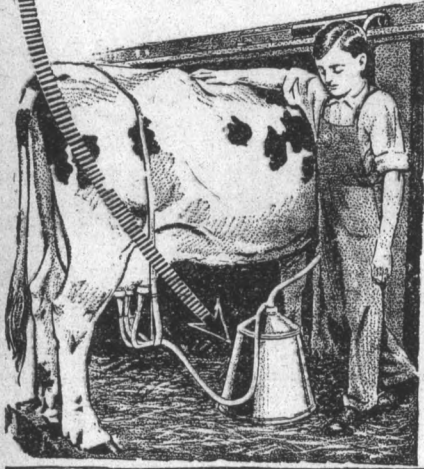
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### REMOVAL OF TREE.

I own forty acres of woodlot on corner. My neighbor notified me that I would have to remove trees and brush from the roadside. I did so, but left some very promising trees near the fence. Can I be compelled to remove same?—A. B. S.

No.—J. R. R.

### TAXES ON PURCHASED PROPERTY.

I bought a farm in 1920. The taxes for 1919 were not paid. Can my deed be held for one year's taxes?—P. H.

A deed cannot be recorded until a certificate has been obtained from the county treasurer showing that all the back taxes have been paid.—J. R. R.

### ADOPTION.

Can a wife without the presence, knowledge, or consent of the husband go to the probate judge and have papers made out adopting a young man nineteen years of age? Is the husband bound by said adoption to harbor and provide for said boy? Does the boy have a legal right to bear the husband's name?—J. M.

A married woman can adopt a child under the statute without her husband's knowledge or consent and has a right to give the child the family name. In fact, there is yet no trademark or copyright in names except for business purposes. Selection of name is a matter of choice. The husband is not bound to harbor and provide for the child, nor does the child have any right to his property if he has not adopted it.—J. R. R.

### EXEMPTION.

A man holds my promissory note for \$100, which is due. I am unable to pay it, and he threatens to get it in some way. What does the law allow me before he can sue and collect? I own no property, only household goods, a small truck and some poultry. Can he attach my wages if I hire out?—C. K.

Household goods are exempt up to \$250. Sixty per cent of a married man's wages are exempt up to \$30, and thirty per cent of a single man's wages up to \$15. All wages are exempt up to \$8.00. The truck is not exempt.—J. R. R.

### VALUE OF BUCKWHEAT MIDDINGS.

Would buckwheat middlings be a good feed for cows during the summer while on grass? Would it be better to add corn meal to the buckwheat middlings? How much should one feed to produce milk at the most profit?—P.

Buckwheat middlings is an excellent feed for dairy cows, either while on pasture or on winter rations. During the flush pasture months, such as May, June and the very first of July usually are, it would probably be well to add cornmeal to the buckwheat middlings, using a mixture of perhaps one-third cornmeal and two-thirds buckwheat middlings. As the pasture dries up later in the season part, or all, of the cornmeal may be eliminated. The amount of grain to be fed on pasture depends upon a number of different factors. Heifers and young cows will require more than mature cows in the same condition. Cows in poor flesh will also naturally require more. The prices for dairy production also determine whether or not grain may be fed profitably. It is safe to say, however, that as a usual thing a Jersey cow giving more than twenty pounds of milk daily, or a Holstein cow giving more than twenty-five pounds daily should be fed grain while on pasture. No marked change in milk flow may

be experienced at first, but cows receiving grain on pasture will hold up better in their milk flow later in the season and effect will be noticeable in the next lactation period. It is also difficult to give a rule for feeding grain on pasture, however, one pound of grain for every four to six pounds of milk may be fed and usually with profit, the amount depending upon the age, condition, time in lactation period of the cow, and market prices of feed and milk.—J. A. W.

### MANAGEMENT OF MARSH LAND.

We have about twenty-five acres of marsh land and would like to put some hay seed or clover with timothy. But it is soft and it is impossible to get in there with the team, in places in the spring of the year. It has two creeks running through. Would it be wise to dig several ditches into it, to drain same, then plant it up and sow oats with clover the same spring?—W. S.

In order to make your marsh land produce profitably, it should be drained. When land is in need of drainage, capital should be expended for this purpose before fertilizers, lime and other improvements are invested in, because these improvements will not be efficient until drainage is secured.

When a piece of land is so poorly drained that it is impossible to cultivate, it is very difficult to get grasses and legumes to produce well.

Blue joint is one of the best grasses for wet soils. The seed is produced in such small quantities, however, that it is impossible to secure it commercially.

One of the best mixtures for marsh land consists of four pounds of timothy and four to six pounds of alsike clover seed per acre.—C. R. M.

### CROPS FOR LOW LAND.

I have a few acres that I failed to get seeded. It overflows in the spring so I do not dare to put fall wheat in. I have sowed oats on it for several years and seeded to June and timothy but do not get a good stand. Part is sandy and part clay. Would it be better to seed with alsike for a catch.—Subscriber.

On land such as you describe, alsike usually does much better than red clover. Either orchard grass or red-top hold much better than timothy. Would suggest a seeding of four pounds of alsike, six pounds of orchard grass and two pounds of red-top per acre, making seeding as early as possible in spring. A light planting of oats or barley, not more than one bushel, will greatly help the seeding as compared with heavier plantings.—J. F. C.

### A BEE QUESTION.

I caught a swarm of bees last July and they seemed to get along all right until this winter. They are in an unused room of the house and one warm day a lot of them got out and they all died around on the floor. Since then there has been a few get out once in a while and they all die. They are in a box instead of a regular hive so we can't keep it absolutely tight. Can you tell me why they die when they get out? There is plenty of honey in the hive.—J. J.

The difficulty experienced is doubtless due to the temperature becoming too high in the room in which the bees were kept. Bees should not be in

a cellar or room where the temperature ever goes above fifty degrees F. When it goes higher than that, the bees become exceedingly restless, crawl out of the hives and become lost.

In order that a bee may return to its hive, the hive must be in the open air where the bee can fly out in front of the hive and see not only the hive, but other surrounding objects. In the case of your correspondent' this condition was not present.

When bees are kept in a room with windows, they are attracted to the light and sometimes thousands of them die on the window ledge, after wearing themselves out in trying to get through the glass.—B. F. K.

### POTATO PLANTING ADVICE.

I would like to know what your advice is in planting potatoes and what time you would plant late potatoes this year?—W. D.

Relative to prospective market conditions it is difficult to forecast far ahead as to the advisability of planting large acreages of potatoes. However, take it over a period of five or ten years the man who plants about the same acreage each year usually comes out well financially, provided he has produced his crop economically.

In order to produce potatoes economically it means that one must get a comparatively big yield per acre. The average yield per acre this year for Michigan was seventy-eight bushels. No doubt this average could have been raised to 125 or 150 if growers had more generally adopted better cultural practices.

The usual planting date for late potatoes in this section of the state is about the middle of June. Last year, due to adverse weather conditions, potatoes that were planted somewhat later than this date, say the latter part of June and the first of July, gave better yields than the earlier planted seed. The main object is to put the potatoes in at such a time that they will be setting during the cooler part of the growing season which is usually the latter part of August and the fore part of September.—H. C. M.

### WILD RICE.

I am thinking of raising some muskrat. I want to plant some wild rice in a three-acre pond if it will grow here. The pond is dry from two to three months in the summer. Is wild rice a noxious weed? Where can I get the seed?—F. W.

Wild rice grows naturally in a great number of Michigan shallow lakes and bays. It usually grows best in water which ranges in depth from one to four feet.

Seed for planting can be secured from Mr. John Baird, State Game Warden, Lansing, Michigan, or it may be purchased from distributors.

The Michigan State Game Department has in the past distributed seed of wild rice to those who are interested in increasing the feeding grounds of game. The seed is packed in balls of clay done up in mosquito netting and shipped in a small keg. These should be dropped overboard from a boat or tossed from the shore where conditions are right for growth.

If the earth in your pond remains moist during the period that the water is out of it, wild rice would carry through the summer successfully. Wild rice is not a noxious weed, but often chokes up channels in small lakes. If the land gets fairly dry it is possible that the common pond lily will give you the best results.—J. F. C.





# Making Horses More Useful

*Some Things Every Good Farmer Should Know.*

By Wilfrid E. Diegel

**I**N biting a young and nervous horse, care should first of all be taken to observe whether his mouth be sore or tender, and if so, the mouthpiece should be covered with leather. In any case, a bit with a large, smooth mouthpiece is far better than the sharp and cruel instruments often seen. When harnessing a horse the bit should be attached to the bridle by the off-side cheek-strap only, and the animal, unless it is tender about the ears, will usually allow the bridle to be quietly adjusted in its proper place. Then taking the hanking bit in the left hand and grasping the near-side cheek-strap with the third and fourth fingers of the right hand, insert the first and second fingers in the mouth which the horse will involuntarily open; the bit can then be deftly brought up into its place and fastened almost before the horse is aware of it. Take plenty of time and use the horse very quietly. When gentling a young horse it is ad-

visable for a week or two to keep a mousing-bit in the mouth while standing the animal in harness, say for an hour and a half in the morning and again in the afternoon.

vis sit still, take his lines, hold them quietly, while you lift up either front foot; give each nail a light tap and a good smart tap on the frog; drop the foot quickly and then tell him to go. In most cases he will go right on about his business, but the driver must keep his lines taut and not pull or jerk him back. This may make some horsemen smile, but a horse has more common sense than most people are willing to give him credit for. The secret of this little trick is simply diversion. With kindness and proper treatment a horse can almost always be made to go.

Another method is as follows: Take a small rope and firmly attach it to the horse's tail. Take a turn on the doubletree or cross-bar, giving slack enough to tighten the traces. If the horse refuses to pull, tighten this rope until the draft comes on the tail. No horse ever refuses to pull by his tail. When the horse starts, the tail-hold may be relaxed until the draft comes



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visable for a week or two to keep a mousing-bit in the mouth while standing the animal in harness, say for an hour and a half in the morning and again in the afternoon.

### Teaching a Colt to Back.

Many experience difficulty in training a colt to back. There should be no difficulty in this if proper methods are followed. The following method is a good one: "After the colt fully understands the legitimate use of the halter in leading is a good time to teach it to back—an important and necessary duty in its after life of usefulness—which is easily accomplished by complying with the natural law again, by pressing the extended finger of one hand between the point of the shoulder and the breast bone and using the other hand at the halter strap simply to keep the colt straight in line, to back in any desired direction. Do not try to force the colt backward by 'yanking' at the halter or bit, but simply press in his sensitive chest cavity with the fingers, and the colt will naturally go backward, provided there is nothing of any obstruction behind it. When this pressure has been made at the front and the colt moved backward (if it is only one step) you should be satisfied and try it again. About the third time this pressure has been made is a good time to associate the word 'back' with the pressure, and you will be surprised to see how soon the colt will comprehend what is wanted, and how willingly the young thing complies with your every wish as soon as it understands what is wanted.

### Starting a Balking Horse.

A remedy which will start a balky horse almost every time is as follows: When a horse balks—no matter how badly he balks or how ugly he is—do not beat him; don't throw sand in his ears; don't use a rope on his forelegs or even burn straw under him. Quietly go and pat him on the head a moment; take a hammer or even pick up a stone in the road; tell the driver to

on the traces again. Many balking horses will refuse to start, and others will start off all right, but if stopped will refuse to pull. The way to treat this form of vice is to pull on the tail rope until the draft comes partially on the tail. Then he will go. The tail draft may then be gradually relaxed until all the draft rests on the traces. Persist in this treatment and a permanent reformation is a sure result.

### Kicking in the Stall.

For the habit of kicking in the stable, it is a good plan to fasten a chain or strong rope across from post to post behind the animal, about three feet from the floor. A horse almost invariably backs up as far as his halter rope will allow before commencing to kick, and if he cannot get back he is very likely to stand up in his place and behave himself. Another plan is to fasten a chain about a foot long to one hind pastern by means of a strap.

### Halter Pulling.

A very good plan to break a horse of halter pulling is to pass the halter rope through the manger ring and bring it back between the fore legs, attaching it to a rope tied around the body. Another plan is to pass a double rope back through rings on a surcingle, and fasten them to a crupper. When either of the above methods is adopted the animal should be urged to pull back which he is not likely to do more than once.

A very good diet to build up a horse is oats, barley, bran and flax. The bulk of the food should consist of oats and bran. It is well to have the oats chopped and mixed with one-quarter their bulk of bran. A horse may receive from four to five quarts of this for the morning and noon meals. In the evening the feed may consist of about three quarts of boiled barley, one quart of boiled flax and a quart of bran seasoned with salt. The hay fed should be of good quality and be given in no larger quantity than is eaten up clean in one hour three times daily.



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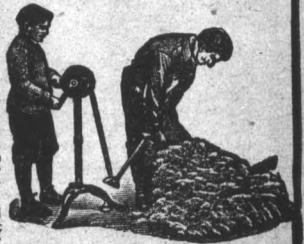
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 Satisfaction or money refunded.  
 60 years in business proof of our responsibility. Write for catalog now.  
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pronounced by U. S. Department Agriculture best keeper of the Pacific Northwest. Keeps common storage until May; cold storage a year. We can still supply limited number mail size trees at special prices for spring planting. Colored illustration of fruit and special information free. Sample apple 10c.

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**Peach, Cherry and Apple Trees**

at Wholesale both 1 yr. and 2 yr. by mail and Express Special prices to Orchardists. Send for 1922 Guarantee Seed and Tree Catalog. Send today. Allen Nursery & Seed House, Geneva, Ohio.

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save money, buy at factory. Write today for low prices.

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 New Springfield, O.

**FROST PROOF CABBAGE PLANTS.** Early Jersey Wakefield, Charleston Wakefield, Succession and Flat Dutch, at \$1.25 per 1,000, express collect. Parcel post paid, 100 at \$5; 500 at \$1.50; 1000 for \$2.

**G. J. & C. Whaley, MARTIN'S POINT P. O. S. C.**

**Concord Grape Vines** 1 yr. \$35 per 1000. All fruit trees and plants at reduced prices. Write for my price list today.

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**Nevis' "Success With Small Fruits"**

Do you know you can obtain more health, pleasure and profit from a garden of strawberries than from any equal amount of land of your place? My beautiful new Catalog greets you with a smile, and tells you something about ourselves and our favorable location where soil and climate combine to produce plants of superior quality.

**WHAT IT TELLS:**

It tells: How to select varieties best adapted to your soil and needs. How to prepare the soil for planting. When to plant. The different systems of small fruit growing. How to plant. How to care for the patch. How to pick and market the fruit so as to obtain the highest prices. How to renew the patch. It is a Fruit Grower's Guide and whether you buy your plants from us or not you will need this helpful book—Nevis' "Success With Small Fruits." Send for your copy to-day. A postal will bring it.

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**Celery City Nurseries**  
 Box 204 Kalamazoo, Mich.

**Nursery-to-you, At Pre-War Prices**

# Repairing Damaged Trees

By P. L. Buttrick

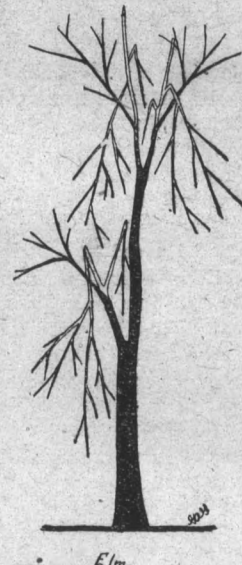
**T**HE sleet storm of February 22, 1922, which swept across the middle of the state of Michigan, did enormous damage to forests, shade trees and orchards. There is no record of an ice storm doing anything like the damage this one has done.

With the woods in the shape they now are the owner may well be discouraged with the prospects, knowing the utter impossibility of repairing the damage to their trees by the same methods as can be used with shade trees. The owner should not lose courage and neglect his woods, since much can be done to minimize the damage and salvage the destroyed trees.

The measure to adopt is to make what the forester calls a damage or salvage cutting. It consists of removing all trees so badly damaged that they cannot recover so as to permit less damaged trees to take their places, and to utilize the wood of the injured trees before it starts to decay. Such a cutting will remove at once all trees broken below the crown. Such trees cannot possibly recover. It should likewise remove trees so bent over that there is no possibility of their straightening up, as well as all trees broken in any fashion so badly that even though they recover they will not make timber.

Such a cutting should be made at once so as to get the injured trees out of the way and permit healthy ones to develop in their place. At the same time as many of the broken branches and tops of the ground should be work-

It is recommended that cities and towns hire an expert to take charge of the work of repairing their trees. The employing of incompetent tree trimmers who do not understand the work



E/m

of reforming the crowns of the trees and protecting them against decay will do more harm than good.

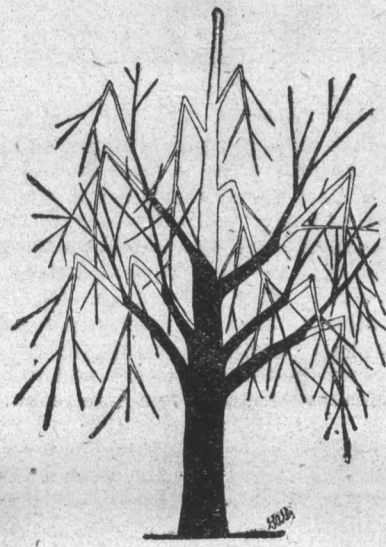
The following rules for repairing injured shade trees are recommended:

1. Prune injured branches back to the nearest sound branch.
2. Don't leave broken stubs sticking out.
3. Make clean saw cuts. Don't trim trees with an axe.
4. Cut broken branches off some distance from crotch and then trim off stub at crotch as closely as possible. This will prevent falling branch from splitting off bark and permit scar to heal over.
5. Trim tree to a symmetrical form.
6. If top is broken out, cut back to nearest good-sized side branch, making slanting cut so that water will not soak into wood through wound.
7. Protect scars from decay by covering them with asphalt or lead paint, as soon as sap stops running. The paint, if placed on the cut when the sap is running, will not stick—spar varnish or shellac would do more than paint to hold in the sap.

8. Where branches are wrenched out by the socket or strips of wood split off below the branches, the rough surface should be smoothed off with a chisel and treated in the same fashion as a branch cut.

9. Split crotches may sometimes be repaired by drawing them together with bolts. They should not be held together with wires drawn about them as this will result in girdling.

For the communities in the storm zone to neglect their trees at this time would be disastrous, since in most of them the trees were just coming to maturity. If neglected now the towns will for the next quarter of a century be practically devoid of beautiful trees.



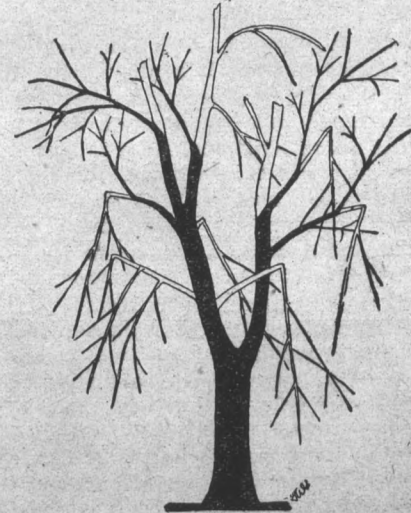
Sugar Maple

ed up into cordwood as possible, both to conserve it and to reduce the fire risk which will be great when the vast amount of debris dries out.

It is probable that many of the injured trees will recover temporarily but will, after a year or two, begin to die out. They should be removed as fast as they die to salvage them, but it would be unwise to assume that all will die and to sell now when prices are at a low ebb.

In the case of maple sugar orchards it is hoped that owners will not tap them this season as the trees are certain to bleed badly as a result of their injuries and the added strain put upon them by tapping may weaken them too much to permit recovery. Owners who feel that they must secure a revenue from their orchards could secure a supply of syrup by tapping the trees which have had their tops broken out and are sure to die. The sap will run in these this season just as if they still had their tops.

From eighty to ninety per cent of the shade trees in the cities and towns can be salvaged if prompt and proper treatment is given them. If they are not properly treated many of them will die, or if they remain alive will be sickly and misshapened.



Silver Maple



A PORTABLE LIME SHELTER.

A GREAT many farmers have found the use of lime valuable in crop production. On many farms the necessity for the use of lime is so general that some sort of a systematic scheme for applying it is almost necessary. I recently found a farmer who had apparently given this matter some thought and had succeeded in working out a way of handling the job efficiently.

First he believes in going at the work systematically. Instead of liming a spot here and another one there, he takes one field a year and gives it a complete application. If the lime is hauled and put on during the busy season it consumes so much valuable time that it is very often neglected. Even distributing lime that has been stored in the barn on a distant field is costly at this busy time. This farmer gets around this by having a portable lime shelter which consists simply of a house on runners which he can haul from field to field. This house is placed in the field that is to be limed the next season and during the winter or at some other slack time it is filled with a carload of lime. When the time for liming comes the lime is in good condition for spreading and the time required for distributing is greatly shortened.

This house may be built with a hinged roof to facilitate filling and unfilling. As a guide to determine the size of house to build, a ton of finely ground limestone occupies twenty cubic feet of space.—O. E. ROBEY.



Ditching by the Use of Explosives.

WHEAT ACREAGE INCREASES IN HURON COUNTY.

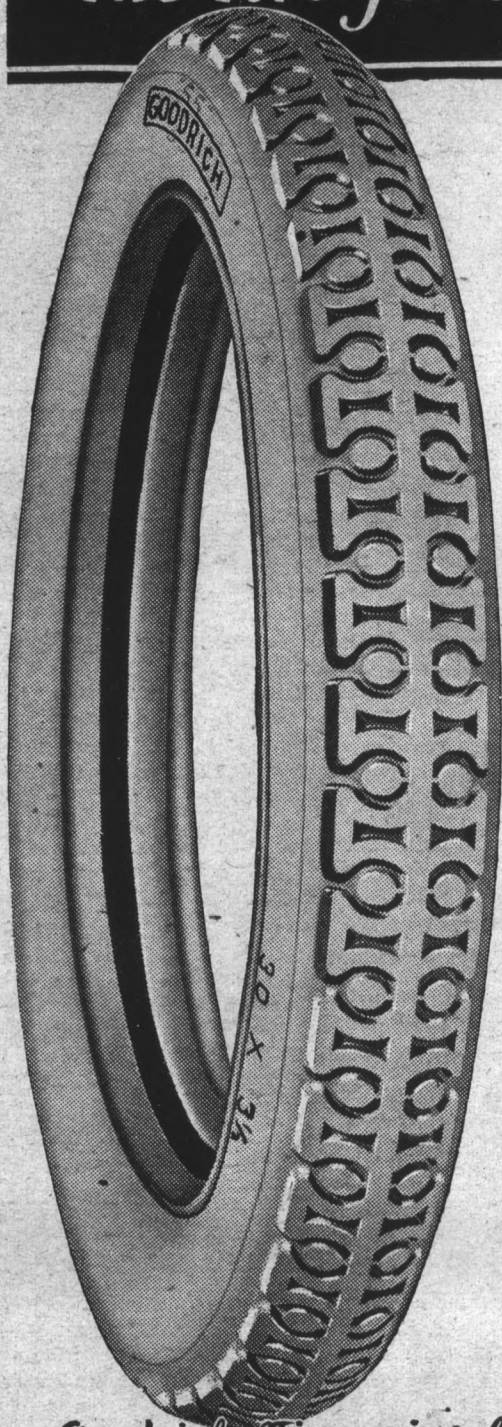
ALTHOUGH the wheat acreage in Michigan is only slightly above the ten-year average, there is a twenty-five per cent increase in planting in the north half of Huron county, says H. D. Horton, of Kinde. While wheat has been uncovered nearly all winter there has been very little alternate freezing and thawing and it is in good condition. The critical time is at hand, however, as two or three weeks of changeable weather with three or four days of cold winds late in the spring, would do great damage.

Mr. Horton says there will be a big increase in acreage of beans, even though sugar beets are planted this spring in usual acreage. Many who did not plant beans last year are preparing to grow them this season. Potato prices are not likely to go any higher, though the supply in farmers' hands in Huron county is pretty well cleaned up. Higher prices have prevailed here than in the potato belt and the present price—eighty-five cents, is regarded as good.

While this section of the Thumb is ordinarily not a great producer of hay, Huron county farmers got into it during the war on account of high prices and more hay than usual is now being shipped. Hay prices are low and many farmers are holding a two-years crop.—J. C. M.

The Newest Goodrich Tire

Goodrich "55"  
The Tire for Small Cars



30x3½ clincher fabric

\$10.90

ALSO MADE IN 30x3

This is the latest addition to the Goodrich list of tires. It completes the line. It enables your dealer to give you full service under the Goodrich name and trademark.

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\$10.90 will buy the Goodrich "55"—the new tire for the popular light cars. The splendid construction is made better yet by the thick anti-skid tread of scientific safety design, made of specially toughened rubber.

A Goodrich for \$10.90! That means great value. Your dealer is ready to supply you.

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Akron, Ohio

HOME OF THE SILVERTOWN CORD

— Goodrich Tires give longest service with Goodrich Tubes

Household chores made easier

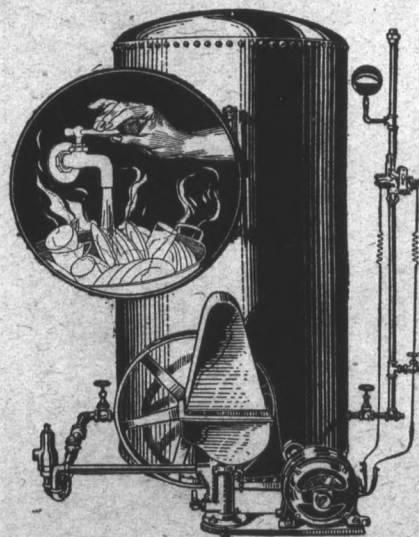
With an adequate supply of running water, under pressure, almost all of the household chores are more easily performed. For the farm or suburban home housewife there is no longer any need for pumping and carrying water by hand from a well in the yard.

HOOSIER Water Service

will deliver water for use in your kitchen, bathroom and laundry. One of these systems, after installation, requires scarcely any attention to assure an abundant water supply, sanitary and under pressure. Any kind of power may be used. Water pumped from any well. Easily installed.

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Men's and boys' sturdy work shoes. Tan color. Solid leather oak soles. Smooth grain leather inner sole. All seams stitched with triple wax thread. Wide widths. Men's No. MF9490, sizes 6 to 12 ..... **\$2.85**  
Boys' No. MF8810, sizes 1 to 6, at ..... **\$2.45**  
Little gent's No. MF8870, sizes 9 to 13 1/2 ..... **\$1.95**  
and postage on arrival.



Men's and boys' good tan scout shoes. Strong leather soles. Grain leather uppers. A light but durable work shoe for men and boys. Order men's by No. MF9660, sizes 6 to 11 ..... **\$2.49**  
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Men's and boys' tan and black English sturdy shoes for general wear. Leather soles. Strong leather uppers. Comfortable last. Order men's black gun metal by No. MF20, sizes 6 to 10 ..... **2.49**  
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Be sure state color.



Girls' black soft gun metal lace and button. Sturdy shoes for girls. Comfortable, correct fitting shape. Order lace by No. MF3680, sizes 8 1/2 to 2 ..... **\$1.95**  
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Women's black, No. MF6750, sizes 3 to 8 ..... **\$2.49**  
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Women's soft black gun metal and tan side leather. Extension oak soles. Leather insoles. Strong serviceable shoes for general wear. Order tan color, sizes 8 1/2 to 2 by No. MF4870 ..... **\$1.98**  
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Black or tan color. Wide toe. Tan color. Medium toe. Black. Wide toe.

Send us a trial order. We stand all the expense if you are not satisfied. Send no money—NOW—pay low price and postage on arrival.

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Send for our new Spring and Summer catalog. IT'S FREE.

# Farm Organization News

## CERTIFIED SEED BUSINESS GROWS.

MICHIGAN farmers in two years have increased their consumption of certified alfalfa seed to the point where today the daily certified alfalfa seed shipments of the Michigan State Farm Bureau amount to as much as the annual consumption of such seed two years ago, says J. W. Nicolson, manager of the bureau's seed department.

Two years ago, said Mr. Nicolson, Michigan made her first venture in certified alfalfa seed when the Michigan Crop Improvement Association introduced eight thousand pounds of North Dakota certified Grimm alfalfa into the state. Today Idaho, Montana, North Dakota and other northwestern states' certified, hardy alfalfa seed is displacing common alfalfa by the cartloads in Michigan and is making possible big acreages of highest grade alfalfa in counties where scarcely any alfalfa was grown two years ago. The state has always been an importer of alfalfa seed because Michigan climatic conditions have not been favorable to alfalfa seed production.

The main difficulty with importing seed, the farm bureau holds, is the fact that in most instances it is hard to make sure that outside seed is adapted, true to name, pure and virile. Certification of seed makes this assurance possible by placing upon the seed producers the task of high standards of purity, freedom from disease and insect injury and making positive the origin of the seed, all under a rigid system of inspection.

During the past two weeks farmers' cooperative associations have been buying western-grown certified Grimm alfalfa seed at the average rate of 3,700 pounds daily, said Mr. Nicolson. This spring the farm bureau is moving an equal volume of common alfalfa of known northern origin and adaption to Michigan farmers, he added.

## PRESENT ADMINISTRATION PRO-FARMER.

MASTER LOWELL, of the National Grange, referred to the present administration as pro-farmer, having effected results that are proving beneficial to food producers. He believed the agricultural conference called by President Harding had opened the way for improvements in the economic situation, as a result of which action on the bill was hastened, giving farmers' cooperative marketing associations exemption from the provisions of the anti-trust law, enabling these organizations to do business on a safe basis. As their growth continues the unnecessary jobber will be more and more excluded from agricultural dealings, and his profits will be split between the farmer and the consumer. It was Mr. Lowell's opinion that Secretary Wallace is efficiently filling his position, and that the department of agriculture is doing everything within its power to help the farmers.

The stabilization plan of the Farmers' National Stabilization Committee, according to President Charles S. Barrett, of the National Farmers' Union, who is promoting this plan, provides for exactly what was done and what is now done in a manner adapted to peace needs in Australia. Under it the American wheat producer, cotton, corn and wool producer would not be required to dispose of his commodities at a price below a certain minimum, but if market conditions should justify

a higher level he would participate in the greater advantage given.

## LENAWEE POMONA PASSES RESOLUTIONS.

THE following resolutions were recently passed by unanimous vote of Lenawee County Pomona Grange in session at Fruit Ridge:

Whereas, Rumor is current that a strike of coal mine workers and railroad employes is to be called for some time in April or early spring, thereby practically tying up every industry, and especially paralyzing agriculture, which industry is already hedged about by almost unsurmountable difficulties.

A railroad strike, now, means farmers' products remaining unsold and spoiling in his barns. And that may mean famine, suffering and perhaps death in the cities. It means farm supplies piled up in railroad yards while fields wait for seeds, fertilizer and machinery necessary to make them productive.

A strike in April at planting time wrecks a year's crop production plans.

A coal strike comes less directly home to our people than to the people living in the cities, but an obligation to help makes it clear that the interest of all, and not of a class or group is paramount in this republic. It is none the less pressing because our interest in this is secondary and financial, instead of primary and vital.

If coal production stops people will suffer, and the spectacle of a comparatively small group of men and interests seizing the weapon of human misery and human suffering in order to impose their will, and their refusal to deal fairly with one another, and make others pay the penalty, is preposterous in this nation and time.

No individual or body of men is justified in creating a condition that will stop the progress of our recovery from the terrible scourge of war, which we have just passed through.

We are doing our part and it is not unfair for us to demand that both capital and labor do theirs. Whatever differences may exist between them must be adjusted without stopping the wheels of commerce.

Therefore be it Resolved, that we implore the organizations of labor and of capital, and the proper officials of our government, to use every means at their command to reach an amicable adjustment of the questions involved and we urge all loyal citizens everywhere to give this all important question serious consideration and do all in their power to create a powerful public sentiment demanding the settlement of differences between employer and employe by arbitration and governmental regulation rather than by employing the unjust, uneconomical and destructive methods of the strike.

Whereas, the state administrative board by authorizing the issue and sale of \$10,000,000 of highway bonds without due hearing in the face of the expressed and well known opposition of the State Grange, the State Farm Bureau and other kindred farm organizations, which collectively represent a considerable part of the taxpayers and people of the state, has thereby defiantly flouted and ignored the constitutional right of the people to be heard by petition and by such act has set itself up as a power absolute over and above the people.

Therefore Resolved, that by such action the state administrative board should be and is hereby censured and its action is hereby condemned as being autocratic and monarchial in tendency, and opposed to the spirit and intent of American ideals in government.

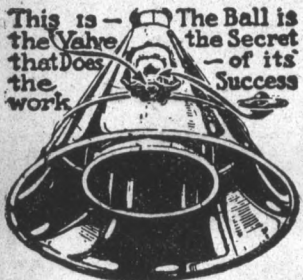
Resolved, that we are opposed to such concentration of authority and power as can make possible and permit overt acts by officials regarding questions of public policy and procedure, in defiance of the right of hearing by petition.

Resolved, that we commend the acts of Auditor-General Fuller and Superintendent of Public Instruction Johnson for refusing to join their associates on the board in authorizing the issue and sale of the \$10,000,000 in highway bonds without hearing, when it was known that a strong protest by petition was pending.

# \$5.00 Solid Copper Vacuum Washer \$2.00

WILL LAST A LIFETIME!  
THIS OFFER WON'T BE REPEATED—GET ONE TODAY.

If you want the very best that can be made, here it is. We have sold over 300,000 tin washers and they have given perfect satisfaction, but, of course, the solid copper is much better. We are just selling a few at \$2 to introduce them, after which the price will go back to \$5.00. Don't miss this wonderful chance. Tell your friends about it. SEND TODAY.



We absolutely guarantee the Duplex will wash a tubful of anything washable in three minutes. Blankets, lace, socks, cuffs, silks, underwear, curtains, towels, handkerchiefs, ANYTHING. Hands do not come in contact with the water, therefore it can be scalding hot. So easy to operate that a child can do it. Will not wear out your clothes. The Duplex forces the boiling suds through the clothes, NOT the clothes through the suds. Will save your back and many hours of needless toil. An ordinary weekly wash can be washed, blueed and on the line in one hour. Your money back without question if it will not do all we claim and more. Don't miss this special offer. Send only \$2.00 and this ad TODAY and we will send you the solid copper Duplex Vacuum Washer, regular price \$5.00, by parcel post, to any address.  
DUPLEX MFG. CO., Dept. C 50, DETROIT, MICH.

We Pay \$200 Monthly Salary--Furnish rig and expenses to introduce our guaranteed poultry and stock powders. BIGLER COMPANY, X683, Springfield, Ill.

"Play Safe" Buy your certified Grimm, Oosack and So. Dak. No. 12, Alfalfa Seed direct. The Western So. Dak. Alfalfa Seed Growers' Exchange, Rapid City, So. Dak.

Strawberry & Raspberry Plants Best varieties of Spring and Everbearing plants. Write for price list. Geo. B. OWENS, Box 353, Leslie, Mich.

Strawberry Plants—Grape Vines Berry plants, small fruits, tested garden seeds. RANSOM NURSERY, Box 2, Geneva, Ohio.

CHOICE STRAWBERRY PLANTS. \$3.75 Per 1,000. All standard varieties \$3.75. Guaranteed first class or money refunded. Catalog. MRS. FILENA WOOLF, Allegan, Mich.

For Sale --- Pure Wolverine Seed Oats 80c per bu. Fairview Farm, R. 4, Jackson, Mich.

Senator Dunlap Strawberry Plants \$3.50 thousand, State inspected. E. S. SWANSON, R. 2, Paw Paw, Mich.

Strawberry Plants \$3.00 per M. Black Raspberry plants \$10. W. M. YARIGER, St. Johns, Mich.

FOR SALE Best 8, 10 frame Standard Hives Prices right. WM. C. SCHAFER, R. 2, Wyandotte, Mich.

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

HOMESPUN SMOKING or chewing tobacco, 5 lbs. \$1.25; 15 lb. \$3. Send no money, pay when received. FARMERS' ASSOCIATION, Jonesboro, Ark.

## FARM HELP

Wanted Man & Wife To take charge of farm, Baldwin, Mich. Located 75 miles north of Grand Rapids. Will furnish 2 hogs, Butter and Milk and all the garden stuff he can raise for himself. State nationality and wages expected, must be a worker and furnish references, also state how many there are in family. Address H. W. LEVERENTZ, 517 Mather St., Chicago, Ill.

**HUBAM**  
Now on sale at your local coop. at farmers' prices.  
MICHIGAN BRAND SEEDS  
Yow!  
MICHIGAN STATE FARM BUREAU BOX 37 SEED DEPARTMENT BOX 37 LANSING, MICHIGAN

WOLVERINE SEED OATS Heavy yielding variety, clean and bright, strong in test. Offer 2000 bu. at any part at 65c per bu., sacks extra. F. O. B. Vassar, Michigan. Subject to prior sale. Samples mailed on request. Clarence Heinlein, Vassar, Mich.



WILL GIVE \$6.00 FOR BEETS.

THE Menominee River Sugar Company is offering contracts for sugar beets at six dollars per ton, this year, says the Herald-Leader of Menominee.—It wants to purchase 75,000 tons of beets this season. This is the only factory in the upper peninsula, but only one-ninth of its consumption of beets is Menominee county-grown. Most of the product is grown in northern Wisconsin.

CONSUMERS WANT A CLEAN AND WHOLESOME SUPPLY OF MILK.

PROTESTING against the recent drop in the price of milk sold by farmers in Marquette, Mr. L. R. Walker, county agricultural agent, calls attention to the need of a good and abundant milk supply for the city, and that the depression in the price is discouraging farmers who have engaged in the dairy business.

The cut did not come as a result of a demand upon the part of consumers but because of the competition of the small, irregular producers with whom milk-selling is an avocation. Mr. Walk-



Unusually Good Prices Are Being Paid at Pure-bred Auction Sales by Michigan Breeders and Farmers for Bred Sows this Spring.

er quotes figures to show that, at five cents a quart, the dairy farmer, at the present cost of production, is likely to pocket a loss at the end of the month, or at best, make only a small profit, and he cannot continue at the business under such conditions.

Marquette has at present an excellent milk supply, with inspection of dairies and their product through the city's department of health. There are seventy-two licensed distributors of milk in the city. The main interest of the consumers, as Mr. Walker points out, is in not getting his milk for a cent less per quart but in having an abundant supply of pure, wholesome milk. He is undoubtedly right in this opinion.

ALFALFA GIVES EXCELLENT CROP.

I SEE in a recent issue that Mr. Pezet, of St. Clair county, hulled a fine lot of alfalfa seed from his farm. I feel that I have cause to do a little boasting along this line. I have eleven and one-half acres from which I took off twenty-seven loads of hay from the first cutting. I left the second crop for seed. There were thirteen and a half loads of straw which when hulled yielded me nineteen bushels of fine seed.

I also cut from another small lot of one and one-fourth acres five loads in three cuttings the first year. Last spring I seeded down five acres and secured a fine catch. By fall it was up to my knees and all blossomed out. Had it not been so wet, and had I not had the labor of getting up the seed mentioned above, I should have cut this new seeding and I feel sure that I would have secured a good load to the acre from it. I have used home-grown seed and I feel that it is worthy of the consideration of the man who is contemplating putting out a field to this crop.—E. D. MOORE, Sanilac Co.

*Problem in Subtraction.*  
*Find how much a farmer really pays for a stripped Titan tractor, formerly sold at \$900 but now sold at a reduction of \$200 including complete equipment worth \$130, and a plow worth at least \$175, free.*

Former Titan price	\$900
Amount of reduction	200
Value of 3-bottom plow given free	175
Value of necessary equipment included in regular price	525
	<hr/>
	130
	<hr/>
	\$395

*Answer*  
*A farmer actually pays \$395 for a stripped Titan. Remember—the Titan is a 3 plow tractor*

THE VILLAGE SCHOOLMASTER

The Above Answer Does Not Tell the Whole Titan Story

THE big point about the Titan is that it is a 3-plow tractor. Figure out for yourself the cost per plow bottom; the cost of labor per plow bottom; the time saved in getting your work done. The great reserve power of the Titan means money saved the year round. Consider the value of deeper plowing. Make use of Titan efficiency at belt work.

The Titan is a practical heavy-duty farm power plant with a durable slow-speed motor. The first Titan tractors are seven years old and they are still in good running order.

Study the facts from all angles. Make all possible comparisons. And remember that the Free Plow Offer ends May 1. See the McCormick-Deering Dealer NOW!

INTERNATIONAL HARVESTER COMPANY  
 CHICAGO OF AMERICA U.S.A.

**GOOD NEWS**

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**FREE BROWN'S CUT-PRICE CATALOG**

Jim Brown's big new 88-page Bargain Book has Good News for you! Prices are now lower than ever! You can save big money on fence, gates, posts, roofing and paint. Wonderful bargains you have been waiting for.

**Direct from factory**  
 You save money right from the start. Jim Brown ships Direct from Factory, and Pays All the Freight. His double galvanized fence lasts years longer; saves you more money. 600,000 customers say so!

**NOW** is the time to buy your fence, gates, posts, roofing and paint. Jim Brown's new prices are the lowest ever. Catalog and sample of fence sent to you free. Write postal today.

Jim Brown, Pres.  
 The Brown Fence & Wire Co., Dept. C493, Cleveland, O.

**Cyclone Lawn Fence**

Cyclone Fence around your home indicates a prosperous farm. Causes passers-by to admire your property. Increases property values.

Our fence proposition will interest you. Get our pre-war prices and 1922 catalog. Tell us quantity and style of fence wanted. We will state exact cost of fence delivered to your station. Write Dept. F. 200 today.

**CYCLONE FENCE COMPANY WAUKEGAN ILLINOIS**

**FENCING at REDUCED PRICES**

**Direct from Our Factory to You**

We are manufacturers of twenty years' standing, not mail order jobbers. We make all kinds of Farm Fencing, Poultry Fencing, Ornamental Fencing and Steel Posts, and sell direct to you at prices that defy competition. Buy a guaranteed product direct and save money! Send for our booklet 75M31A.

**We Pay the Freight.**

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 Apply THE JENNINGS FARMS, Bailey, Mich.

**KITSELMAN FENCE**

Get It From the Factory Direct

**PRICES 'WAY DOWN**  
 We've knocked the bottom out of high cost of fence building. We Pay the Freight and save you money. Here's a man that Saved 38 per cent

Mr. R. D. Dillard, Milton, Okla., writes: "I found all the Fence as good or better than I expected. I saved \$28.65 on my \$75.00 order."

You will never know how much you can save thru our **DIRECT FROM FACTORY TO FARM** selling plan until you get our free catalog. Write today **KITSELMAN BROS. Dept. 278 MUNCIE, IND.**

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Choice quality and the practical varieties. Enrich your soils while replenishing your pocketbook. Our instructive circular tells how to do it.

**FOUTS BROS., Rt. M., Camden, Ind.**

**Grimm Alfalfa Seed, Genuine,**  
 from old Montana fields. Hardy, scarified, tested seed. \$44.75 per 100 lbs delivered your station. Direct from growers. Valter Christensen, Box C, Minot, No. Dak.

**HUBAM** Will close out Hubam at following prices, postpaid: 50 lb. or more, 60c per lb.; less amounts, 70c per lb. Scarified and ready to sow. Inoculator for alfalfa and sweet clover, 55c for 1/2-bu. size; \$1 for bu. size, postpaid. E. E. Basil, Latty, O.

**OATS**—"Burt's Heavyweight" Test 38 lbs. per bu. Also Early SEED CORN. Get our low price, samples and catalogue.

**THEO. BURT & SONS, Melrose, Ohio**

**25 Honeysweet Raspberry Plants \$1.00**  
 Catalog of Strawberries, Small Fruits, Hardy Shrubs etc., free. **GEO. H. SCHENCK, Elsie, Mich.**

**DOGS**  
**Trained American** Fox Hounds, Rabbit and Skunk dogs all ages. Send stamp. **W. E. LECKY, Holmesville, Ohio**

Please Mention The Michigan Farmer When Writing to Advertisers





## New Price

# \$295

f. o. b. Factory

## Standard Walking Type Now Sells For Less



Standard Walking Type Utilitor  
with Plow



Standard Walking Type Utilitor  
Equipped with 84-inch Mowers



New Riding Type, Model 501-A  
\$340 f. o. b. Factory

**YOU CAN** now own one of these handy, money-making, time-saving machines for less money. The Utilitor has proved its ability on hundreds of farms to do better, faster and less expensive work than animal power.

On the belt it has no equal for its size. It moves from job to job under its own power.

All hitches have been simplified and perfected.

We are also offering the **NEW RIDING TYPE** Utilitor. It steers from a comfortable seat by means of a tiller control. Most of the operations are watched from the driving position. The New Riding Type sells for \$340 f. o. b. factory. Ask for Model 501-A.

With increased discount and reduced prices the Utilitor is more attractive than ever from the dealer's standpoint.

Complete description of all models on request. Please address Department 603.

**MIDWEST ENGINE COMPANY, Indianapolis, U.S.A.**

## Be Sure You are Right

*And Then Proceed with the Tile Drain*

**T**HE ideal system of tile-drainage is one that combines economy in construction, and efficiency in such a way that the benefits derived from it represent a maximum return on the money invested in it. In drawing up a plan for such a system, all of the many factors that influence it, must be given due consideration.

No part of the investment in a tile-drainage system will yield bigger returns than the time and money invested in a careful study of these factors. No two farms present the same drainage problem in every detail. What may be an economical, efficient plan of drainage for Smith's farm, may be an extravagant, inefficient plan for Brown's farm which adjoins it. Guesswork has no place in the planning of a tile-drainage system. Unless a farmer is qualified through training and experience to do this work, he should by all means engage the services of a competent drainage engineer.

The importance of designing a plan of drainage that will serve the drainage requirements of the entire farm, can hardly be overestimated from the viewpoint of economy. No wideawake manufacturer who contemplates the building of a factory, will tell his contractor to build its foundation before he has determined the maximum number of stories it will ever be called upon to support. Similarly, not a foot of main-drain should be installed in any farm unless the maximum load it will ever be called upon to carry, has been determined by a careful study of the farm's drainage requirements. Piecemeal construction of a drainage system, without following a definite plan, is a wasteful practice.

The first factor to be considered in the design of a system of underdrainage is the outlet. The economy of securing a permanent outlet that will be large and deep enough to answer the requirements of depth and grade of all the drains it serves, is quite apparent. Where available, two outlets can sometimes be economically used. Frequently a considerable amount of main drain can be dispensed with by running the lateral drains directly into an open ditch. This practice is not recommended, however, unless the cost of a main drain is excessive. If there is no outlet near the farm, it may be possible to secure one by crossing a neighbor's farm. In this case, the two neighbors should cooperate and plan a main-drain of such size and so located that the drainage requirements of both farms will be met. Should none but a poor outlet of insufficient depth and size be available, the planning of a drainage system should be postponed until an adequate outlet can be obtained.

The nature of the soil and subsoil is an influential factor in the design of an adequate system of drainage, and should be carefully studied. This factor determines the depth and frequency of drains, and the minimum grade to which they can be safely laid. Should the subsoil be so compact that water cannot pass through it, a study of it will reveal that fact, and prevent the waste of time and money involved in trying to drain it.

Another factor to be considered in this connection is the kind of crops to be grown on the farm. Truck crops will, because of their greater value, warrant a closer spacing of laterals and a greater resultant investment than hay and grain crops. It is quite conceivable that an investment in drainage of \$75 per acre on land devoted to the former may yield bigger returns than one of \$40 per acre on land devoted to the latter.

The direction of the surface and underground water flow, and the slope of

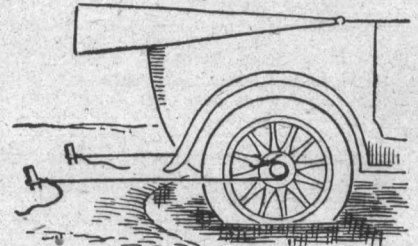
the ground are the factors that determine the location of the drains. Lateral drains must be laid, whenever possible, across the line of surface and underground water-flow, in order to prevent seepage between them and to a large extent, surface washing of the soil. A few long laterals provide more economical drainage than many short ones, because of a reduction in the amount of double drainage in the area adjacent to the main.

The efficiency of a farm drainage system is frequently impaired because tile of inadequate size are used in the main. This is false economy, because the loss of crops due to an excess of surface water may, in one season, more than equal the saving thus affected.

The economical success or failure of any system of tile-drainage will depend largely upon the degree in which the factors considered above have influenced its design.—W. VAN HAITSMA.

### A HELP TO AUTOISTS.

**W**HILE riding one day with a neighbor in his car we were unfortunate enough to run into a mud hole. The rear wheels, even with the chains on, absolutely refused to take hold, either going ahead or back. It seemed to me at first that we were in to stay; but I found that my friend was prepared for just such emergency. He produced from the tool box two pieces of trunk rope about ten feet



long, two wooden stakes about eighteen inches long and a three-pound sledge. I wondered just what was "coming off," but I soon learned. He drove a stake behind each rear wheel where the ground was solid. A rope was then tied to each stake, close to the ground, run under the hub and tied to a spoke, as the cut shows. My friend started his engine, threw it into reverse and the car easily backed itself out of the mud hole.

It is worth any autoist's while, especially when traveling on country roads, to add these inexpensive articles to his equipment.—V. A. GALLIHER.

### POOR ROAD WORK.

A state road was let, bid in, and sold. It was accepted and the contractor received over a thousand dollars over his bid. In one year a half is all cut up, needing a re-coating of gravel. Last year another mile was sold to the same contractor. It is not all accepted, but the gravel thereon is more sand than anything else. The culverts are defective. The contractor has overdrawn his bid several hundred dollars. Must we taxpayers stand for such work? What steps must we take to stop it?—R. W. G.

An injunction might be obtained to prevent the acceptance of the contract by proving fraud or collusion between the contractor and the highway commissioner, or a better highway commissioner might be elected.—J. R. R.

Ronald Morgan has thought up a new form of Christianity. He has a car that is bound in Morocco and rides like a canoe. He and Mrs. Morgan take old ladies riding whose husbands died before autos were invented. The old ladies see things they had missed since the Sunday School picnic back in 1892. Folks say Ronald gets as much satisfaction out of it as in giving money to all kinds of things.

## STRAWBERRY PLANTS

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


A. R. WESTON & CO., R. F. D. 6, Bridgman, Mich.

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Because 32 years' experience gives us the "know how," Whitten plants always grow and produce large, luscious berries all season. Exceptionally heavy-rooted, healthy plants guaranteed. Learn about "Eaton—The Strawberry Supreme" and "Gollins—The King of the Canes." Our catalogue, illustrated in colors, gives full details. Also, we offer the best in Raspberries, Blackberries, Dewberries, Grape Vines, etc. Send for free 1922 catalogue TODAY.

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Grown the Kellogg Way  
**Yield BIG Profits**

Our Free Book tells how. Written by the Strawberry King. Gives his secrets for growing the Big Crops of Fancy Strawberries that won him fame and fortune. Worth its weight in gold. Costs nothing—it's FREE.

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Box 371 Three Rivers, Mich.



### Home of the Everbearers

**Prices Down**

Have you found a better than Progressive? Come and see. What about Howard No. 17? 30th Annual Catalog.

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## Strawberry Plants

\$3.50 Per Thousand. Our strong, healthy, tremendous bearing plants guarantee big crops of luscious berries. Best varieties for all kinds of soils. Full line of Raspberries, Blackberries, Currants and Asparagus. Large stock of extra fine Grape plants. GREATLY REDUCED PRICES. Our customers are making up to \$1200 per acre from small fruits. New color catalog free. Write today.

BRIDGMAN NURSERY CO., Box 22, BRIDGMAN, MICH.

## 200 Strawberry Plants \$2

100 Everbearers—100 Senator Dunlop both postpaid anywhere at proper planting time. Send Now. We have 50 other varieties of strawberries; also small fruits, shrubs, trees, evergreens, etc. Free Catalog of everything to plant. Our Reduced Prices will pay you to answer this adv. Write today to The Allegan Nursery, Box 46 Allegan, Mich.

# Better Fertilizers

The correct proportioning and curing of the different raw materials which carry ammonia and other plant foods is of more importance than the average user realizes.

For the last fifteen years we have been carrying on experiments to help us in developing Fertilizers for the different crops and soils.

In making up Darling's brands containing ammonia, we use animal tankage as a base. Although animal tankage costs more, we use it because years of actual field tests show that Animal Base Fertilizers give better results during the entire growth of the plant and show larger yields than chemical fertilizers.

The manufacture of Acid Phosphate has received a lot of study, with the result that we have installed very expensive machinery. The Acid Phosphate made with this equipment has a higher availability, is much drier and runs lower in free Sulphuric Acid. This system was worked out successfully in the large Fertilizer consuming state of North Carolina, and our plant is the first and only plant of this kind in the Middle West.

We have never made an effort to sell the cheapest Fertilizer. Our effort has always been to manufacture Better Fertilizers.

Write for our Booklet and Prices. Our Agents proposition will interest you.

## DARLING & COMPANY

4187 S. Ashland Ave., Chicago, Illinois

### STRAWBERRY PLANTS

and a full line of Raspberry, Blackberry, Grape and other bush fruit, Asparagus, Rhubarb, etc. Send for Free Catalog. J. N. Rokely & Son, R. 6, Bridgman, Mich.



## Francisco Farm Notes

By P. P. Pope

A GOOD-NATURED Irish neighbor boy dropped in a few days ago and says, "Me and Pa went to town Saturday and got me a hundred marbles." "Spring is coming," says I, "when the boys gather out on the sunny side of the house and begin to shoot marbles." It is a sure sign. The sun warms one deliciously, but the winds are still raw. Soon they will moderate, all nature will take up the spirit of the boys, and almost before we realize it we will discover that the trees also begin to shoot, the flowers have



their pistils, and the bull rush is out. Sounds dangerous doesn't it? Fear not, however, they are all perfectly harmless, only celebrating the fact that spring is here and rejoicing in it like the rest of us. For the piping of the robin, there is a sort of involuntary expectancy everywhere. Reports are beginning to come in announcing his arrival, and we find ourselves constantly on the alert for his cheery call. How eagerly do we welcome those round, joyful notes with their friendly admonition to Cheer Up! Cheer Up! Coming as he does, one of the earliest birds of spring when the chill of winter is still in the air, methinks there is no more fitting songster the whole year through. All the world knows we need his simple advice this spring, and he is wel-

fresh and green. I stood up straight, took a long deep breath, and felt better. We, up in the territory of the big ice storm, have been entertaining grave doubts and fears, for the welfare of the winter plants, the wheat, the rye, the clover, the alfalfa. I went out over the wheat field. Made tracks in the mud, big ones, three inches deep, but I wanted to know, and Presto! It was alive! Dead as it looked on the surface, the heart and the roots were sound. It needs only a chance for an early growth and there will be bread for next year and money to pay the bills. I stood up straight, took another long deep breath and felt better. If you had been near enough and could have understood English you would have heard a remark quite like that of the victorious English general after the battle of Quebec, "The Lord be praised, I die happy."

Down at the near end of the next field stands the remnant of last year's stack of bean pods. The wind blew chill from the north, but the sun shone down invitingly on the dry straw of the south side. I accepted the invitation, and if that isn't another sure sign of spring, then I'm no prophet. How delightfully comfortable the warm rays of the sun in the early spring. Especially with a strawstack at one's back, and nothing to disturb his conscience. I "wallowed" there for half an hour, not caring to think much, not caring to do much, not caring to move, but just satisfied to exist in comfort. You know, now don't deny it. You have all been there. At length I arose, stood up straight, took a long deep



Mr. Pope Finds the Tandem Hitch Practical for Many Kinds of Farm Work.

come to well nigh burst his little throat, in his effort to break the spell of this old winter and its accompanying depressions.

I awakened the other morning with a dull headache and a general all-round feeling similar to that of an apple well advanced in the stage of decay. Breakfast didn't taste good, work didn't appeal, so I picked up an axe and started to chop wood. I trimmed up a few limbs that the ice storm had broken from the apple trees, and then remembered that that axe hadn't been ground all winter, but had been used for splitting wood, and our wood house has a cement floor. So I shouldered the axe, started for the grindstone, and bravely tackled the job, but, like the Irishman, there were two things about farming that I didn't take to that morning, "one was turning the grindstone and the other was work." I deserted both the axe and grindstone and wandered down across the meadow, that self-same meadow that we have been waiting for winter to decide whether it should stand another year or not. It is too early to tell definitely what the prospects will be, but it looks encouraging. And the alfalfa, it had not heaved a bit, neither had it been smothered, and down near the crown underneath the brown and frozen top growth, the little shoots were starting

breath and felt better. A few rods farther, past the end of the cornfield, and on over the saturated pasture sods, I came to the little woodlot that once was tall timber, regretting as I always do, that more of that tall timber does not still stand. I "spotted" a few young trees for transplanting to the home grounds when the frost goes out. Over on the south side at the roots of a favorite maple I came across another very inviting patch of sunshine, and in it, revealed for a spell, browsing mentally all over the farm, fertilizing here, draining there, fencing yonder. Roused from my reverie by a sound overhead, I listened. A bluebird's note, tender, gentle, quietly telling of the coming of spring. Not with the robin's assurance but full of hope and desire. And tuned exactly with and heart strings on that particular morning, I drank it all in. Then I straightened up, stretched, took a deep breath and felt better. And now a heartless killdeer (the first of the year) keeps calling to me as I write, "come here, come here, come here, here, here, here, here, here."

When I reached the house the other day after the bluebird episode there was the good wife poring over garden catalogs, and would you believe it, there was a list of garden seeds all (Continued on page 368).

## Wishing for sleep is a poor way to get it

A LITTLE wisdom in the daytime is a better assurance of rest than any amount of anxious wishing when nerves are a-jangle at night.

What you do at noon often has more influence on sleep than what you want and hope for, at midnight.

Coffee's drug element, caffeine, whips up the nerves, and when its use is continued there's usually a penalty which no amount of mental effort can avoid.

The part of wisdom, as so many thousands have found, is to turn away from nerve-stimulation and adopt rich, delicious Postum as the mealtime drink. Postum delights the taste, but brings no disturbance to nerves or digestion. Even the little children can share in the enjoyment of Postum at any meal.

It's better to anticipate warnings than to be driven by them.

It's better to encourage and preserve sound nerves and complete health than to listen to the clock ticks at night and say, "I wish!"

You can get Postum wherever good food or drink is sold and served. An order today may be the beginning, for you, of the great satisfaction and comfort which so many others have found in Postum.



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

Postum for Health  
"There's a Reason"

Made by Postum Cereal Co., Inc.  
Battle Creek, Mich.

## POOR Man's Stump Puller

Here is the stump-puller that gives the farmer a square deal. You need this low priced method of clearing your stumpy ground. No help, no tractor, no horses. One man pulls any stump in a few minutes. Quickly and easily set or moved to any part of field by pushing it like a wheelbarrow.

**MARTINSON WHEELBARROW STUMP-PULLER**

The marvel of the Minnesota Land Clearing demonstration when one man with the Martinson pulled 64 stumps in 3 hours. Why get a costly machine when this low-priced one will do your work and do it easier.

**FREE** We prove to you the truth of our claims on a FREE ten day test on your farm. If the Martinson fails to make good, return it, and the deal is off.

**MARTINSON MFG. Co.,**  
1401 Lincoln Building, Duluth, Minn.

We guarantee it to pull more stumps with less labor than any other puller sold at its price.

Write for full particulars.

**Holder of World's RECORD 64 Stumps in 3 Hours**

"My machine is a wonder. Have 15 acres ready for the plow—stumps all pulled with the Martinson." Inez Phillips, Akeley, Minn.

## BUILD For All Time

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

**Kalamazoo GLAZED BUILDING TILE**

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

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

Please Mention The Michigan Farmer When Writing to Advertisers



# News From Cloverland

By L. A. Chase

## INCOME FROM HONEY.

AS illustrative of the possibility of honey production in the north country, my attention has been called to the experience of the manager of a cooperative store in this section, who operates an apiary as a side-issue. Last year he began with thirteen swarms and closed with twenty-one, and his returns from sales of honey were \$435, it is reported.

## FARMERS FORM LOAN ASSOCIATION.

THIRTY farmers of townships adjacent to Negaunee, Marquette county, have made application for the formation of a farm loan association under the Federal Farm Loan Act, and they seek loans of \$29,600. There is another association at Republic, of thirty-four members and loans of some \$41,500, and one at Skandia with about forty members and loans between \$60,000 and \$70,000, reports County Agricultural Agent L. R. Walker.

## NEW COUNTY AGENT IN IRON COUNTY.

THE Iron County Agricultural Commission has engaged Mr. Earl Roberts, of Wisconsin, as county agricultural agent. The commission states that Mr. Roberts has had scientific training at the University of Wisconsin and much actual farming experience in Waukesha county. The March News Letter of the commission raises the question of a cow-testing association, which it advocates as the best method of determining good and poor cows.

## FAIR ASSOCIATION PLANS EDUCATIONAL EXHIBITS.

EARLY in March there was organized at Iron Mountain the West Cloverland Fair Circuit, by representatives of the agricultural societies of Baraga, Dickinson, Gogebic, Houghton, Iron and Menominee counties. The president of the association is Dr. A. Saunders, of Stephenson; secretary, John E. Mason, the commissioner of schools, Crystal Falls. The dates for the several fairs of this circuit are as follows: Dickinson, August 13 to September 1-2-3-4; Menominee county at Stephenson, September 5-6-7; Iron county at Iron River, September 20-21-22; Houghton county at Houghton, September 26-27-28-29-30; Gogebic county at Ironwood, September 13-14-15. An educational feature for all the fairs, opening at Norway and closing at Houghton, will be provided by the association. The Michigan Agricultural College Experiment Station at Chatham will provide an exhibit of cattle, sheep and hogs. The farm of the State Hospital at Newberry will furnish a carload of pure-bred Holsteins. There will be an exhibit of crops adapted to the soil and climate of the territory covered by the association and there will be an appropriate premium list.

## BUY EXPLOSIVES BY THE CARLOAD.

AS a part of its campaign for the clearing of 10,000 acres this year, Menominee county has arranged to obtain dynamite in carload lots at a reduced price of \$16.75. Orders will be collected by the county agricultural agent, Irving Irishman, and will be forwarded when a carload is comprised in the total orders received.

The Houghton County Board of Su-

pervisors has made an appropriation to cover five land-clearing schools in that county, to be given under the auspices of the Michigan Agricultural College, each to cost \$175. The agricultural committee of the board, it is announced, will fix the dates for the schools upon consultation with L. M. Geismar, county agent, and Mr. L. F. Livingston, in charge of the schools.

## CLOVERLAND'S ROAD BUILDING

UNDER the revised plans of the state highway department, the 1922 highway construction program for the several counties of the upper peninsula, calls for the following mileages in each county: Alger, 1 mile; Baraga, 15; Chippewa, 31; Delta, 8; Dickinson, 13; Gogebic, 12; Houghton, 20; Iron, 16; Keweenaw, 9; Mackinac, 36; Marquette, 15; Ontonagon, 1.5; Schoolcraft, 27. This totals 214.5. Last year, notes the Daily Mining Gazette, of Houghton, Houghton county spent on its roads over \$569,000 from all sources, including the proceeds of a bond issue of \$200,000.

## WILL COOPERATE IN BIG SECTIONAL PROGRAM.

THE upper peninsula was represented at the Tri-State meeting on development called by Governor Blaine of Wisconsin to meet at Milwaukee, March 2-3. The program included papers on the St. Lawrence Deepwaterway project, the Importance and Necessity of a Rural Credit Program, Menace to Live Stock from Predatory Animals, Intensive Reclamation Methods as applied to Cutover Lands, Land Clearing Movement in the Upper Lakes Basin, Protection of Settlers by the State, Marketing of Cash Crops from the Farm, Land Settlement in Relation to Production, a National Reclamation Policy, Developing the Playground of the Middle West, State Parks and their Relation to Tourist Traffic, Fish and Game as a State Asset, Correlation of State and National Forestry Policies, presented by recognized experts on these subjects. A similar meeting was held at St. Paul, Minnesota, last year, and it is taken for granted that the next year's meeting will occur in the upper peninsula, it is believed at Marquette or Escanaba.

## FRANCISCO FARM NOTES.

(Concluded from page 367).

made out, as big as the Michigan Farmer. Among the first signs of spring I think this one contends with the marbles for first place. The first symptoms usually appear in February and it has been intimated that some people do most of their gardening in that month. The wife likes to tell how I spent eight dollars for garden seeds a dozen years ago for the two of us. That was just after we were married so I have always felt excusable. How could I tell how much it would take to feed her, and I wanted to make sure of enough. However, from the size of that list of hers, I think we are even now.

Time to see what that Killdeer wants.

N. B.—The axe is ground.

A pound of sulphur and a quarter-pound of pulverized sabadilla makes an effective dust with which to fight cattle lice.

You will enjoy the first fine open weather more if you clean and overhaul that sprayer now.

**1/3 more sticks at no extra cost 3 more per dollar**

You can now blast

1/3 more Stumps 1/3 more Boulders  
1/3 more Tree-Holes

THE Du Pont Company has a new farm dynamite for you—DUMORITE.

Its use is going to cut the cost of improving your land. The same money you now pay for 100 sticks of 40% dynamite buys 135 to 140 sticks of DUMORITE.

A stick of Dumorite has approximately the same strength as a stick of 40% and the same slow, heaving action as "20%," which makes it, stick for stick, a better farm explosive than either of these dynamites. In addition it is absolutely non-headache and non-freezing. Think what this new explosive means to you! Nearly 1/3 more acres cleared at the same cost, or the same number of acres cleared at a saving of about 1/4 in cost of dynamite.

Buy Dumorite at your local dealer's. Write for the "Farmers' Handbook of Explosives." It gives full instructions.

E. I. DU PONT DE NEMOURS & CO., Inc.

Hartley Bldg.  
Duluth, Minn.

McCormick Bldg.  
Chicago, Ill.

Ask your County Agent how the Federal Farm Loan System will help you clear your land.

NON-HEADACHE **DU PONT** NON-FREEZING  
**DUMORITE**

Mount Gilead  
**CIDER PRESSES**  
draw the Business

Big Money made with M-G Cider Presses. Small investment. Quick, clean profits with little labor and expense. Demand for cider greater than ever. Install the reliable

Standard for 44 years. Largest juice yield. Easy to operate. Fully guaranteed. Sizes from 10 to 460 bbls. daily. Complete outfits ready to ship. Also Hand Power Presses for Cider, Grape Juice, Fruits, etc., and a full line of accessories such as Juice Evaporators, Pasteurizers, Vinegar Generators, etc. Write for catalog.

HYDRAULIC PRESS MFG. CO.  
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# WORLD EVENTS IN PICTURES



Mr. Pearce, of U. S. Department of Commerce, sampling some Turkish "manna" sent by a Syrian Bishop of Jerusalem.



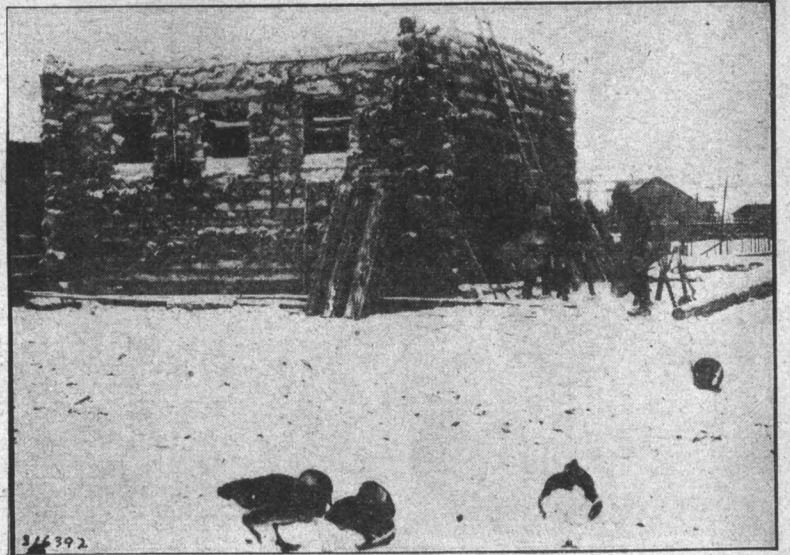
Senator Arthur Capper, of Kansas, who was unanimously elected as chairman of agricultural bloc.



Miss Coleen Moore, a movie star, setting the world's largest alarm clock, which is capable of waking up a whole regiment of soldiers.



The officers of the ill-fated dirigible "Roma" were buried with full military arms in the Arlington National Memorial Cemetery, near Washington, D. C.



Russian peasants build an emergency hut out of logwood and clay in their fight against the intense cold and famine in the district near Moscow.



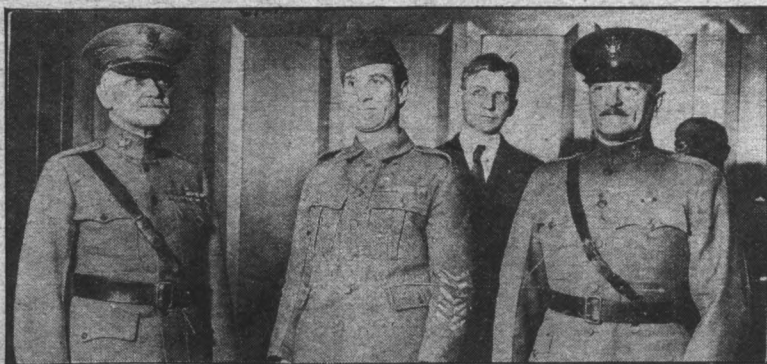
Miss Margarie Kay, former war nurse, and her unique collection of battlefield military badges.



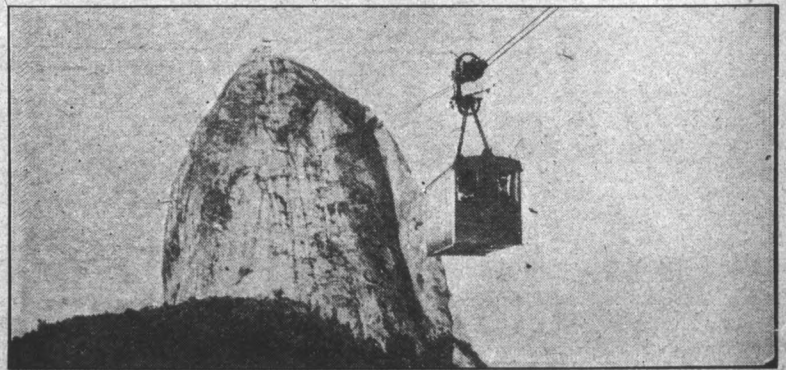
Mrs. Mary Peoke and Mrs. Bell Billings, of Clint, Texas, southwest's oldest twins, are extended congratulations by the four-year-old Perry twins on their eighty-third birthday.



Dr. C. P. Steinmetz examining part of tree which his own lightning invention struck.



General Pershing at right meets private at left, who impersonated him in a play entitled, "A Buck Private on Leave." The buck private is in the center.



An aerial railway is used to reach the summit of "Sugar Loaf," the famous mountain near Rio de Janerio, which overlooks the magnificent harbor.



# THE BLIND MAN'S EYES

By William MacHarg and Edwin Balmer

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"Father! What has happened? Why are you here? Oh, Father, Cousin Wallace!"

"He is dead," Santoine said. "They shot him!"

"Father; how was it? You—"

"There are none of them in the room?" he asked her in reply.

"None of them?"

Her failure to understand answered him. If any of the men who fought there had not got away, she would have understood. "They were not all together," he said. "There were three, at least. One was not with the others. They fired at each other, I believe, after one shot him." Santoine's hand was still in Blatchford's. "I heard them below." He told shortly how he had gone down, how Blatchford had entered and been shot.

The blind man, still kneeling, heard the ordering and organizing of others for the pursuit; now women servants from the other part of the house were taking charge of affairs in the room. He heard Avery questioning them; none of the servants had had part in the fight in the room; there had been no signal heard, Santoine was told, upon any of the bells which he had tried to ring from his room. Eaton was the only person from the house who was missing. Harriet had gone for a moment; the blind man called her back and demanded that she stay beside him; he had not yet moved from Blatchford's body. His daughter returned; her hand on his shoulder was trembling and cold—he could feel it cold through the linen of his pajama jacket.

"Father, you must go back to bed!" she commanded uselessly. He would not stir. A servant, at her call, brought a robe which she put over him, and she drew slippers on his feet.

"They came, at least some of them came,"—Santoine had risen, fighting down his grief over his cousin's death; he stood holding the robe about him—"for what was in your safe, Harriet."

"I know; I saw it open."

"What is gone?" Santoine demanded.

He heard her picking up the contents of the safe from the floor and carrying them to the table and examining them; he was conscious that, having done this, she stood staring about the room as though to see whether anything had escaped her search.

"What is gone?" Santoine repeated.

"Why—nearly all the formal papers seem to be gone; lists and agreements relating to a dozen different things."

"None of the correspondence?"

"No; that all seems to be here."

Santoine was breathing quickly; the trust for which he had been ready to die—for which Blatchford had died—seemed safe; but recognition of this

only emphasized and deepened his perplexity as to what the meaning had been of the struggle which an instant before had been going on around him. "We don't know whether he got it, then, or not." It was Avery's voice which broke in upon him; Santoine merely listened.

"He? Who?" He heard his daughter's challenge.

"Why, Eaton. It is plain enough what happened here, isn't it?" Avery

Her father checked her; he stood an instant thoughtful. "Who is directing the pursuit, Donald?" he asked.

Avery went out at once. The window to the south, which stood open, was closed. The blind man turned to his daughter.

"Now, Harriet," he commanded. He put a hand out and touched Harriet's clothing; he found she had on a heavy robe. She understood that her father would not move till she had seen the

"There is a bar of iron with a bent end near the table—between it and the window; there are two flashlights; both extinguished."

"How was the safe opened?"

"The combination has been cut completely away; there is an instrument connected with the electric-light fixture which seems to have done the cutting. There is a hand-drill, too—I think it is a hand-drill. The inner door has been drilled through, and the catches drawn back."

"Who is this?"

The valet, who had been sent to Eaton's room, had returned with his report. "Mr. Eaton went from his room fully dressed, sir," he said to Santoine, "except for his shoes. I found all his shoes in his room."

During the report, the blind man felt his daughter's grasp on his arm become tense and relax and tighten again. Then, as though she realized she was adding to this comprehension of what she had already betrayed, she suddenly took her hand from her father's arm. Santoine turned his face toward his daughter. Another twinge racked the tumult of his emotions. He groped and groped again, trying to catch his daughter's hand; but she avoided him. She directed servants to lift Blatchford's body and told them where to bear it. After that, Santoine resisted no longer. He let the servants, at his daughter's direction, help him to his room. His daughter went with him and saw that he was safe in bed; she stood beside him while the nurse washed the blood-splashes from his hands and feet. When the nurse had finished, he still felt his daughter's presence; she drew near him.

"Father?" she questioned.

"Yes."

"You don't agree with Donald, do you?—that Mr. Eaton went to the study to get something, and that whoever has been following him found him there and—interrupted him and he killed Cousin Wallace?"

Santoine was silent an instant. "That seems the correct explanation, Harriet," he evaded. "It does not fully explain; but it seems correct as far as it goes. If Donald asks you what my opinion is, tell him it is that."

He felt his daughter shrink away from him.

The blind man made no move to draw her back to him; he lay perfectly still; his head rested flat upon the pillows; his hands were clasped tightly together above the coverlet. He had accused himself, in the room below, because, by the manner he had chosen to treat Eaton, he had slain the man he loved best and had forced a friendship with Eaton on his daughter which, he saw, had gone further than mere

## Sonnets of Spring

By Teresa G. Morris

With feathery fern and lacy leaf,  
The world is newly dressed.  
Old Winter hides his hoary face—  
With shame he seems obsessed.

Between the fringed and budding boughs  
Some tiny nests appear.  
The birds returning from the south  
Are mating for the year.

The skies are bathed in azure blue,  
All wintry winds have fled;  
And tiny flow'rets, knowingly,  
Bud forth and nod the head.

The earth in joy has brightened,  
And new birds on the wing,  
Will soon tell gladsome tidings  
Of the advent of Sweet Spring.

Adown the quiet street I walked,  
When a Robin hopped in view.  
He looked askance, and shied at me—  
Then over the fence he flew.

Behind a leafy bush he peeped,  
And chirped a sweet "Halloo."  
My eyes in greeting answered back,  
And I laughed aloud for two.

Sir Robin Redbreast peeped again,  
Then chirped a tiny lay.  
The spring had made him bolder—  
His friendship made me gay.

Now, springs may come and springs may go,  
Of that there's not a doubt;  
But when you walk, you'll find new joy  
If a redbreast is about.

What makes me feel so dreamy?  
What makes Life seem so sweet?  
I'm sure it is the Springtime—  
With gladsome views replete.

Birds chirping gayly on the bough,  
The buds that yearn to ope,  
And the brooklet's merry murmur  
As it runs adown the slope.

The hills and valleys bloom anew,  
Old Sol just seems to coax  
The vim and vigor from the earth,  
From fruit and flowers and folks.

My eyes have seen the glory  
Of priceless works of Art,  
But none can share the beauty  
Of Springtime at the start!

answered. "He came here to this room for what he was after—for what he has been after from the first—whatever that may have been! He came prepared to force the safe and get it! But he was surprised—"

"By whom?" the blind man asked.

"By whomever it is that has been following him. I don't attempt to explain who they were, Mr. Santoine; for I don't know. But—whomever they were—in doing this, he laid himself open to attack by them. They were watching—saw him enter here. They attacked him here. Wallace switched on the light and recognized him; so he shot Wallace and ran away with whatever he could grab up of the contents of the safe, hoping that by luck he'd get what he was after."

"It isn't so—it isn't so!" Harriet denied.

room for him. She gazed about again, therefore, and told him what she saw.

"There was some sort of a struggle near my safe," she said. "Chairs—everything there is knocked about."

"Yes."

"There is also blood there—a big spot of it on the boor."

"I found that," said Santoine.

"There is blood behind the table near the middle of the room."

"Ah! A man fired from there, too!"

"There are cartridges on the floor—"

"Cartridges?"

"Cartridge shells, I mean, empty, near both those spots of blood. There are cartridge shells near the fireplace; but no blood there."

"Yes; the bullets?"

"There are marks everywhere—above the mantel, all about."

"Yes."

AL ACRES—Percy Solves Al's Poultry Problem.

—By Frank R. Lee





friendship; it had gone, he knew now, even to the irretrievable between man and woman—had brought her, that is, to the state where, no matter what Eaton was or did, she must suffer with him! But Santoine was not accusing himself now; he was feeling only the fulfillment of that threat against those who had trusted him with their secrets, which he had felt vaguely after the murder of Gabriel Warden and, more plainly with the events of each succeeding day, ever since. For that threat, just now, had culminated in his presence in purposeful, violent action; but Santoine in his blindness had been unable—and was still unable—to tell what that action meant.

Of the three men who had fought in his presence in the room below—one before the safe, one at the fireplace, one behind the table—which had been Eaton? What had he been doing there? Who were the others? What had any of them—or all of them—wanted? For Santoine, the answer to these questions transcended now every personal interest. So, in his uncertainty, Santoine had drawn into himself—withdrawn confidence in his thoughts from all around, from Donald Avery, even from his daughter—until the answer should be found. His blind eyes were turned toward the ceiling, and his long, well-shaped fingers trembled with the intensity of his thought. But he realized even in his absorption, that his daughter had drawn away from him. So, presently, he stirred.

"Harriet," he said.

It was the nurse who answered him. "Miss Santoine has gone downstairs. What is it you want of her, Mr. Santoine?"

The blind man hesitated, and checked the impulse he had had. "Nothing," he replied.

CHAPTER XIX.  
Pursuit.

**H**ARRIET SANTOINE, still clad only in the heavy robe over her nightdress and in slippers, went from her father's bedroom swiftly down into the study again; what she was going to do there she did not definitely know. She heard, as she descended the stairs, the steward in the hall outside the study calling up the police stations of the neighboring villages and giving news of what had happened and instructions to watch the roads; but as she reached the foot of the stairs, a servant closed the study doors. The great curtained room in its terrifying disorder was brightly lighted, empty, absolutely still. She had given directions that, except for the removal of Blatchford's body, all must be left as it was in the room till the arrival of the police. She stood an instant with hands pressed against her breast, staring down at the spots upon the floor.

There were three of these spots now—one where Blatchford's body had lain. They were soaking brownly into the rugs but standing still red and thick upon the polished floor. Was one of them Eaton's?

Something within her told her that it was, and the fierce desire to go to him, to help him, was all she felt just now. It was Donald Avery's and her father's accusation of Eaton that had made her feel like this. She had been feeling, the moment before Donald had spoken, that Philip Eaton had played upon her that evening making her take him to his confederate in the ravine in order to plan and consummate something here. Above her grief and horror at the killing of her cousin and the danger to her father, had risen the anguish of her guilt with Eaton, the agony of her betrayal. But their accusation that Eaton had killed Wallace Blatchford, seeing him, knowing him—in the light—had swept all that away; all there was of her seemed to have risen in denial of that. Before her eyes, half shut, she saw again the body of her cousin Wallace lying in its

blood on the floor, with her father kneeling beside it, his blind eyes raised in helplessness to the light; but she saw now another body too—Eaton's—not here—lying somewhere in the bare, wind-swept woods, shot down by those pursuing him.

She looked at the face of the clock and then down to the pendulum to see whether it had stopped; but the pendulum was swinging. The hands stood at half past one o'clock; now she recalled that, in her first wild gaze about the room when she rushed in with the others, she had seen the hands showing a minute or so short of twenty minutes past one. Not quite a quarter of an hour had passed since the alarm! The pursuit could not have moved far away. She reopened the window through which the pursuers had passed and stepped out onto the dark lawn. She stood drawing the robe about her against the chill night air, dazed, stunned. The house behind her, the stables, the chauffeurs' quarters above the garages, the gardeners' cottages, all blazed now with light, but she saw no one about. The menservants—except the steward—had joined the pursuit; she heard them to the south beating the naked woods and shrubbery and calling to each other. A half mile down the beach she heard shouts and a shot; she saw dimly through the night in that direction a boat without lights moving swiftly out upon the lake.

Her hands clenched and pressed against her breast; she stood straining at the sounds of the man-hunt. It had turned west; it seemed; it was coming back her way, but to the west of the house. She staggered a little and could not stand; she stepped away from the house in the direction of the pursuit; following the way it seemed to be going, she crossed the lawn toward the garage. A light suddenly shone out there, and she went on.

The wide door at the car driveway was pushed open, and some one was within working over a car. His back was toward her, and he was bent over the engine, but, at the glance, she knew him and recoiled, gasping. It was Eaton. He turned at the same instant and saw her.

"Oh; it's you!" he cried to her.

Her heart, which almost had ceased to beat, raced her pulses again. At the sound she had made on the driveway, he had turned to her as a hunted thing, cornered, desperate, certain that whoever came must be against him. His cry to her had recognized her as the only one who could come and not be against him; it had hailed her with relief as bringing him help. He could not have cried out so at that instant at sight of her if he had been guilty of what they had accused. Now she saw too, as he faced her, blood flowing over his face; blood soaked a shoulder of his coat, and his left arm dangling at his side; but now, as he threw back his head and straightened in his relief at finding it was she who had surprised him, she saw in him an exultation and excitement she had never seen before—something which her presence alone could not have caused. Tonight, she sensed vaguely, something had happened to him which had changed his attitude toward her and everything else.

"Yes; it's I!" she cried quickly and rushed to him. "It's I! It's I!" wildly she reassured him. "You're hurt!" She touched his shoulder. "You're hurt! I knew you were!"

He pushed her back with his right hand and held her away from him. "Did they hurt your father?"

"Hurt father? No."

"But Mr. Blatchford—"

"Dead," she answered dully.

"They killed him, then!"

"Yes, they—" She iterated. He was telling her now—unnecessarily—that he had had nothing to do with it; it

(Continued on page 373).



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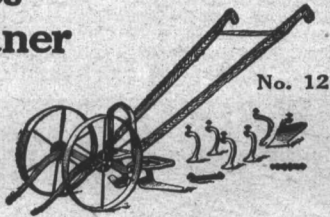
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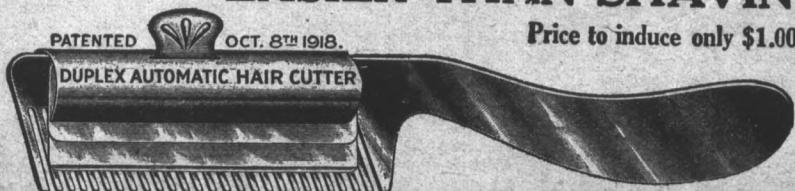
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What We Know of God?

Our Weekly Sermon—By N. A. McCune

OUR information about God, the Creator and Sustainer of the universe, and the Father of His human children, is gotten from the lips of Christ. I do not mean to say that nothing about God can be learned apart from Christ, for it can. Nature teaches that a mighty Mind is back of created things. Some one has said that no man can dissect an eyeball and remain an atheist, so intricate is its structure, and so perfectly does it fulfill its purpose. To look through a compound microscope and see the cells and the circulatory system in a plant stem is



to get a very high idea of the Brain that designed it. These facts are known to most people. It is sometimes called the argument from design, and it is a good argument. If you found a watch, and had never seen one before, and you started the watch to running, it would be easy to see what the watch had been designed for. But above and beyond this, there remains a vast, unknown, unexplored region of ignorance about God, if you leave out the teachings of Christ.

The great things about God, the facts that are near and precious to the believer, and to all christendom, we learn from the sayings of the Nazarene. Only a few can be touched on. Speaking of nature, Christ did not leave that out, when he taught us about God. "Observe the ravens. They neither sow nor reap, and have neither store-chamber nor barn. And yet God feeds them." "But if God so clothes the vegetation in the fields, that blooms today and tomorrow will be thrown into the oven, how much more certainly will He clothe you, you men of feeble faith!" One can almost feel that Christ is proud of His Father's workmanship. He enjoys the birds, the lilies (daisies) in the fields, the sparrows. Did your small son ever make something and come and show it to you? A little cart, perhaps, or a windmill. It was a pretty tough looking piece of carpentry, but he was proud of it, and so were you. Christ says that God enjoys his big, fertile, rolling, whirling world. I suspect that the chief engineer of the Panama Canal is a bit proud when he sees ocean ships passing through the locks that he built.

OUR Lord further teaches that love is at the base of all creation. That would be news, if it were not so old. And we do not as a rule believe it. Fear rules in the religions of paganism. Love rules in the thought of God. That teaching is so deep and revolutionary that we have not arrived at it. The prodigal comes home and is welcomed by the old father with a kiss and a reception. But we are inclined to sympathize with the disgruntled older brother who is vexed and says it isn't fair. A sheep is lost. It is only one, there are ninety-nine more, or a million and ninety-nine more. One will not be missed, we think. Besides, it was only an old ewe anyway that had lost her lamb. But no, that is not the attitude of God. The one sheep is missed. It must be gone after at great pains and labor, and brought back. She was a fool to get lost? No doubt, but she must be brought back. Love is at the bottom of God's work. That is Christ's teaching.

We have been carried away with the idea of law. Law rules everything, we say. "Stern as fate, absolute as ty-

ranny, merciless as death; too vast to praise, too inexorable to propitiate, it has no ear for prayer, no heart for sympathy, no arm to have," is the way some one has described law. But law is as gentle and protective as it is stern. You plant radishes and law says, you get radishes, not onions. Law is kind, and can be relied on. It would be an awful thing, don't you think, if law could not be depended on; if, when you planted radishes you did not know for the life of you, whether radishes would come up or lettuce, or green peppers; or, if you sowed wheat, whether millet would appear, or kaffir corn? Law is kind. It is a protector of life, and behind law is love. As a poet put it, "All's love, yet all's law." Of course, law often acts as though it were a destroyer. A man is frozen to death, a child is burned to death, and we say, "where is your love now? Law looks to me like a savage." But we forget that the law has to be uniform, or it could not be relied on. The force that destroyed the life of the child is keeping millions of them warm and happy tonight. The cold that caught the farmer half way home and froze out his life is holding vegetation back, and covering the winter wheat with snow, so that the crops will be good next year, and the world will be fed.

WE like to do things for our children. "If ye being evil know how to give good gifts to your children, how much more—" You enjoy hearing your little boy learning to talk. He pronounces some words so funny that you don't correct him, you like to hear him say it that way. Christ does not teach this exactly but we can almost believe that God enjoys seeing His children trying to increase in knowledge, and to make new conquests in the world. It may be in science, or exploration or engineering. Man makes many a false move and does many funny things before he learns the secret of what he is after. Sin occurs when one fails to cooperate with God. You know your duty, you do not do it. You have a kind, an affectionate Father, you turn away from him, and go your own way, doing injury to yourself and others, and insulting Him who has given you life, food, health, happiness. That is sin. Moreover you do this in face of the fact that a Man who was more than man came, taught, died, to show men the way to life. But even here love rules, too. For there is forgiveness and restoration and new life, to all who will have it. These are but a few of the many and great things that Christ teaches about God. More of this perhaps, some other time.

A GENTLEMAN writes: "Where does Christ stand on this city question? He is unquestionably against this great city, Babylon, that reigns, and the kings of earth. It is the cities that have played the deuce in economics, industry and religion. If any man will read the apocalypse and pay attention to what it says, he can see that Christ has no use for city business. This thing of all the farm papers advocating city business methods for the farm is not begotten of Christ." I do not think that there is anything in the teaching of Christ that condemns the city as such. Cities do give a great opportunity for wrong doing, because there are many people crowded together in a small area. The apocalypse speaks of the "holy city, new Jerusalem," so perfect that there is no need of the sun, etc. That is the city that is yet to come. Christ did some of his greatest work in Capernaum, a city with perhaps a half million people.



# The Blind Man's Eyes

By William MacHarg and Edwin Balmer  
Copyright by Little, Brown & Company

(Continued from page 371.)

was the others who had done that. He released her and wiped the blood from his eyes with the heel of his hand. "The poor old man," he said—"the poor old man!"

She drew toward him in the realization that he could find sympathy for others even in such a time as this.

"Where's the key?" he demanded of her. He stared over her again but without surprise even in his eyes, at her state; if she was there at all at that time, that was the only way she could have come.

"The key?"

"The key for the battery and magneto—the key you start the car with."

She ran to a shelf and brought it to him; he used it and pressed the starting lever. The engine started and he sprang to the seat. His left arm still hanging useless at his side; he tried to throw in the gears with his right hand; but the mechanism of the car was strange to him. She leaped up beside him.

"Move over!" she commanded. "It's this way!"

He slipped to the side and she took the driving seat, threw in the gears expertly, and the car shot from the garage. She switched on the electric headlights as they dashed down the driveway and threw a bright white glare upon the roadway a hundred yards ahead to the gates. Beyond the gates the public pike ran north and south.

"Which way?" she demanded of him, slowing the car.

"Stop!" he cried to her. "Stop and get out! You mustn't do this!"

"You could not pass alone," she said. "Father's men would close the gates upon you."

"The men? There are no men there now—they went to the beach—before! They must have heard something there! It was their being there that turned him—the others back. They tried for the lake and were turned back and got away in a machine; I followed—back up here!"

Harriet Santoine glanced at the face of the man beside her. She could see his features only vaguely; she could see no expression; only the position of his head. But now she knew that she was not helping him to run away; he was no longer hunted—at least he was not only hunted; he was hunting others too. As the car rolled down upon the gates and he strained forward in the seat beside her, she knew that what he was feeling was a wild eagerness in this pursuit.

"Right or left—quick!" she demanded of him. "I'll take one or the other."

"Right," he shot out; but already, remembering the direction of the pursuit, she had chosen the road to the right and raced on. He caught the driving wheel with his good right hand and tried to take it from her; she resisted and warned him:

"I'm going to drive this car; if you try to take it, it'll throw us both into the ditch."

"If we catch up with them, they'll shoot; give me the car," he begged.

"We'll catch up with them first."

"Then you'll do what I say?"

"Yes," she made the bargain.

"There are their tracks!" he pointed for her.

The road was soft with the rains that precede spring, and she saw in the bright flare of the headlights, where some heavy car, fast driven, had

gouged deep into the earth at the roadside; she noted the pattern of the tires.

"How do you know those are their tracks?" she asked him.

"I told you, I followed them to where they got their machine."

"Who are they?"

"The men who shot Mr. Blatchford."

"Who are they?" she put to him directly again.

He waited, and she knew that he was not going to answer her directly. She was running the car now at very high speed; the tiny electric light above the speedometer showed they were running at forty-five miles an hour and the strip was still turning to higher figures.

Suddenly he caught her arm. The road had forked, and he pointed to the left; she swung the car that way, again seeing as they made the turn, the tire-tracks they were following. She was not able now to watch these tracks; she could watch only the road and car; but she was aware that the way they were following had led them into and out of private grounds. Plainly the men they were following knew the neighborhood well and had chosen this road in advance as avoiding the more public roads which might be watched. She noted they were turning always to the left; now she understood that they were making a great circle to west and north and returning toward, but well west of, her father's house; thus she knew that those they were following had made this circuit to confuse pursuit and that their objective was the great city to the south.

They were racing now over a little used road which bisected a forested section still held as acreage; old, rickety wooden bridges spanned the ravines. One of these appeared in the radiance of the headlight a hundred yards ahead; the next instant the car was dashing upon it. Harriet could feel the shake and tremble of the loosely nailed boards as the driving wheels struck; there was a crash as some strut, below, gave way; the old bridge bent but recoiled; the car bounded across it, the rear wheels skidding in the moist earth as they swung off the boards.

Harriet felt Eaton grab her arm.

"You mustn't do that again!"

"Why?"

"You mustn't do that again!" he repeated the order; it was too obvious to tell her it was not safe.

She laughed. Less than five minutes before, as she stood outside the room where her father's cousin had just been murdered, it had seemed she could never laugh again. The car raced up a little hill and now again was descending; the headlights showed another bridge over a ravine.

"Slow! Stop!" her companion commanded.

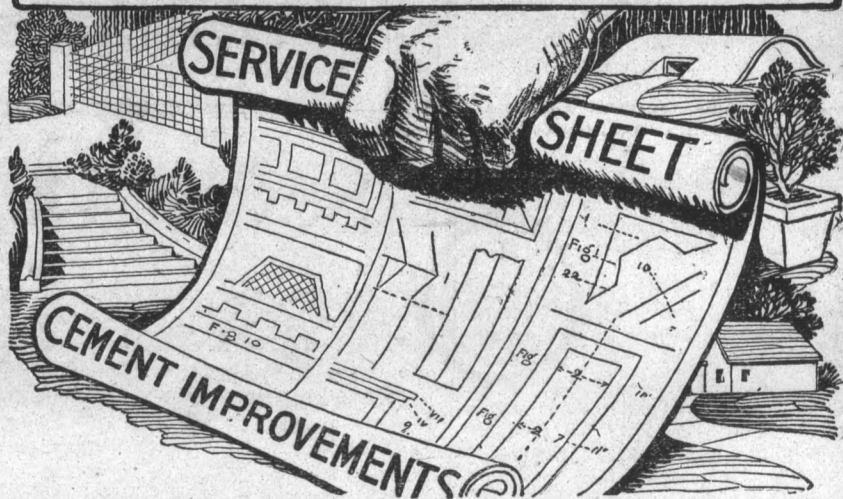
She paid no attention and raced the car on; he put his hand on the wheel and with his foot tried to push hers from the accelerator; but she fought him; the car swayed and all but ran away as they approached the bridge. "Give it to me!" she screamed to him and wrenched the car about. It was upon the bridge and across it; as they skidded upon the mud of the road again, they could hear the bridge cracking behind.

(Continued next week.)

We are perfectly willing to accept the rule of the majority, providing the majority says what it ought to say.



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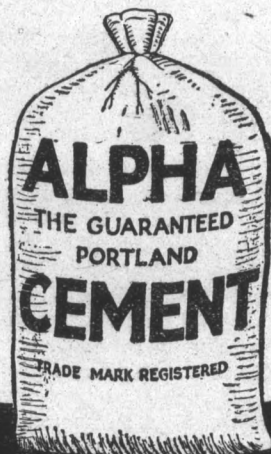
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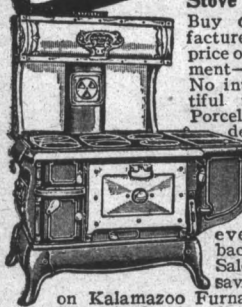
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Who overcomes by force hath overcome but half his foe.—John Milton.

**Woman's Interests**

**Seven Daughters of Great Men**

ILLUSTRIOUS fathers may not have illustrious sons, but seven daughters of the White House have proven that the female descendants are not without their claim to honors.

What illustrious father has a better known daughter than our Alice Roosevelt Longworth? True, Mrs. Longworth has not chosen to follow her father's teachings and go in for large families, shooting big game, and running for office. But her success in getting her husband elected to congress showed that she can wield the Big Stick if necessary. Mrs. Longworth is easily the most talked about White House girl since Dolly Madison, and created almost as much of a sensation in England as she did at home. During the war she did relief work, and turned her home over to the Red Cross.

Miss Helen Taft, daughter of Justice William H. Taft, is as scholarly as her distinguished father. She is a star in history, economics and politics, having studied history at Yale, where she qualified for her degree of bachelor of arts. Mrs. Fred J. Manning is now her name. Her husband is instructor in history at Yale.

A past generation remembers Esther Cleveland as the White House baby. She is now Mrs. William Sidney Bence Bosanquet, wife of a D. S. O. of the Coldstream Guards, whom she met in Switzerland. It is related that during her girlhood days in Princeton two Princeton boys ran a foot race for her hand. She rewarded the winner by turning down both suitors. During the war Mrs. Bosanquet went abroad to engage in war relief work, and served as a nurse in Dunstan Home for Blind-Soldiers in London.

One president's daughter is a lawyer, Miss Elizabeth Harrison, or Mrs. James Blaine Walker, Jr., was admitted to the bar in 1919, after taking the degree of bachelor of science from New York University. She is also a member of the bar in Indiana. Mrs. Walker is not only the daughter of a

president, Benjamin Harrison, but is also a descendant of one, William Henry Harrison. Her husband is a grand-nephew of the late James G. Blaine.

Woodrow Wilson has two daughters who are much in the public eye, Miss Margaret Wilson and Mrs. William Gibbs McAdoo. Mrs. McAdoo's war work took the form of boosting the sale of Liberty Bonds. She went about the country addressing women's meetings and urging women to buy bonds, with the result, it is claimed, of adding \$10,000,000 to the total of sales. Mrs. McAdoo is also interested in Boy Scout work.

Miss Margaret Wilson is a convincing platform speaker and a singer of some note. She is a regular speaker before the labor forum, and it is said has had many a tilt with leading men. She advocates the use of public schools as Americanization centers. During the war she conducted concerts and tours for the benefit of the Red Cross.

Ethel Roosevelt, or Mrs. Richard Derby, is the wife of one of the first physicians to respond to the call for war work. Mrs. Derby accompanied her husband overseas and was a volunteer nurse at Neuilly. Mrs. Derby goes in for athletics, tennis, riding and golf being her favorite outdoor sports.

**Removing Stains**

*Some Suggestions on Renovating Old Clothes*

Rust stains on white goods are not hard to remove. Apply a solution of citric acid, one part to twenty parts of water. After the spot has disappeared wash in warm water. Sometimes when the color of the fabric has been destroyed by acid, ammonia applied at once will restore it. If it proves obstinate apply chloroform.

Oil of turpentine will remove tar spots, and iodine stains on white goods can be taken off by washing with alcohol. Lemon and salt will remove ink stains, and tomato juice is a good remedy. Blood stains on white dresses should be soaked in petroleum and then washed in hot water. When fruit stains the table linen, cover immediately with salt. In removing black ink from colored garments cover immediately with red ink and not a trace of either ink will remain. Test your goods first, though. Stains caused by lemon or orange juice will usually respond to an application of one part ammonia to twenty parts of water. Molasses will remove the grass stains on white goods, and buttermilk and salt, mildew spots. If you drop a tiny bit of cream

on your gown, touch the spot with ammonia and iron over blotting paper. For a raspberry or strawberry stain rub a little starch on and leave for a few hours. If it is oil from the salad dressing, sprinkle plentifully with talcum powder and let remain for several hours. Brush off and repeat until the spot has disappeared. Ordinary stains on silk may be removed by using spirits of turpentine. Always remember when using turpentine, gasoline, or benzine for spots to put a blotting paper underneath and thus do away with the ring around the spot.

A white frock spotted with brown dye was restored by rising in Javelle water, and then rinsing again and again in clear water in which a little ammonia had been added. One must act quickly when rinsing in Javelle water for if the work is slow the gown may be ruined. Javelle water is made of one part chloride of lime and ten parts of water. Then one part of washing soda is dissolved in four parts of water. Allow this to settle and pour off the clear liquid into a jar with the first mixture and keep covered.

Ground rice is good for cleaning white flannels that you do not want to wash. Rub in, let the garment lay for a day or so and brush off. Repeat if not clean.

Furs may be cleaned with common bran. Warm the bran in the oven and use on the fur as hot as your hand will stand. Rub in well and then brush carefully. The dirt will come out with the bran.—ADDIE FARRAR.

**LEAD CHILDREN TO NATURE.**

NOW comes spring with her helpers, the March winds, the April showers, and the warm sunshine. The children can be outdoors more at this time, and love to romp with the strong March wind, which is sweeping and blowing the dead leaves about. Watch for the first wee green shoots as they peep through the ground, followed soon by crocuses, daffodils, bloodroot and the tiny woods flowers. It is a great joy to be able to take children for walks in the woods at this season. Try this interesting experiment.

Give each child a sponge, and have him moisten it and place it in a saucer



Some of the Hats Princess Mary Took on Her Honeymoon.



in a sunny window. Then sprinkle it full of ordinary mixed grass seed or, if you keep a canary, and have bird seed, use that. Do not tell the child what will happen, but let him watch for the changes that will come. Bring pussy willow stalks, and branches from other bushes into a warm, sunny room, and observe the budding of the flowers and leaves.

Lead your little children to think of the April rains as kind helpers, and repeat to them "come listen to the pitter patter of the April showers." In these verses we have the thought of the April showers bringing out the sweet May flowers.—National Kindergarten Association.

**WOMEN TO WORK FOR DISARMAMENT.**

TO back up the recent disarmament conference the National Council for the Limitation of Armaments is planning to make use of the various women organizations which are working through state and national organizations. F. J. Libbey, executive secretary of the council, is now en tour visiting these various women's clubs and enlisting their help in international disarmament.

**ARE FARM WOMEN OVERWORKED?**

DO Michigan farm women consider themselves overworked and downtrodden? Or do they think their lot compares very favorably with women workers in other vocations? The favorite attitude of some writers towards farm women is that their life is one unending round of toil. Is this in any way a true picture of the farm woman of today?

West Virginia farm women say "No." Furthermore, they resent this "overworked" idea so strongly that they are organizing to start a campaign in the other direction. This sort of idea can not help but keep women off the farms, and be a factor in driving farm girls to the city. Farm women do not want to be pitied nor patronized, say these West Virginia women. They want to be understood.

Mrs. Izetta Brown, of Kingwood, West Virginia, is a leader in the movement. "Women working in clubs are learning the value of concerted action in bettering country life," says Mrs. Brown. "They are bringing about better school conditions, straightening out community problems. Now they are going to start a campaign of optimism about country life."

**ON FOOD VALUES.**

I AM taking the liberty to write you with reference to an article entitled, "Lessons in Health Culture," appearing in the March 4 issue of the Michigan Farmer. I have no axe to grind, but am making this suggestion with the idea that you certainly would not knowingly give circulation to inaccurate information in regard to nutrition. To be specific, I think that you will find nothing in the literature in support of the statement that the oil of nuts is more wholesome than animal fats; that lettuce is cooling to the blood, or that any other food for that matter, can be spoken of as cooling to the blood; that lettuce contains opium and has any specific effect upon the nerves; that onions can properly be referred to as "nervines;" that celery is a nerve food and that it has specific effect with reference to dyspepsia, neuralgia, and rheumatism; and that tomatoes stimulate the liver, contain vegetable calomel, and should be avoided by those suffering from rheumatism.

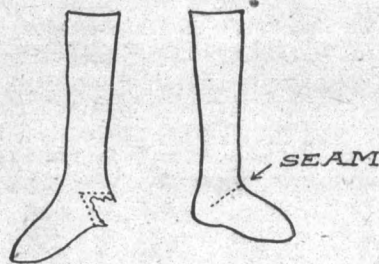
I note also that the writer states that apples contain more phosphoric

acid in easily digested form than any other fruit. It just happens that apples are almost at the bottom of the list of fruits in relation to phosphoric acid content.

I note also that foods are listed in accord with their iron content as foods for the nourishment of the blood. The latest and most productive work on foods for the nourishment of the blood has been done by Professor G. H. Whipple and his associates at the University of California Medical College. This work has been published during the last year in the American journal of Physiology and in the Archives of Internal Medicine. This work has been more extensive and thorough-going than any previous investigations on this subject. The net result of these studies has been that drugs have been found to be virtually without value as applying to blood formation, and that meat is much more useful than other foods for the purpose of restoring the amount and normal composition of the blood after the experimental animals had been rendered anemic by bleeding. The authors conclude that we have no basis for ascribing these beneficial results to the iron of the food. In fact, we are without evidence as to just what nutritive principal in the meat is responsible for the very favorable results obtained.—E. B. FORBES, Institute of American Meat Packers.

**MENDING CHILDREN'S STOCKINGS.**

WHEN the children's stockings become worn at the heel, I still prolong their usefulness by cutting out the ragged part, as indicated by the dotted lines, drawing the opening together and running a seam. This, of



course, puts the part that was formerly the heel over the top of the foot, but the seam is at a point where no inconvenience is caused by pressure of the shoe.—C. Z. G.

**SERVICE BOOKS FOR HOME-MAKERS.**

THE Department of Agriculture at Washington has just issued a bulletin describing the making of paper dressforms. The book gives explicit directions for making the forms, and is well illustrated with photographs, the information and photos having been furnished by various state home agents. The price is five cents.

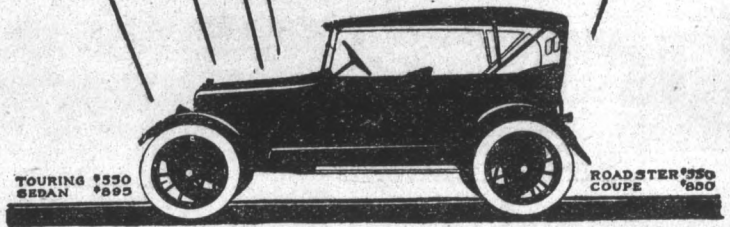
The Minnesota Farmers' Institute and Agricultural Extension Division, University Farms, St. Paul, has issued a valuable book, Home and Farm Conveniences, No. 34. The book contains floor plans for farm homes and kitchen arrangement, suggestions for saving labor in the home, articles on types of water supply, plumbing, heating, electric supply for farm homes, acetylene plants, plans for implement sheds, and many little thought provokers along the social side of life. If you write for the book, send ten cents to cover postage.

Community Service, One Madison Avenue, New York City, has a book for teachers or social community leaders called "Rural and Small Community Recreation." The book takes up all sorts of community recreation, musical, playground activities, games for the school yard, athletic events and indoor amusements. The price is fifty cents.

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Place with us AT ONCE, your order for Baby Chicks. Our supply is limited and we refuse to sell anything but our OWN STOCK, so we advise to not delay. Buy from Michigan's largest practical Single Comb White Leghorn Egg, Pullet and Broiler Farm. We supply every egg that goes into our incubators from our own strain of BRED TO LAY UTILITY S. C. White Leghorns and have a few thousand surplus chicks to spare at certain periods of the season. We GUARANTEE each customer ABSOLUTE SATISFACTION. Write NOW for interesting PRICES, before placing your order elsewhere. Drop us a Post Card TODAY. Chicks delivered at your door by Parcel Post Free. 100% ALIVE

Macatawa White Leghorn Co., Inc.  
Holland, Michigan



**BARGAINS** Baby Chicks Hatching Eggs!  
From "Pedigree" sired "culled" flocks of English and American SCW Leghorns. Flocks rated best in Mich. Bar'd Rocks. Free cata'g  
**OTTAWA FARMS, Grand Rapids Michigan**  
Special Prices 21 Rose St.

**CHICKS and EGGS**

of S. C. White Leghorn Barron Strain and Shepherd's Anconas. Pure bred stock, the kind that grows fast and makes the best layers. Safe delivery guaranteed. Parcel Post Prepaid. Catalogue free. Custom hatching in season \$3 per 100 eggs, chicks 14 cents. Byron Center Poultry Farm, G.O. Keizer, Byron Center, Mich.

**CHICKS**

We have bred our flocks for heavy egg production for many years. We now have the finest flocks in this vicinity. Buy chicks from the largest chick producing center in the world. Leading varieties—Leghorns and Anconas. Send for catalog.  
JAMESTOWN HATCHERY, Jamestown, Mich.

**DAY OLD CHICKS**

Order your Baby Chicks now from selected heavy laying strain. Single Comb White Leghorns, English strain Brown Leghorns, Anconas. Reds. Send for price list. Hillcrest Hatchery, R. 2, Holland, Mich

**CHICKS.** Eng. White Leghorns, S. C. Brown Leghorns, Anconas, Barred Rocks, from heavy egg producing stock on free range, 100% live arrival guaranteed. Send for prices. Bakers Hatchery, Jamestown, Mich.

**5 to 6 Lb. White Leghorns**

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

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

FOR Sale choice Barred Rock cockerels and pullets, 20, 25, and \$4 and pullets \$2, two \$3. Good large birds. George H. Campbell, R. 5, Ypsilanti, Mich.

Barred Rock. Hatching eggs from Parks 200-egg B strain from stock direct from Parks best pedigreed pens. \$2 per 15, \$6 per 50, \$12 per 100. Prepaid by parcel post in non-breakable containers. No chicks for sale. R. G. KIRBY, Route 1, East Lansing, Mich.

**Baby Chicks and Hatching Eggs**

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



**Crystal Poultry Farms**

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

**Barred Rocks.** Hill's heavy-laying prize-winning strain. Eggs 15, \$2.00; 50, \$5.00; 100, \$9.00 prepaid. Lucian Hill, R. 3, Tekonsha, Mich.

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

**BABY CHICKS** \$13 per 100 and up. Leghorns, Rocks, Reds. SEND FOR PRICE LIST.  
CONNERS CHICK HATCHERY, Oxford, Mich

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

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

**100,000 Chicks 12c & Up.** Of pure bred finest egg producing flocks. Built directly from laying and exhibition contest winners hatching eggs. Ducklings, Catalog, 20 varieties. Early bookings avoids disappointment. Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

Our Boys' and Girls' Department

How I Grew My Potato Crop

By Ted Stenson, Three Times State Potato Champion

THIS is my fourth and last year in club work. Next year I will be nineteen years old so I must drop out to make room for some younger boy. I am sorry that I must drop out of this work as I am more interested this year than ever before and I regret that I could not have started when I was younger. Club work will help to make many good farmers which are very much needed. These potatoes of mine have an interesting history behind them.

About twenty-five years ago Mr. Longyear came to Covington to hunt deer. The pioneer that he stayed with complained that his potatoes were very poor. Mr. Longyear then told him that he had some very good potatoes that he would send for seed the next spring. An Irishman, Mr. Longyear said, had brought these potatoes with him from Ireland. This pioneer gave my father seed and by years of hill and seed selection, we have made a fairly good potato for yield and for eating.

For four years I have raised a quarter of an acre of potatoes and on this one acre I have raised over four hundred bushels of saleable potatoes. The first year I sold my potatoes at one dollar a bushel which left me a net gain of about sixty dollars. The second year I sold twenty bushels in the fall at a dollar and a half and kept the rest until spring and received three and one-half dollars for them. So then I had enough to buy a calf and go to the agricultural school. I went to school at the Menominee Agricultural School. I paid \$109.93 for my heifer, a pure-bred Holstein bought at Newberry State Farm. Her name is Princess Longfield Segis. Longfield, the name of her sire, took first place at the International Live Stock Show at Chicago two years ago. Princess is now the mother of my club calf.

During my third year in club work, I did not sell any of my potatoes. I seventy-five cents per bushel, but thought I would get more in the spring and was fooled. During the four years that I have been in club work, I have

taken first place in our county on my potatoes and story. I have also taken prizes at the four county fairs at Houghton, competing not in club class only, but with the rest of the farmers. I also have taken the state champion-



Ted Stenson Among His Potatoes.

ships for two years in succession, thus winning the silver cup, but I must win it once more to have it for keeps. I also have received a scholarship which will be paid on my fees at the M. A. C. if I go there, which I intend to do.

Does anyone think that I was a loser or foolish to join the potato club? No, I was not. I have a cow and a calf, a loving cup, a scholarship at M. A. C., and my potatoes to sell this fall, and besides all this, I have learned a great deal about good farming that I could have learned in no other way. So at the end of my last year, I wish to thank all the extension workers, and, although I can no longer be a member, I shall always be on the side lines and boost. Three cheers for club work! May the good work go on!

Cost of production .....	\$16.50
Value of marketable potatoes..	83.30
Value of cull potatoes.....	2.10
Value of seed potatoes sold or retained .....	4.50
Total value .....	89.90
Profit .....	73.40
Average cost per bushel.....	15.5-7c

What the Runt Did

By J. Leland Fowler

MR. WATKINS owned some choice white hogs that were registered stock and he was very proud of them. Among the last litter of pigs, born in March, there was one that would not grow. They were old enough to wean but this little fellow was no larger than it was when only a week old.

Ben, a lad of fourteen years, was as much of a hog fancier as his father, and when Mr. Watkins decided to kill the runt of the March litter, Ben begged so earnestly for the little life that his father gave a reluctant consent upon the conditions that the pig must be removed from the rest of the litter and be cared for by Ben.

The boy fashioned a small pen from some boards six feet long and of varying widths. They were nailed together in the form of a triangle which he could easily move around. It was plac-

ed out in the old orchard and a box was placed in one corner to furnish a warm bed.

Every morning Ben would turn a couple of shovelfuls of sod so the little pig could get some fresh roots, move the pen over to a new place, give it all the sour milk it would drink up, and plenty of fresh water.

At noon he would give it a slop made of milk, corn meal and bran, and the same night adding a teaspoonful of flaxseed meal every other night. He began by feeding one teaspoon of corn meal and one tablespoon of bran in each feeding of milk, and increased the amount until he was feeding a half cup of the corn meal and a cup of bran a day at the end of two months. This was not increased until the first of September, when Ben made a self-feeder and gave it all of the bran and corn meal mixed that it would eat until fair time, when his pig not only weighed sixty pounds more than any other pig of the same litter, but brought him three first prizes, one for the best pig in the boys' club, one for the largest pig for its age, and one for the best O. I. C. exhibited.

He feels that his success was due to the tonical success of the dandelion and other roots which the little pig seemed to crave, and to the morning's feeding of fresh sour milk. The doctor had told him to drink it fresh every morning if he wished to feel good, and he felt that if it was good for him it might be good for the pig.

The pig had all the green food it would eat all summer, besides its slop. The green food consisted of the orchard grass and weeds and such garden waste as poor beets, carrots, cabbage, etc., which Ben culled out as he worked in the vegetables.

When Roosevelt was president, he kept a picture of Lincoln hanging near his desk. Said he, "When I am confronted with a great problem, I look up to that picture, and I do as I believe Lincoln would have done. I have always felt that if I could do as he would have done, I would not be far from right."

Club Boys' Touring Outfit



THE picture above is of the demonstration team from the Felch Handicraft Club in Dickinson county, Michigan, and of the boy who won the trip to the State Fair from the eighth grade examination during 1921. These boys, together with their county agent, made the trip to Detroit on the railroads and drove back the distance of seven hundred miles, in a new automobile. From the time they left home until they returned they were guests of the Michigan State Fair, with all expenses paid. These boys, from left to right, are: Arvid Asplund, Albin Heggman, Walfred Anderson and Geo. Wickman. These boys are all back in school this year and are working hard so that they, or some other boys of their club, can win a trip this year.



# Current Contest Comments

By Uncle Frank

I HAD another fine bunch of letters to go through during the past week. On the whole, I think they were better than the contest letters we had last week, but there were not quite as many. This probably is due to the fact that many did not see the announcement of the winners of the March 4 contest as they had expected. There is a lot of work in "making up" a farm paper and many pages have to be "made up" quite a few days in advance. For this reason we cannot announce the winners until two weeks after the contest appears.

## The Winners

THOSE who won the dollar each in the March 11th contest are:

Marjorie Brown, R. 9, Coldwater, Mich.

Margaret E. Dobson, Box 4, Sutton's Bay, Mich.

Reffa Alberts, R. 1, Fenton, Mich.

Ford Chapman, R. 2, Leslie, Mich.

Franklin Kropschot, R. 2, Littlefield, Mich.

Say, boys, I am not putting your names last because I think the girls had better letters than you, but because I believe in "Ladies' First."

Question number four was the one on which most failed this time. Many confused the editorial, "Where Enthusiasm Works," with the quotation on enthusiasm on the Household Page. Nearly two-thirds of those who wrote did this. The comments on this editorial were very interesting, and Mr. Wermuth, who wrote it, wants to thank the many boys and girls for the good criticisms on it.

A little over one-third of the writers found the quotation but some found everything but the misspelled word. About one-fifth of all the letters got all the questions right. So you may well judge that I had quite a job picking the winners.

The girls are still in the lead in the number of contest letters sent, and the final score in the prize-takers was two to three in favor of the girls, which was the same as last week's contest. The boys who won this time had very nice papers. Keep coming boys.

### The Correct Answers.

The right answers to the questions in the March 1 contest are:

1. Department of Bacteriology, East Lansing. Page 8.
2. It ranks between corn and oats in value. Page 25.
3. Kalamazoo. Page 12.
4. "Always" is spelled wrong. Page 20.
5. Increase food supply, give one dram of fluid extract nux vomica and one-half ounce of Fowler's solution at a dose in feed or water two or three times a day. Page 29.
6. 120. Page 24.
7. Bordeaux mixture. Page 11.
8. 150,000,000 more creamery butter, 50,000,000 more dairy butter. Page 13.
9. Renan. Page 18.
10. Genoa, Italy. Page 15.

### Our Letter Box.

Last week I announced a correspondence corner, and already I have received quite a few nice letters for it. The editors could not arrange the space so we could start it this week, but next week we shall start, even if it is only a small beginning.

Just keep sending in the letters—

tell me about what you are doing and hope to do. I am sure this is going to be one of the most interesting parts of the Boys' and Girls' Department.

### CLUB CONTESTS AT DAIRY SHOW.

SEVERAL thousand dollars will be available for the Boys' and Girls' Club Department at the National Dairy Show in 1922 in accordance with the program outlined March 4 in the general offices of the National Dairy Association, which will be an increase of over one hundred per cent more than was used last year in this department. The tentative plan calls for an expenditure of \$3,500 by the National Dairy Show itself and the various breed associations will offer special prizes in addition.

The club department will be divided into three parts, namely, the judging contest, the demonstration work and the exhibit of the various herds and individuals. The judging contest will require an expense of \$1,500. The demonstration work representing one or more teams from a number of states will require \$1,000 and the exhibit will receive \$1,000 in prizes plus the specials offered by the breed associations. The tentative plan announced by the Holstein-Friesian Association is to offer the following prizes for county herds composed of seven head from each county for Holsteins as follows:

First, \$50; second, \$40; third, \$30; fourth, \$20; fifth, \$10.

A \$50 special will probably be offered by the Holstein-Friesian Association for the best state herd, provided it is composed exclusively of Holsteins.

The whole club program is enlarged

## Write and Win

LAST week it was Read and Win, but this time I want to give your brains a little different exercise. A change in exercise is a good thing, you know. So I am going to ask you to write on a subject you all know, under the heading, "Why I Like (or Dislike) the Farm."

You will notice that I put the word dislike in the title. I did this because, if you dislike the farm I would like to have you say so, and tell why.

The rules of this contest are: Do not use more than two hundred and fifty words; write on one side of the paper only and give your age. Originality, neatness and conciseness will be considerations in judging the winners.

The five best essays from boys or girls will bring their writers one dollar each. Anyone under eighteen years of age can try. The best way to win a prize in this contest is to tell in your own way as neatly as possible your thoughts on this subject.

Please address your letters to Uncle Frank, care the Michigan Farmer, Detroit, Mich.

and will be a great incentive for keen competition among boys and girls in dairy club work which will no doubt have a far reaching influence in increasing the growth of the dairy industry.

Billy—What are you drawing, Jim?  
Jimmy—Why, a dog!  
Billy—But where's its tail?  
Jimmy—Oh, that's still in the ink bottle.—Boys' Life.

## FENCE PRICES SMASHED

### ORDER FROM THIS AD. NOW!

## New Low Prices

### on No. 11 Gauge Fence

We are now ready to make immediate delivery on our New Line of No. 11 gauge fence. It is of the same high quality that has sold millions of rods of PENDERGAST FENCE to hundreds of thousands of customers in our 30 years of fence making. We have a fence for every purpose. Below are given only a few of the many fence bargains you will find in our new folder.

The letter H preceding the style number indicates the Heavy Number 11 Gauge fence. The other styles are our standard weight having No. 9 1/2 top and bottom wires and No. 12 1/2 filling. Write for our Money Saving Prices on our Extra Heavy All No. 9 Fence.

**THESE PRICES ARE THE LOWEST ON THE MARKET**

Style	Line Wires	Height Inches	Inches Between Stays	Weight in lbs. Per Rod	Price Per Rod Delivered in Ind. Ohio, Mich. & Ill.
726	7	26	12	5.5	\$ .26
7260	7	26	6 3/4	6.5	.30 1/2
832	8	32	12	6.2	.28 1/2
8320	8	32	6 3/4	7.7	.36 1/2
9390	9	39	6 3/4	8.7	.41 1/2
H-726	7	26	12	7.5	.32 1/2
H-7260	7	26	6	9.8	.37 1/2
H-832	8	32	12	8.6	.37 1/2
H-8320	8	32	6	11.4	.49 1/2
H-939	9	39	12	9.7	.42

**2 Point Hog Barb Wire heavily galvanized, weight about 1 lb. to the rod, per 80 rod spool. \$3.70**

**2 Point Cattle Barb Wire galvanized, weight about 1 lb. to the rod, per 80 rod spool. 3.50**

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We guarantee Pendergast Fence to be exactly as represented and to give perfect satisfaction or your money back. You are the judge. Whatever you say.

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**WE PAY THE FREIGHT AS ADVERTISED**

OUR three big plants are running full blast and we are shipping thousands of rods daily. Every single customer is not only getting the highest quality fence but he is making a big saving in price. Our factories are conveniently located to give you Prompt Service. Send your order on this coupon to our nearest factory and your fence will be at your station within a few days. If the style you want is not quoted above write for our big folder.

### PENDERGAST FENCE CO., Inc.

331 Main St.      232 Eaton St.      433 Division St.  
Stiffwater, Minn.      Fort Madison, Iowa      Elkhart, Indiana

GENTLEMEN:      My Postoffice is \_\_\_\_\_

Please ship me the following order freight charges prepaid. If I am not entirely satisfied with the goods I will ship them back freight collect and you are to refund every cent of my remittance and I will owe you nothing.

\_\_\_\_\_ Rods of Style No. \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ Rods of Style No. \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ Spools of Barb Wire \_\_\_\_\_ @ \_\_\_\_\_

Enclosed find check for \_\_\_\_\_

My name is \_\_\_\_\_      Railway Station \_\_\_\_\_

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## RURAL BABY CHICKS

We can save you money on your CHOICE STOCK. Bred to lay, free range, English Strain White Leghorns, Brown Leghorns and Anconas. Also hatching eggs and Pulletts. Be sure to ask for our prices on this Choice Stock, today. We pay the postage, guarantee satisfaction and 100% live arrival.

**CATALOG FREE.**

Rural Poultry Farm & Hatchery, R. 1, Zeeland, Mich.

### HA! HA! { 75,000 } CHICKS

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

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

### STRONG BABY CHICKS

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

**RANSOM POULTRY FARM.**      Geneva, Ohio.

### BABY CHICKS

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

**DURAND HATCHERY,**      Fenton, Mich.

### EVERLAY BROWN LEGHORNS

The beautiful business hen! Wonderful winter layers. Big white eggs. World Record layers. American Egg Contest. Greatest winners New York, Chicago. Hardy, vigorous money makers. Stock Eggs, Chicks, shipped safely. Catalog free.

**EVERLAY FARM**      Box 6      Portland, Ind.

### BABY CHICKS

White and Buff Leghorns, Barred Plymouth Rocks, Buff Plymouth Rocks, White Plymouth Rocks, Rhode Island Reds and White Wyandottes. 25 for \$5.25, 50 for \$10.00, 100 for \$18.00. FENTON CHICKEN HATCHERY, Box 244, Fenton, Michigan

### Barred Plymouth Rock

eggs for hatching \$2.00 per 13. Full blood stock. J. A. BARNUM, Union City, Mich.

### EGGS \$1 SETTING

Parcel Post Paid. Thorough-bred, Barred Rocks, White Rocks, Buff Rocks, White Wyandottes, Anconas, Buff Minorcas, White Leghorns, Brown Leghorns, Rhode Island Reds, Buff Orpingtons. Philip Condon, W. Chester, Ohio

### Hatching Eggs

\$1.25 settings, \$2 per 30, dotted, White and Barred Rocks, White Leghorns. Genuine Farm raised. Please order from ad. Satisfaction.

**GORET BROS.**      Corunna, Mich.

### EGG BRED CHICKS,

from high producing free range stock. 19 years experience in hatching and breeding White Leghorns, Barred Rocks and Anconas. Circular. Frank Heinz, Box 6, Comstock Park, Mich.

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S. C. W. Leghorns, S. C. Anconas and Barred Rocks. Quality chicks that please, guaranteed full count, 100% live on arrival, parcels post paid. Circular.

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### CHICKS

English S. C. W. Leghorns \$11 per 100. Barred Rocks \$16 per 100. Best laying strain known. By parcel post, alive delivery guaranteed. Henry Waterway, R. 4, Holland, Mich.

### English W. Leghorns

extra selected winter layers. Eggs 15, \$1.50; 100, \$7. prepaid. ORCHARD KNOLL, R. 2, Spring Lake, Mich.

### Eggs \$ .75 Setting.

Parcel post paid, selected eggs from strong, healthy Buff Orpingtons, Grant Salway, Jonesville, Mich.

### For Sale

Columbian Wyandotte Cockerels \$10.00 each. Hatching eggs \$5.00 per 15, \$8.00 per 30. F. H. WOODWARD, R. 6, Owosso, Mich.

### Original

Dr. Heasley S. C. Buff Leghorn flock. Egg Basket Strain. Officially Certified Egg bred. Winners at Chicago, Cincinnati, etc. Cockerels breeding hens and chicks, at bargain prices. Also bred to lay English Strain S. C. White Leghorn chicks for 1922. Discount on Early Orders. Hillside Hatchery Farm, R. 3, Holland, Mich. Successor to Henry DeFrie

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**Ducklings** EGGS AND DRAKES Price List Free. Box T. Pardee's, Islip, L. I., N. Y.

### Quality S. Wyan.

from State Champ. and Detroit Winners. Yearling cocks and chix. for sale. Eggs reasonable. Triangle Poultry Yards, Hillsdale, Mich.

### RHODE ISLAND WHITES

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

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

### ROSE COMB

Rhode Island Reds. Hatching eggs a specialty. Mrs. Albert Harwood, R. 4, Charlevoix, Mich.

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Quality Chicks From 284 egg strain, Farm Stock. Get my prices. At GRAND VALLEY POULTRY FARM, R. 4, Saranac, Mich.

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baby chicks. All eggs used by us for hatching produced on our own farm. Write for circular.

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Stock and hatching eggs. Bred-to-lay. Catalog free.

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cockerels Northrup Strain choice stock, \$3 and \$5. Hatching eggs, single settings or quantity. C. J. Deedrick, Vassar, Mich.

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**GUARANTEED**  
To Please You

English type S. C. White Leghorns and S. C. Brown Leghorn Chicks from Hoganized heavy laying selected breeders. 10 years of careful breeding for egg production. Our chicks are hatched right and will grow right and are easy to raise. We guarantee satisfaction. Order now for March and April delivery. Prices very reasonable. Catalog free.

**ROYAL HATCHERY**  
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**DAY OLD CHICKS**  
HOMESTEAD FARMS



Michigan people: Here is something in your own state to interest you. Let us send you a description of our Pure Bred Practical Poultry

Here is an egg producing poultry stock such as the farmer poultry-woman wants. It is proving out in actual eggs in the hands of the farmer poultry people who buy it.

White, Brown and Buff Leghorns; Anconas; Black Minorca; Barred, Buff and White Rocks; Rhode Island Reds; Wyandottes; Orpingtons.

This stock is culled and bred on the plan of the state Agricultural College, and all the Hens in the Breeding Colonies are practical egg-producing Hens.

If you will send for a description and egg record of this Pure Bred Practical Poultry, you will find stock that it will pay you to buy. Buy Day Old Chicks this year and see the results you will get.

**EIGHT WEEKS OLD PULLETS**

We shall have 5000 Eight-weeks and Three-months Pullets to sell in May, June and July in all our breeds. Orders can be placed now for these Pullets. We will send you description and Price List.

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Postage Paid. Live arrival guaranteed. Write TODAY for valuable FREE Booklet, "How to Raise 90% of Your Chicks," also interesting Catalog, describing convincingly, WHY you should purchase our "Better Hatched" Chicks. Co-Operative Breeding and Hatching Co., Box H, TIRO, OHIO.

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For years we have been building up utility heavy laying strains of exhibition quality so our customers will be assured of success. 12 leading breeds. 12c each and up. Safe arrival guaranteed by P. P. Prepaid. Catalogue free. Ovie's Poultry Farm & Hatchery, 32 State St., Marion, Indiana

**100,000 Reliable Chicks for 1922**

Of quality, real value for your money. Anconas, Brown Leghorns, American and English White Leghorn strains, with the long deep-bodied loop combed kind that lay the large white eggs, from Hoganized selected flocks. Post paid to your door at reduced prices. Get our information and price list free before you buy elsewhere.

**PAUL DE GROOT, Prop.**  
Reliable Poultry Farm & Hatchery,  
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**ANCONAS "Superior Quality"**  
baby chicks and fertile eggs from M. A. C. selected 250 egg strain hens, mating list free.  
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**DAY OLD CHICKS**

White Leghorns \$15 per 100; \$8 for 50; and \$4.25 for 25. Barred and White Rocks, White Wyandottes and Rhode Island Reds \$17 for 100; \$9.00 for 50; and \$4.75 for 25. Order from this ad, terms cash with order. Custom hatching 5c per egg, hatchery capacity 9600. Hatchery 4 miles east of Mt. Morris on Mt. Morris road one mile north and one east. Valley Phone No. 14-5. ROSS WADE, Prop. Meadow Brook Hatchery, Mt. Morris, Mich.

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**Spring Management of Bees**

Some Essentials in Honey Production

By George W. Price

THE object of spring manipulation is to produce a large amount of brood, so that when the honey-flow comes on there will be a great number of gatherers. The condition of a colony of bees in the spring depends almost entirely on whether the bees have been properly wintered or not. A properly wintered colony will need practically no attention in the spring. When a colony has a good queen and goes into winter quarters strong in young bees, it will usually pick up to good rousing strength in time for the honey-flow, provided, of course, that it had plenty of stores and was properly housed. Bees wintered in single-walled hives in the northern states will always be in bad condition, if not dead, by spring.

As soon as the weather is warm enough for bees to fly, each colony should be gone over to see if it needs stores and to determine its strength. If the bees were wintered in the cellar

there will be no disturbance. The two colonies will soon be working in perfect harmony and the queen of the weak colony, if she is any good, will quickly pick up on her egg laying. It is a good plan, especially for a beginner, to put a wire cloth screen between the hives for the first two or three days. The two colonies will soon have the same odor and when the queen excluder is put on, the bees from below will not kill the strangers. With a very weak colony it is best to take a frame of brood with the adhering bees from the strong colony. The queen must not be on this frame. Put it into the weak colony and put the weak colony's queen on it. Then close the hive for about half a day before setting on top of the strong colony.

**Handling Weak Colonies.**

In about a month both hives will be full of bees and brood. They may then be separated. Move the stronger colony to a new location and set a board



Many Michigan Farms Find an Apiary a Profitable Sideline.

this should not be done until the bees have been out of the cellar about a week. If it needs stores it is best to give a frame or two of honey, if it can be had. Do not feed sugar syrup, but use bee candy, if you have no honey. Be sure that each colony has a queen. Old queens sometimes die during the winter, thus leaving the colony hopelessly queenless. Such colonies are not active in pollen gathering. They may be united with other colonies, or if strong enough may be given a queen of their own.

**The Cause of Spring Dwindling.**

If the colony went into winter quarters with old instead of young bees, the bees will die off faster in spring than they are replaced by emerging brood. This is known as "spring dwindling." If spring dwindling begins it is well to keep the hive warm so that the old bees may utilize their energy to the best advantage in rearing brood. Reducing the brood chamber may help. Some bee-keepers unite two or more of these weak colonies to make a strong one, but this is not a very good plan, because though the colony may seem all right when united, it will soon be as small as any one of the units which went to compose it.

A much better plan is as follows: Go over each colony carefully to determine its strength. Mark the weakest ones and mark the same number of strong ones. The weak colonies are to be set on top of strong ones with a queen excluder between the hives. The work must be done very carefully so that neither colony will be excited. Especially avoid exciting the strong one. It is a good plan to leave the strong colony open a few hours before, with only the queen excluder on top. Set the weak colony on very carefully, so

up against the front of the hive or throw some brush in front so the bees will notice that the location has been changed. This plan makes two strong colonies where there would have been only one, and is very satisfactory where there is not a great many hives to care for.

Many of the large producers sacrifice the weak colonies to build up the medium. One would think that a half strength colony would gather about half as much honey as one of full strength, but this is not the case, for a half-strength colony will probably not go into the supers at all, while a strong one will fill several supers.

**Uniting Colonies.**

When the colonies are examined in the spring they are marked as to weak, medium and strong. The weak colonies should be united with the medium. The best way to do this is to set the weak colony on top of the stronger one with a thickness of newspaper between. The bees will soon gnaw through the paper and unite peacefully. When the two queens meet there will be a battle, in which one queen will kill the other. The best queen will usually survive. If the apiary is run for extracted honey the hive may be left double through the season, but if run for comb it is better to remove one story just before the honey flow begins. Leave as much sealed brood as possible and give the rest to weaker colonies. As there are usually as many medium strength colonies as there are strong and weak together, it is well to build up the medium by giving brood from the strong. Where this is done, sealed brood should be given, if possible, as unsealed brood might die from lack of bees to care for it.



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Price List.	Prepaid to You.	Purebred Stock.
Wh. & Brown Leghorns	12.00	6.50 3.50
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Black Leghorns	15.00	8.00 4.25
Ancona & Minorcas	15.00	8.00 4.25
R. I. Reds	15.00	8.00 4.25
Barred Rocks	15.00	8.00 4.25
Buff & Wh. Rocks	16.00	8.50 4.50
Wh. & SL Wyandotte	16.00	8.50 4.50
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Start the season right with chicks that can be depended upon to produce profitable heavy egg producing hens. Farm at Hudson, O. Mail orders to J. KREJCI, 2165 East 89th St., Cleveland, O.

**Wouldn't You Rather Have Your Chicks HEN HATCHED?**

It would not be practicable to set hens on 250,000 eggs, so we are putting them into Mammoth FRESH AIR Incubators that almost beat the old hen at her own game. All eggs from selected flocks and all hatched in BUCKEYE'S—the machine with the 3 BIG ELECTRIC FANS. Chicks not taken out and shipped till ripe and right, on the 22d day. They are not cheap chicks, but cheap at the price. Compare them with the hen hatched kind.

	Mar. 27-30	April 3-6
B. P. ROCKS	\$17.00	16.00
R. I. REDS	17.00	16.00
W. WYANDOTS	19.00	18.00
BF. ORPINGTONS	19.00	18.00

Add 50c for 1/4 and 3/4 hundreds. 100% live delivery guaranteed. Mailed post paid. All Buckeyes hatched in forced draft ventilation. Strong, fluffy, lively chicks.

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**A Good Place**

to buy your S. C. White Leghorn baby chicks. Because we hatch from our own stock only. Large vigorous free range stock that have been bred for eggs, and vitality for several years. We ask a trial order at our very low prices. It will convince you they are right in every respect. And will give us your future business. Also some good Rocks and Reds. Ask for catalogue.

SUPREME POULTRY FARM, Fremont, O.

**Day Old Chicks** From best selected flocks, all popular varieties, chicks and prices that are right. Send for price list, HOMER HATCHERY, Homer, Mich.

**POSSIBLY RHEUMATISM.**

Can you tell me what ails my Barred Rock hens? They seem to be well but get spells when they can't walk. When trying to walk they will drag their feet and in a few hours will get up and walk again. There are four of them in that condition. They all lay pretty good. I feed them all the mash they can eat and give them two quarts of wheat a day, and sprouted oats at noon.—E. K.

When lameness comes and goes it is often due to rheumatism. This might be caused by dampness in the hen house. The condition can be improved by keeping the house as dry and well ventilated as possible. A teaspoonful of castor oil for each bird may be helpful. If the hens have leg weakness and lose control of the legs entirely, it is doubtful if any treatment will help them. This condition is not thoroughly understood but is usually prevented by feeding the hens a balanced ration and making them exercise. As soon as the hens can use the range in the spring the trouble will probably disappear. The hens might keep in better condition in cold weather if at least half their scratch grain consisted of corn instead of all wheat.

**ROOSTER CHOKES.**

I have a rooster that seemed well until about a week ago when it seemed to get dumpish. When attempting to eat it would choke, twist its head side ways and backwards and fall over. I would run my fingers along its neck and when I would touch a certain spot it would make repeated attempts to get away, which indicated to me that that particular spot was very sore. The inside of the throat looked sore and inflamed. Would you tell me what is the cause of this and what I could do for it?—M. A.

Occasionally bits of foreign matter such as straw or sharp briars might become lodged in a bird's throat and cause inflammation as well as choking whenever the bird tried to eat.

The only remedy would be to remove the obstruction if possible, or give the bird a dose of castor oil and isolate it from the flock for observation. Injury to the neck by some accident, such as a kick by a farm animal might cause similar trouble. In such cases nature has to take its course as any other treatment is rather difficult.

**FEEDING SOUR MILK.**

Please give me the proper way to feed separated milk to laying hens. We have one hundred pullets which we are feeding about fifteen quarts daily, a portion of it mixed with bran mash at noon and the balance given warm to them in the morning. We are also giving them fresh water at noon. Our pullets are doing fairly well, and what we wish to learn is which way we will get the best food value, whether sweet, sour or made into cheese. We would also like a balanced egg-making feed ration.—H. W.

Poultrymen prefer to feed milk all sour as it is found that alternating from sweet milk to sour milk is apt to bring on digestive disorders. As the milk is very apt to sour anyway after being placed before the birds, it is best not to give any of it until it has soured. We feed the milk in crocks during warm weather as they are heavy and not tipped over easily and can be scalded and cleaned quickly. In the winter the crocks are easily broken if any liquid freezes in them.

A good dry mash can be made of twenty pounds each by weight of bran, middlings, ground corn, ground oats and tankage or meat scrap. If you have plenty of milk before the hens at all times the amount of meat scrap can be cut in two as too heavy protein feeding is bad for the health of the birds. The tankage must be high-grade to be the equal of beef scrap.

It's the happy hen that lays the eggs.



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**17 Years of Careful Breeding for Egg Production**

You get the advantage of 17 years of careful breeding which brought our flocks up to their present High standard. Our wonderful winter layers are headed by large, vigorous and Pedigree sired males of exceptional quality.

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Mr. F. L. Hess, Chicago, Ill., writes: "I averaged 112 eggs a day from 140 of your pullets and sold \$158.00 worth of eggs in February."

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Intelligent chick buyers of today do not take chances with ordinary stock. Our enormous output enables us to sell these money makers at a price that positively cannot be equaled.

**We Ship Thousands of Chicks Each Year**

Every shipment is sent by PARCELS POST PREPAID, and we guarantee 100% live delivery. Send for our illustrated catalogue and prices today, it's Free.

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**BUY HUBER'S RELIABLE CHICKS**

**Our 13th Year 700,000 for 1922**

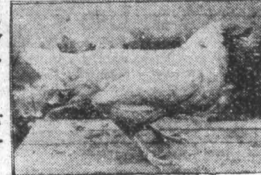
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ALL FLOCKS on free range, vigorous and healthy, culled by M. A. C. experts, for years headed by Pedigreed Males.



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All chicks sent prepaid to your door and live arrival guaranteed.

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Bred-To-Lay from flocks selected for standard quality and production. We offer Exceptional values in following varieties: Leghorns, Rocks, Reds, W. Wyandottes, Orpingtons, Minorcas and Anconas. Our prices are right when quality is in consideration as this should be the main point in view. Get our big catalogue of Baby Chicks, Brooders & How to Care for Your Chicks after you have them, it is FREE, for the asking. Write today.

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

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50 hens laid 1170 eggs in Jan. Eggs \$2.00 per 15; \$10 per 100. EVERGREEN POULTRY FARM, Blanding & Sons, Greenville, Mich.


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

Additional Poultry Ads. on Page 385



# In Dairies



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MADE BY THE KOW-KARE PEOPLE

## The Way of Meat Prices

Beef Declines While Consumption of Lamb Increases

There has been a considerable falling off in meat production in the United States since the war record of 1918, when about 17,500,000,000 pounds of dressed meats, excluding lard, are estimated to have been marketed, of which 2,500,000,000 pounds were exported. Economic conditions, at first favorable to producers and later very unfavorable, have since then, however, operated to cause a production, of upwards of 16,000,000,000 pounds each year up to and including 1921, but the exports last year had fallen to 820,000,000 pounds, or only one-third as large as those of 1918.

### Heavy Decline in Beef Since War.

The great war effort of beef growers in 1918 resulted in the marketing that year of 15,750,400 animals, which yielded about 7,500,000,000 pounds of dressed beef. This number has never

ly one-half of it was re-exported. The exports of domestic mutton in 1921 for the first time began to show some importance, being 20,000,000 pounds, or four times as large as in any previous year.

Consumption of mutton and lamb in the United States is only about six pounds per person per annum and is very small compared to beef and pork. It is smaller even than veal, of which about eight pounds per person is consumed. Judging from the increased consumption last year, however, the campaign "Eat More Lamb" seems to have had some effect. Still we have a long way yet to go to catch up with Britain, or even France. According to figures previously published, the average Briton consumes relatively about seven times as much mutton and lamb as the average American, while the



Jay Harwood's Herd of Eighty Registered Herefords Headed by Captain Stanway and Keep On.

been approached before or since. In three years the cattle slaughterings have fallen to 12,271,280 with an accompanying decline of over a billion pounds in beef production. Since 1910 the consumption of beef per head of the population in the United States is shown to have decreased a fraction over twenty pounds.

The exports of beef products fell from 728,000,000 pounds in 1918 to only 52,000,000 pounds in 1921. A large reduction in export shipments was to be expected, however, as the United States for several years before the World War was not a beef-exporting country. South America and Australasia have become the great sources of cheap beef and mutton, and naturally dominate the foreign trade in those commodities.

Falling prices for live stock continued in 1921, so that farmers generally faced a very difficult financial situation. Low values were accentuated by uneven marketing, attributed to forced liquidation on the part of many owners.

### Veal Gains Halted in 1920.

Perhaps the most outstanding feature of the domestic meat situation in recent years has been the increase in the production and consumption of veal. The number of calves annually slaughtered increased steadily from 1915 to 1919, and calves marketed in that year almost doubled the number in 1914 and 1915. The upward trend was halted, however, in 1920, and veal production has fallen back somewhat in the last two years.

### Lamb Consumption on Increase.

The table showing sheep and lamb slaughter is marked by considerable irregularity. The slaughter was greatest from 1911 to 1914, after which it declined for three years, then increased for two years, declined again in 1920, and last year rose sharply to the highest total in six years.

Exports and imports of mutton and lamb have been almost negligible until 1920, when New Zealand frozen lamb carcasses were imported in large quantities, making an epoch in the trade. The total weight imported during the year was 101,000,000 pounds, but it failed to find a ready market, and near-

average for France is nearly four times as much.

### Lard Exports Largest on Record.

Pork production in 1920 and 1921 fell considerably below the high record made in 1919 when marketings were unusually large, due to a great extent to the high prices prevailing during that year, including the highest ever paid for live hogs. Nevertheless, the home consumption of pork was slightly greater in 1920 and 1921 because of the heavy decrease in exports. The record exports of bacon and hams in 1919 have in two years been reduced almost two-thirds, the totals for these two items in round figures being 1,787,000,000 pounds sent abroad in 1919, 822,000,000 pounds in 1920, and 648,000,000 in 1921.

The one bright spot in the foreign trade situation in 1921, as related to meat products, was the exports of lard, which were the largest on record. More lard was exported in 1921 than all meats combined. The total shipments amounted to 893,000,000 pounds, a substantial increase over recent years and an increase of fifty-five per cent over the pre-war year 1913. A factor in this result was the resumption of heavy trading with Germany, which, next to the United Kingdom, is the largest foreign consumer of our lard.

### DAIRY SCHOOLS FOR TUSCOLA COUNTY FARMERS.

Dairy schools were held on three farms in Tuscola county on Friday, March 17, under the direction of Prof. O. F. Reed, of the M. A. C. dairy department. The first school was called at 9:30 o'clock at the farm of Paul Gruber, one mile south of Richville, another school at the farm of Jacob Bickel, one mile north and a half mile west of Tuscola village, at 1:30; and the third school at the farm of Charles Snell, three miles east of Richville, at 3:30. Care and feeding of dairy cattle, cow-testing and other features were discussed.—M.

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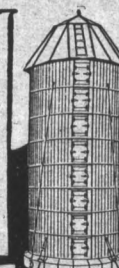
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# The Man, the Cow, the Feed

*How to Hook this Tandem Into a Profitable Team*

**M**ANY factors enter into successful dairy farming. Three of them are of vital importance. First, there is the man. It is said that some men attempt to qualify as expert machinists who would not keep a wheelbarrow running properly. Similarly, some men attempt to make dairymen out of themselves when they have no qualifications for handling live stock. They are out of their element. The man who does not like live stock, but who is good at following rules, may get along fairly well with dairy cattle. But this is the exception and not the rule. When we find milk reaching city markets containing up to fifty million bacteria per cubic centimeter and see the great number of undernourished scrubby looking dairy herds that are found in every county in the country, we are almost inclined to believe that the proportion of misplaced workers in the dairy industry must be particularly large.

Any man who does like live stock, however, is willing to intelligently study the problems connected with milk production, can make a surer living out of the dairy cow than from any other line of farming.

Then comes the cow. It is wasted effort to give good care and good feed to cows that just simply haven't it in them to make milk in profitable quantities. The profitable dairy herd is

composed of cows from good producing ancestors, either grade or pure-bred, that have been themselves proven producers through one or more lactation periods. Sometimes we are inclined to believe that there are more poor feeders than poor cows, and that many of the so-called 3,000-pound cows would produce 5,000 or 6,000 pounds of milk if only given half a chance. On the other hand, there are cows producing 5,000 and 6,000 pounds of milk that should be producing 8,000 or 9,000 pounds on the feed and care that they receive. The ability to select good cows is the first and most important attribute of a good dairyman.

Finally, there is the question of feed. The farmer who is a good dairyman and has good cows, will be only an indifferent success unless he operates his farm to produce maximum quantities of nutritious roughage. On the dairy farm, large acreage will be devoted to legumes such as red clover, sweet clover and alfalfa, to the production of succulent crops, such as roots and corn for ensilage with a small acreage comparatively in grains. Where such crops are grown, very little feed will need to be purchased outside of heavy concentrates to supplement the coarse grains produced at home and there will be a maximum of increase, a minimum of outgo, and satisfactory profits.

# Dairymen to Market Products

(Continued from page 357). which it ships its cheese. They have contracted with the Wisconsin Cheese Federation to act as their sales agent and by so doing they have made the federation just so much stronger.

The cost of cooperative handling of cheese has been reduced so that the federation is able to do it for 1.2 to 1.6 cents on every dollar's worth. The cost through private dealers is from 4.7 to 9.3 cents on the dollar, as shown by the Wisconsin College of Agriculture.

Supervision of factories and strict grading of the product is one of the great features which is making for success in this organization. Mr. E. L. Alderhold, who has been connected with the Agricultural College of Wisconsin, and who has served as inspector for the state on cheese factory work for the past thirty years, is factory supervisor for the Federation.

When cheese arrives at the warehouse and is found to be off grade, Mr. Alderhold visits the cheesemaker and instructs him in ways to overcome the defects. In this way the product of the federated factories is standardized.

A few years ago some very large interests entered the cheese trade of Wisconsin and made it known that they would handle cheese with a large per cent of moisture in it and the factories could ship it out the day it was made. This reduced the work of the cheesemakers several hours per day and was part of the plan to keep factories out of the federation. This also gave Wisconsin cheese quite a setback in the consuming markets.

The state was forced, by this method, to pass laws to protect the dairy industry and put laws into effect prohibiting the shipping of cheese before it was three days old and limited the moisture content to thirty-eight per cent.

The federation has started to advertise a Melocreme cheese in Milwaukee with quite good results. Melocreme cheese is the highest quality of American cheese, which the association handles, and is being called for in the

large markets. This association sells nothing except American cheese and through their method of grading and standardization they are building a valuable reputation for quality.

There is a surplus period every year during the months of April, May and June, in which much more cheese is made than is consumed. At this time the dealers take advantage of the price and buy for storage and by holding make good money generally.

Last year, by informing the buying trade that cheese would be sold for thirteen cents per pound, the men who are against the federation were able to get the trade to stop buying and the price did go that low—and then came back to twenty cents by the end of the surplus period. This year the federation intends to store and hold their cheese through this period and finance the holding with warehouse receipts.

The cheese producers of Menominee county are considering the organization of a warehouse and cooler company for their twenty-two factories. This would enable them to market their cheese through the Wisconsin Cheese Federation the same as the Minnesota farmers are now doing. This seems to be the only solution for putting their business on a sound basis. In the past every factory has been making the best bargain possible with some dealer and these dealers have not been able to get the best price on account of the varied qualities they have been buying. The farmers are beginning to realize that only large volume of standard goods will get them the results they are looking for. The very best trade will not buy food products, no matter how good the quality, from a small factory because he will only just get the tastes of his customers educated to the quality when he finds the supply short. He wants to know that the supply will be continual before he will buy the best quality.

Therefore, a large supply of standard produce sold by the best talent, under the control of the farmer's will, is the only way to save to the producer that which he should have.

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

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**BUTTER BRED JERSEY BULLS** FOR SALE  
CRYSTAL SPRING STOCK FARM,  
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**For Sale Jersey Bulls** ready for service; Lad. Majesty breeding. **WATERMAN & WATERMAN,** Packard Rd., Ann Arbor, Mich.

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Now offering—Three bulls ready for service. Mastodon, Clansman, Emancipator blood in gilts bred for spring farrow. See them.  
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Branch County **Mgr. Branch Co. Farm**  
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**Stock Farming**

**ON HANDLING LAMBS.**

**I** READ in your issue of March 11 an article, entitled "Handling the Young Lambs," by L. W. Oviatt. I am going to make two suggestions along lines referred to. I have been a breeder of Merino sheep for years.

First, I would not use warm water except as a last resort, as the lambs are more liable to take cold than if by dry-warming up. During lambing season, have a quantity of bricks hot for use and place a layer in the bottom of a suitable basket. Cover well with old carpet, under as well as over to retain heat, and protect the lamb. This will generally do the work and the mother will not disown as often as is the case if taken away for a time. Also, should there be twins, they may be kept together while warmed and dried.

The other is regarding the eyes. It is a very common thing to have the eyelids turn in on wrinkly sheep. Turn the lid out and then with a sharp pair of sheep shears clip the wrinkle off. You need not fear going through the eye. You only clip off the outer skin and you will be surprised how the lid opens. I have found it necessary to clip both lids on a few, but I never cut off the outer edges of the lids, only the wrinkle and not only through the first skin. They always get well very soon.—O. DAUGHERTY.

**HURON COUNTY FARMERS FATTEN CATTLE FOR SPRING MARKET.**

**T**HERE are more cattle "on feed" in the western half of Huron county than in a number of years, according to Frank Hutson, of Bad Axe. In former years these cattle were purchased in Chicago, but during the past two years farmers have learned they can get a supply in this county and that the animals bought at home show greater gains than western cattle. Tuscola county farmers alone bought close to 1,500 feeders from Bad Axe last fall and these animals will be on the market this spring. Not many cattle are fattened in the eastern half of the county or in Sanilac county, but a good many are raised there for stockers.

Buyers are paying nine and a half cents for live hogs, quite a raise from last fall when five and a half to six cents was paid. Because of low market prices many farmers went out of the hog-raising business and now they are wishing they were in it again, but they can not get pigs. Mr. Hutson says lower prices will prevail if this country does not do something to curb importations from South America, where it is said the packing houses are full of stock and waiting to dump on the market here.—J. C. M.

**ATTEMPT BOYCOTT OF FARMERS' COMMISSION HOUSE.**

**C**HARGING that a boycott against cooperative live stock commission firms has been attempted at the St. Louis National Stock Yards, Secretary of Agriculture Henry C. Wallace recently issued a formal complaint against every "old line" live stock commission firm that is a member of the St. Louis Stock Exchange, and against the principal order buyers, dealers and traders at that market.

The offenders, 110 in all, who have refused to do business with the National Producers' Live Stock Commission Association as well as other independent farmers' cooperative live stock marketing companies not members of the exchange, were cited to appear in

federal court at East St. Louis, Illinois, March 20 to show cause why an order should not be issued against them, under the Packers' and Stock Yards Act, to "cease and desist" from the practices complained of. It is claimed that the defendants not only boycotted the cooperatives but any firm that did business with them.

This is the first formal complaint issued under the Packers' and Stock Yards Act approved August 15, 1921, and its issuance is the outgrowth of a considerable amount of complaint at the St. Louis market, it is said.

Opening for business on January 2, the Producers' Live Stock Commission Association at St. Louis, climbed to first place in volume of business within seven weeks. Not only has it maintained first rank since among all commission firms, but the total volume of business handled by the four cooperative firms now amounts to more than twenty-five per cent of the entire receipts at this market. In conformity with the cooperative plan all earnings on commissions are pro-rated back to the members by the farmers' companies. At South St. Paul Stock Yards and elsewhere it has been demonstrated that where producers' companies get volume the regular commission charges can be materially reduced.

**LOCAL WOOL POOL ARRANGEMENTS.**

**C**HARLOTTE, Owosso, St. Johns and Howell have been given first local pooling dates in late April by the management of the Michigan State Farm Bureau's 1922 wool pool, which was opened recently. At present wool is being received at the Lansing warehouse where a forty per cent cash advance is being made on the current value of the graded wool. Twenty-three local pooling points in the first tier of Michigan counties had been scheduled March 14. This year the farm bureau wool department is profiting by last year's grading campaign and is consolidating some county pooling points for greater economy and efficiency in pooling.

Announcement of the pool is followed by reports of wool coming into the Lansing warehouse. Two Michigan farmers can claim the honor of being No. 1 on the farm bureau's 1922 wool pool account books and the first to have their wool in the 1922 pool. They are No. A-1, George Middlestitch, of Jackson, and No. 1, James Chesney, of Grindstone City.

Early reports regarding the 1922 pool show that wool storage is costing less in 1922, fewer storage places will be needed under the plan of shipping direct to the central warehouse after local grading for assembling and sale. Two previous pools have shortened up the lines of communication everywhere and the farm bureau is making arrangements at considerably less expense than heretofore. Full cooperation is being given the pool in the counties, the bureau says.

**CARO SHIPPERS NAME OFFICERS AGAIN.**

**C**ARO Shipping Association has re-elected all its former officers, who are: Edward Coler, president; J. P. Richards, secretary-treasurer; directors, Frank Arnold, R. D. Robinson; manager, Nate Pattison. During 1921, fifty-six cars of stock were shipped by the association, net sales amounting to \$84,702.85. Of the stock shipped there were nearly three thousand hogs, 556 cattle, 515 calves and 556 sheep.—M.





THE HOG BARN

Note the patented corner brace Hoosier Tile. Patented corner brace is the ideal material for permanent farm buildings...



Pull Stumps NOW Pay After Harvest

Clear your land now—plant your waste acres—pay for your KIRSTIN Stump Puller after harvest with extra crop money...

MINERAL COMPOUND FOR SYMPTOMS OF HEAVES. In use over 50 yrs. Booklet Free. \$3 Pkg. guaranteed to give satisfaction or money back...

I will condition a Horse or Cow in twelve days. Put flesh on its bones. Give it life and vigor. Can add 50% to looks and value...

Auction Sale

At the Square Deal Stock Farm 22 HEAD OF REG. HOLSTEINS ON WED. MARCH 29, 1922. Rain or Shine at 10:30 A. M. 4 1-2 miles northeast Imlay City...

CATTLE Jersey Bull For Sale Spermfield Owl breeding. Herd tuberculosis tested. Satisfaction guaranteed. Age six months...

JERSEYS. Fresh cows, heifers, heifer calves, 1 bull. Terms if desired, L. R. KUNEY, Adrian, Mich.

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

BIDWELL SHORTHORNS BUY A BULL that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings...

The Maple's Shorthorns Kirk Levington Lad, by imported Hartforth Welfare, in service. Bulls and heifers for sale.

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

C. W. Prescott & Sons, Tawas City, Mich. FOR SALE AT Fairacres Stock Farm. 2 young Shorthorn bulls. 1 light roan born March 26, 1920...

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer...

Fetlock Joint Lameness.—I have a horse that has limped for two months, the trouble is in ankle joint. M. D., Grand Ledge, Mich.—Apply equal parts of turpentine, aqua ammonia and raw linseed oil to fetlock joint daily.

Stifle Lameness.—Colt coming three years old has been troubled in stifle ever since, or soon after, birth. He is yet lame, but joint does not slip out of place. What can be done for him? H. B., Brutus, Mich.—Apply equal parts tincture of iodine and camphorated oil daily to stifle joint.

Piles.—My young pigs commenced to scour; later on the bowel protruded and some of them died. Another pig holds head to one side and staggers when walking. C. D., Cassopolis, Mich.—Dissolve one ounce of acetate of lead in one quart of cold water and wet protruding part three times a day.

Sore Leg.—I have horse eight years old that got kicked this winter; since then bunch opened. She got relief. Proud flesh fills the wound. Have applied burnt alum, also blue vitriol, which has worked fine, but I would like to heal sore. J. H. R., Concord, Mich.—Apply equal parts of iodoform and boric acid, also cover sore with oakum and light bandage.

Shy Breeders.—Some of my cows fail to get with calf, they come in heat every four weeks. My bull is a sure breeder as he gets some of my cows with calf and all my neighbors' cows with calf. F. H., Plymouth, Mich.—Dissolve a cake of yeast in one quart of water, let it stand in warm room for two or three hours then flush vagina. Apply this treatment daily for one week before cow comes in heat and two or three hours before service. Please report results.

Bunch on Knee.—I have a very valuable horse that has a bunch about the size of a man's two fists on front part of knee joint. The bunch has a hard center and prevents leg flexing more than forty-five degrees. Leg was bruised one year ago, but has never been treated, but chest and shoulder is sweened. Moderate work fails to make him worse. D. J. B., South Bend, Ind.—All things considered, you had better leave the leg alone, and avoid driving him faster than a walk.

Docking Aged Ewes.—I have some ewes 3 and 4 years old with long tails and I would like to cut them off. Is there any danger in docking old ewes? When is the best time and what shall I apply to wound? W. S., Merrill, Mich.—It should not be done in very cold or very hot weather. When done ligate tail to stop hemorrhage and don't allow the bone to protrude, dis-joint and allow flesh to heal over end. Apply one part iodoform and ten parts boric acid to wound. Ewes far advanced in pregnancy should not be docked, until after they lamb.

Contagious Abortion—Shy Breeders.—I have four cows which lost their calves. The first one lost her calf one year ago, the other three when six months along. Have been breeding these cows regularly since they calved but they don't get with calf. I have flushed vagina with soda and water. I have five other cows that are with calf. Do you believe they have infectious abortion? My barn floor is cement and quite smooth. E. T., Waldron, Mich.—Doubtless you have contagious abortion in your herd. Clean and disinfect cow stable.

Barren Mare—Vaginitis.—I have a thirteen-year-old mare that had a colt two years ago, colt came hind legs first and it died. Mare has failed to breed since, comes in heat about every two weeks; after service she discharges mucus for four days, and sometimes seems all right after she is bred, then discharges mucus between heat periods. I am anxious to get her with foal. R. L. R., Caro, Mich.—Have her examined by a qualified veterinarian, who will ascertain the cause of her failure to breed. Perhaps she was injured at foaling time and some surgical work might make her well. Flushing vagina with one part lysol and 100 parts water daily, might help her.

Claradale Milking Shorthorns We invite the discriminating breeder and farmer, who is in need of a real bull, that will transmit the combine qualities, beef, milk, high in butter fat, type, character, beauty. We do state official milk testing. Come and see us or write for circulars and reasonable prices. F. W. JOHNSON, Ouster, Mich., Mason Co. Box 25

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

Milking Shorthorns of best Bates breeding, bulls, cows and heifers for sale. E. H. KURTZ, Mason, Mich

BERKSHIRES Special prices for registered Berkshire breeding stock: 10 Mature Bred Sows \$75.00 Best type with size and quality. Satisfaction absolutely guaranteed. Write for information. C. C. COREY, 2428-30 First National Bank Building, Detroit, Michigan

Brookwater Duroc Jerseys Gilts for May and early June farrow. Ready for service boars. Satisfaction guaranteed. Prices are reasonable. Mail orders a specialty. BROOKWATER FARM, H. W. Mumford, Owner J. B. Andrews, Manager, ANN ARBOR, MICHIGAN

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

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

Associated Swine Farms, Inc. Peoria, Ill. Guaranteed Animals Satisfied Customers. Big profits in our pure bred Duroc Jersey registered, immune pigs. Write for free illustrated descriptive, educational circular with prices. ASSOCIATED SWINE FARMS, INC., Box 270 B Peoria, Ill.

Duroc Bred Sows \$40 to \$50. Service boars \$25 to \$35 and fall pigs \$15 and \$20. We register in your name and guarantee satisfaction. We have one of the largest and best herds in the state. Write for special sale folder. Michigan Farm, Kalamazoo County, Pavilion, Mich.

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

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

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

DUROCS WITH QUALITY Spring pigs by Walt's Orion, First Sr. Yearling Detroit, Jackson, Gd. Rapids and Saginaw 1919 Phillips Bros, Riga, Mich. Herd headed by Great King Orion Col. assisted by a good son of King Orion, Fancy Jr HARRY FOWLER, Sturgis, Mich.

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

Westview Duroc Bred Sows all sold. Have two spring boars left at a reasonable price. Will book orders for April & May Pigs. ALBERT EBERSOLE, Plymouth, Mich

DUROC—JERSEYS Sows all sold. E. D. Heydenberk, Wayland, Mich.

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

Duroc Jerseys Bred Gilts all sold. Now offering some choice fall boar pigs large enough for spring service RUSH BROS., Romeo, Mich.

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

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

Chester Whites Spring pigs by Monster, Raleigh B. Choice Prince and others. Money back guarantee. Fred L. Bodimer, Reese, Mich.

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

Chester Whites All sold. Spring boars at weaning time, \$15. ALBERT DORR, Clinton, Mich.

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

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

O. I. C. BRED GILTS shipped C. O. D. Mason, Mich. J. CARL JEWETT,

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

O. I. C. and Chester White Spring Pigs from prize-winning stock of the most popular blood lines. We ship C. O. D., register in buyer's name and guarantee satisfaction. J. A. WILK & SON, Alma, Mich.

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

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

O. I. C. Bred gilts all sold. Orders booked for spring pigs. A. J. BARKER & SON, Belmont, Mich.

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

Large Type P. C. Largest herd of individuals in state. Everything sold. Nothing to offer until spring pigs are ready to ship. I thank you. W. E. LIVINGSTON, Parma, Mich.

Big Type Poland China. Fall boars at \$25 each soon ready for service, sired by Clansman Buster and Haver's Giant and out of such sows as Gettsdale Queen 24. She is a daughter of Gettsdale Fimm, and Bob's Prospect 3rd is out of Leonard's Big Bob. DORUS HOVER, Akron, Mich.

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

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

L.T.P.C. \$15, \$20 & \$25 We have a fine lot of fall pigs sired by Harts Black Price and Right Kind Clan. HART, FULCHER and CLINE, address F. T. Hart, St. Louis, Mich.

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

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

L. T. P. C. Gilts bred to that Yearling Boar that stands 40" high, is 76" long, and walks on a 1 1/2" bone. Offering summer and fall pigs. Clyde Fisher, R. 3, St. Louis, Mich.

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

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

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

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

LEONARD'S B. T. P. C. Herd headed by Leonard's Liberator. Orders booked for boar pigs at weaning time. Call or write E. R. LEONARD, St. Louis, Mich.

Large Strain P. C. A few nice gilts left, bred for April Land May farrow, price that any farmer can afford. H. O. SWARTZ, Schoolcraft, Mich.

Big Type Polands Some choice gilts for sale. Weight 250 lb. April and May farrow. F. M. MANN, Mason, Mich.

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

A Real Bargain at Kope Kon Farms

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

90 GOOD BREEDING EWES natives, good age. Price \$8.00 per head if sold at once. Come and see them. J. B. Gardner, Cadillac, Mich.

HORSES FOR SALE One reg. Percheron Stallion four years old; weight 1700 lbs. nice to handle and a good colt getter. Color Black. Will sell at the right price as I can not use him in our herd. E. A. ROHLF'S, Akron, Mich.

Stallions For Sale or Trade Two good Percheron and some good Belgians, also some mares. Will trade for horses, cattle or sheep. Price to sell quick. Otis Baker, Ligonier, Indiana

For Sale Reg. Pure Bred Clydesdale Stallion, rising six years old, sure foal getter. If interested apply HARVEY McALPINE, R. 2, Bothwell Ont., Can.

FOR SALE Percheron Stallion, steel gray, registered No. 149029, 4 years old. THOMAS MURPHY Jr., Gifford, Mich.

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



# LATEST MARKET REPORTS

Tuesday, March 21.

## Wheat.

Detroit.—Cash No. 2 red \$1.43; No. 2 mixed and No. 2 white \$1.40; May \$1.47.

Chicago.—No. 4 red \$1.36; May at \$1.34 1/2.

Toledo.—Cash \$1.43@1.45; May at \$1.46 1/2.

## Corn

Detroit.—Cash No. 2 65c; No. 3 yellow 63 1/2c.

Chicago.—No. 2 mixed 57 1/4@57 1/2c; No. 2 yellow 58 1/2@60c.

## Oats.

Detroit.—Cash No. 2 white 42 1/2c; No. 3 yellow 40 1/2c.

Chicago.—No. 2 white 39 1/4@39 1/2c; No. 3 white 35 1/4@38c.

## Beans.

Detroit.—Immediate and prompt shipment \$6.75 per cwt.

Chicago.—Choice to fancy hand-picked Michigan beans at \$7.50@7.75; red kidney beans \$8@8.25.

New York.—Choice pea \$7; red kidney beans \$8.25.

## Rye.

Detroit.—Cash No. 3, \$1.06.

Chicago.—\$1.04@1.04 1/2.

Toledo.—\$1.05.

## Seeds.

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

Toledo.—Prime red clover \$16.15; alsike \$11.80; timothy \$3.15.

## Hay.

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

## Feeds.

Detroit.—Bran \$33; standard middlings \$33; fine middlings \$33; cracked corn \$30; coarse cornmeal at \$27; chop \$25 per ton in 100-lb. sacks.

## WHEAT

Conditions which caused the decline in wheat prices during the last two and one-half weeks were largely temporary. With liberal quantities arriving in Europe and large amounts on passage for European ports, some of it still unsold, European buyers took advantage of the situation and dropped out of the market and made an involuntary bargain day for their own benefit. A sharp decline in foreign exchange rates also was a factor. Aside from the improvement in the winter wheat crop in the southwest as a result of generous rains in that section, the situation shows no very material change. Europe must have a lot of wheat before next harvest and will not be able to keep her needs concealed.

## CORN

Primary receipts of corn have declined about as expected and are now running the lightest since early December when the new first crop began to move freely. Demand from most domestic sources is slow and expert sales have declined during the last few weeks but industries are buying enough to take care of the receipts so that the visible supply, which is now 48,000,000 bushels and the largest known in the annals of the trade, is believed to be at its maximum. The trend of corn prices depends largely on what transpires in the wheat market.

## OATS

Notwithstanding the limited distribution of oats during the last eight months, the movement from primary markets into consumptive channels has not increased as much as expected. Producers are not selling so rapidly as a few weeks ago but receipts at primaries are still fairly generous and the visible supply has not been cut down a great deal. Small quantities are being sold for export but unless the total demand increases materially there will be no acute shortage of this grain.

## HAY

Receipts of hay at the leading distributing markets are still light but are adequate to supply the trade at most points. Demand for the better grades of timothy and alfalfa is satisfactory but other grades are difficult to move. Some of the surplus sections report that their supplies have been

disposed of while others still have large reserves for sale. In the south pasture is already becoming available and is reducing the demand from that section. Rains in Kansas and Oklahoma have vastly improved the prospect for the next crop.

## SEEDS

Cloverseed prices are remaining near the high point of the season with red clover especially strong. The alsike market has declined slightly but no further losses are anticipated until after spring needs are satisfied. A survey made by the department of agriculture indicates an increased demand for clover, alfalfa and timothy seed as compared with the spring of 1921.

## FEEDS

Feed markets especially wheat feeds have become weak because of a slack demand. Flour mills are forcing bran and middlings on the market for 30-day shipment at lower prices and supplies seem to be accumulating in the east. Gluten feed and hominy feed did not advance as far as wheat feeds and demand has sufficed to maintain quotations. Cottonseed meal and linseed meal prices are steady as available supplies are not large.

## POULTRY AND EGGS

Egg prices have held within a narrow range during the past week and sentiment is developing that the spring decline is about over. About twenty per cent of the receipts at the four leading cities is going into cold storage. Market receipts may increase sharply again and depress prices still further, but such declines should prove short-lived, and storage operators feel that they are safe in taking hold. Receipts of dressed poultry at the four largest cities since January 1 have

been 43,848,000 pounds compared with 42,403,000 pounds in the same period of last year.

Detroit.—Eggs, fresh candled and graded 23@23 1/2c. Live poultry heavy springers at 28c; light springers 24c; heavy hens 29@30c; light hens 28@29c; roosters 18c; geese 18c; ducks 35c; turkeys 35c.

## BUTTER

Although the supply of butter at Chicago, New York, Boston and Philadelphia was slightly larger than in the preceding week and considerably larger than the corresponding week a year ago, consuming demand has enlarged and prices advanced at all four points. Nor was the improved demand confined to the large cities but seemed to be general all over the United States. Besides absorbing liberal receipts of fresh butter, large quantities are being withdrawn from cold storage and there is a possibility that the remaining supply of cold storage will not hold out until additional increases in production are large enough to supply the entire trade with fresh butter. It is probable that prices have advanced nearly the limit but as long as butter disappears at the present rate, the market will be on fairly solid footing. Prices for 92-score fresh butter were:

New York 40c; Boston 40c. In Detroit fresh creamery in tubs sells for 37@38c.

## WOOL

Although the wool market has become a slow affair, values are firm for the most part and especially so for high-class wools. The auction at London continues with prices steady and in Australia some sales show slight advances although others are at slightly lower rates than a month ago. In

the west, business is at a standstill, due partly to uncertainty over the tariff outlook. Buyers, of course, are hoping for a lower duty while producers realize that they are in a position to obtain the full benefit of whatever protection is given them. The probability of a duty of 33 cents per clean pound is fairly good. The Boston market is quoted as follows:

Michigan and New York fleeces.—Delaine unwashed 44-45c; fine unwashed 33@36c; half-blood unwashed 39@41c; three-eighth blood unwashed 39@41c; quarter-blood unwashed 37@39c a pound.

## POTATOES

Potato shipments from the producing sections were heavy again last week and the market declined. The movement is at the rate of about 5,000 cars per week. Total shipments for the season have amounted to 185,810 cars compared with 164,648 cars to the same date last year. A few cars of new potatoes are already coming forward from Florida. Northern round white stock is quoted at \$1.40@1.47 per hundred-pound sack f. o. b. shipping points, \$1.65@1.75 in the Chicago carlot market and \$1.90@2 at other points.

## BEANS

The general trend of the bean market still appears to be upward. Choice hand-picked white stock f. o. b. Michigan shipping points was quoted at \$7.25 per 100 pounds early in the week but eased slightly to \$7@7.10 at the close. Red kidney beans were quoted at \$8. The supply is being well cleaned up and reserves are not expected to last through June. Consuming demand has been good. Colorado pintos are quoted at \$6.25@6.50 per 100 lbs. f. o. b. shipping points while California whites are \$6@6.25 and limas \$9@10. Some beans are still being sold for export although it is certain that imports will be necessary later on to supply the trade.

## APPLES

The barreled apple market is weak but the boxed apple market is firm. Much of the barreled stock is of poor quality. A-2 1/2 Baldwins are quoted at \$7@8 in consuming markets.

## GRAND RAPIDS

The demand for poultry was good, while eggs were in very plentiful supply. Growers are receiving 90@95c for potatoes; parsnips bring \$1.75; eggs 19@20c; dairy butter 24@30c; apples were not in great supply. On the wholesale market they sell from \$8@10 per barrel according to variety.

# Live Stock Market Service

Wednesday, March 22.

## DETROIT

### Cattle.

Receipts 356. Cows and bulls are steady; others strong and 25c higher. Best heavy steers.....\$ 7.00@ 8.25  
Best handy wt bu steers 7.25@ 8.25  
Mixed steers and heifers 6.50@ 7.00  
Handy light butchers.... 6.00@ 6.50  
Light butchers ..... 5.25@ 5.75  
Best cows ..... 4.75@ 5.50  
Butcher cows ..... 4.00@ 4.50  
Common cows ..... 3.00@ 3.25  
Canners ..... 2.00@ 3.00  
Best light weight bulls... 4.50@ 5.00  
Feeders ..... 4.00@ 4.25  
Bologna bulls ..... 5.50@ 6.75  
Stockers ..... 5.25@ 5.75  
Milkers and springers...\$ 40@ 70

### Veal Calves.

Receipts 549. Market slow.  
Best .....\$ 11.00  
Others ..... 5.00@ 9.00

### Hogs.

Receipts 1,524. Pigs steady, mixed hogs 25c lower.  
Pigs .....\$ 10.25  
Roughs ..... 8.50  
Mixed hogs ..... 10.65  
Heavies ..... 10.00@10.25  
Stags ..... 5.00@ 5.50

### Sheep and Lambs.

Receipts 159. Market steady.  
Best lambs .....\$15.00@15.50  
Fair lambs ..... 12.00@13.50  
Light to common ..... 6.00@11.00  
Fair to good sheep ..... 8.00@ 9.50  
Culls and common ..... 3.00@ 4.00

## CHICAGO

### Hogs.

Estimated receipts today are 15,000; holdover 8,051. Market fairly active, steady to 10c lower. Bulk of sales at \$9.75@10.25; tops \$10.30; heavy 250 lbs up \$9.75@10; medium 200 to 250 lbs \$9.90@10.30; light 150 to 200 lbs \$10.10@10.30; light lights 130 to 150 lbs \$9.50@10.20; heavy packing sows 250 lbs up \$9@9.35; packing sows 200 lbs up \$8.75@9.10; pigs 130 lbs down \$8.25@9.75.

### Cattle.

Estimated receipts today are 11,000. Market is slow, weak to lower. Beef steers medium and heavy weight 1100 lbs up choice and prime \$8.90@9.50;

do medium and good \$7.50@8.40; do common \$6.65@7.50; light weight 1100 lbs down good and choice \$8.30@9.25; do common and medium \$6.50@8.30; butcher cattle heifers \$5@8.25; cows \$4.25@7.15; bulls bologna and beef at \$4@6.45; canners and cutters cows and heifers at \$3.15@4.25; do canner steers \$4.25@5.25; veal calves light and handyweight \$6.25@9.25; feeder steers \$5.65@7.75; stocker steers \$5.40@7.30; stocker cows and heifers at \$4@5.65.

### Sheep and Lambs.

Estimated receipts today are 18,000. Market is very slow, bidding lower. Lambs 84 lbs down at \$13.50@16; do culls and common at \$10.50@13.25; spring lambs \$11.50@14.75; ewes \$7@10.50; ewes cull and common \$3.50@7; yearling wethers \$11.75@13.75.

## BUFFALO

### Cattle.

Cattle market shade higher; choice to prime shipping steers \$8.50@8.75; good to choice shipping steers at \$8@8.25; yearlings \$8.50@9.50; best handy steers \$7.25@7.60; handy steers and heifers \$6.75@7; western heifers \$6.25@6.75; light Michigan butchering heifers \$6.25@6.50; best fat cows \$5.25@5.75; cutters \$3@3.50; canners \$2@2.50; bulls \$3.50@5; feeders at \$5.50@6.75; stockers \$4@5.75; milkers and springers \$40@85. Calves, receipts 2,500; tops \$11.50.

### Hogs.

Receipts 80 cars. Market is steady; medium and heavy at \$10.50@10.75; yorkers and pigs \$10.90@11.10.

### Sheep and Lambs.

Receipts 40 cars; lower; top lambs \$15.75; yearlings \$12@14.50; wethers \$11@12; ewes \$10@10.50.

**\$13.95 Buys 140-Egg Champion Belle City Incubator**  
Hot-Water, Copper Tank, Double Walls, Fibre Board, Self Regulated.  
\$7.95 Buys 140-Chick Hot-Water Brooder. Or both for only \$11.95.  
Express Prepaid  
Over 91,000 Users  
Best of Rockies and allowed to print West.  
Guaranteed. Order now. Share in my \$1,000 in Prizes, or write for Free Book "Hatching Facts." It tells everything. Jim Rohan, Pres.  
Belle City Incubator Co., Box 14 Racine, Wis.

**Corrugated Metal ROOFING**  
**2.90**  
100 ft.  
Think of it. We can now sell Excell Metal Roofing, 25 gauge corrugated, at only \$2.90 per 100 sq. ft., painted. Galvanized only \$3.90. If you have been waiting for metal roofing prices to come down, here they are—direct from factory prices—lower than you can get anywhere else. Send for our folder covering all styles Metal Roofing, Siding, Shingles, Ridding, Ceiling, etc.  
**PREPARED ROOFING ONLY \$1.15**  
Don't buy Roofing, Paints, Fencing, Tiles—anything needed this spring until you get our latest cut price folder. You can see and try our roofing before you pay. All sold on money-back guarantee. Write for Money Saver Bulletin.  
The United Factories Co., 304 Marion Bldg., Cleveland, Ohio.

**SCOE HOT SPOT**  
Cheaper Gas for Fords  
Guaranteed to save 20 to 30 cents on each dollar. More power, quicker warming up, sweeter running, no carbon. Accomplished through complete vaporization by the Scoe Hot Spot. Price \$5.00 installed. Sold by any garage. Or send \$4.00 for sample with plain directions. Satisfaction or money back.  
Local Agents, Write for Money-Making Proposition  
Briscoe Devices Corporation Dept. F Pontiac, Michigan



# FREE SOY BEANS

Soy Beans are: Wonderful soil improvers, a rich concentrated feed, a nutritious hay, resistant to drought, a profitable all-around crop. It will pay you to grow them. With every order amounting to \$2.00, we give enough Soy Beans to plant a half acre with corn for silage.

Get our free 64-page illustrated catalog of northern-grown, pedigreed field and garden seeds. "Grown in Cloverland". All seeds comply with strict Wisconsin Seed Law and sold subject to your approval. Write tonight and choose your variety of Soy Beans.

**MARINETTE SEED CO.**  
Marinette, Box 805, Wis.

## TOWNSEND'S PLANTS

AT WHOLESALE PRICES

Direct to Growers.  
300 ACRES Of Choice True-to-name STRAWBERRY PLANTS INCLUDING 250 Acres PREMIER FORD BIG LATE The greatest money making varieties on earth E. W. TOWNSEND & SON, Nurseries 20 Vine Street Catalog is free Salisbury, Md.

## Holt Tractor

5-Ton For Sale

Practically new. Make offer.

**Detroit Motorbus Co.**

Terminal and Edlie Street, Detroit, Mich.

## Wool Wanted

We manufacture 100% virgin wool goods for wool owners, returning all the goods your wool will make, you pay for the making. "Pilgrim Mother" yarn, downy Batting, fleecy Blankets, Comfy Aut robes. Goods also sold direct from factory to user. Write for circulars and details.

WOOLEN MILLS,

Reed City, Mich. Estab. 1883.

**HAY** SHIPPERS, for highest prices bill all cars to The E.L. RICHMOND CO., Detroit.

## SEMI-SOLID BUTTERMILK

FED HOGS AND POULTRY

Saves 1/2 to 3/4 the grain feed. Increases net profits 3 1/2 times. Write for descriptive circular.

J. E. BARTLETT CO., Jackson, Mich.

### POULTRY

#### BABY CHICK BARGAIN

I will sell a limited number May delivery pure bred Eng. W. Leg. and Sheppard Strain Ancona chicks at only 11 1/2c each early and 10 1/2c latter May. 100% live arrival guaranteed, post paid. Order from ad. Pullet for sale in season. Thomas Beyer, R. 4, Zeeland, Michigan.

**FOR SALE.** Large fine Buff Leghorn cockerels, SHADFORD, 1517 Broadway, Ann Arbor, Mich.

**Snowy White Rocks** Fishel Strain, dandy layers. Eggs \$1.50-1.75, \$3.75-5.00, \$7.00-10.00. All prepaid. Mrs. Earl Dehnhoff, Vanaren, Ohio.

**S. C. Brown Leghorns**, excellent layers. Vigorous farm S. C. range. Selected eggs postpaid 15, \$1.25; 30, \$2; 45, \$2.50; 100, \$5. Floyd Robertson, R. 1, Lexington, Ind.

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

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

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

## WE BREED

Park's Strain Barred Rocks, Barron Strain White Leghorns. The two greatest strains of utility poultry in America. Baby chicks for early delivery should be ordered soon. Let us quote you our price on your requirements. Pullet, hens and males at reasonable prices. Bred in the north for northern conditions. FINE BAY POULTRY FARM, Holland, Mich.

**Whittaker's R. I. Reds** Both combs. Michigan's Greatest Color and Egg Strain. Free, by blood test, from bacillary white diarrhea. If you are interested in Breeding Stock, Day Old Chicks or Hatching Eggs write for our Twelfth Annual Catalog. It is free. INTERLAKES FARM, Box 39, Lawrence, Mich.

### WHITE WYANDOTTES

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

**WHITE LEGHORN BABY CHICKS** Send for Catalog. SNOWFLAKE POULTRY FARM, Route 1, Grand Rapids, Michigan.

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

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

**W. Chinese** goose eggs 40c each, Pekin duck \$1.50 for 8 R. O. Br. Leghorn \$1.50 for 15. MRS. OLAUDIA BETTS, Hillsdale, Mich.

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

### A NEW FARMERS' FINANCE BILL.

**H**EARINGS on the new Anderson Lenroot bill designed to meet the credit requirements of the farmers and stockmen in the production and marketing of staple crops and live stock, have been in progress before the senate banking and currency committees. This farm credit bill which Dr. T. C. Atkeson, Washington representative of the National Grange characterizes as "coming nearer meeting the requirements of the farmers than any of the many other bills that have been introduced, but is not the last word in farm credit legislation," is the child of the Congressional Joint Commission of Agricultural Inquiry.

In presenting the bill, Representative Sydney Anderson said the commission had in mind not only the present situation but undertook to set up machinery that would meet the farmer's requirements in the future. It would give discount privileges to all banks on farm paper running from six months to three years, based on live stock, and on staple farm crops secured by warehouse receipts.

A farmer who wishes to secure a loan with which to purchase cattle which he proposes to fatten, under the provisions of the bill, would apply to his cattle loan association or local bank, offering a chattel mortgage running for say three years. This bank whether it is a member of the federal reserve or not, knowing it could discount the note, makes the loan for the time specified. The bank would then apply to the farm credits department of the Federal Land Bank to rediscount the note with its endorsement. The farm credits department would take the note at a rate of discount fixed by the Federal Land Bank. This and other similar notes would form the basis upon which debenture bonds would be sold.

Senator Arthur Capper, a member of the joint commission of agricultural inquiry, said the proposed bill was the result of much study. It does not go as far as some would like to go, but it is a start. Western banks have a fear of frozen credits; and are urging that a better system of farm credits be established.

### TARIFF NEWS.

**A**N import duty of fifteen per cent ad valorem on hides has been voted by senate finance committee members who are rewriting the Fordney tariff bill. Hides were on the free list under the Payne-Aldrich and Underwood tariffs and were left on the free list in the Fordney bill. Members of the agricultural bloc from the west and northwest insisted that cattle raisers be protected.

Senator Gooding, of Idaho, chairman of the agricultural bloc, appearing before the senate finance committee, insisted upon a basis rate of thirty-three cents a pound on the scoured wool content, which the committee has agreed upon tentatively. Senator Gooding declared that senators from agricultural states were determined to secure protection for the farming industry equal to that given other industries.

### EFFECT OF GOVERNMENT RAILROAD REGULATION.

**C**OMPETITION has forced other industries to yield to lower price demands, and in transportation where we have substituted government regulation for competition, the Interstate Commerce Commission could not consider railroads to be a "sort of sacred cows in our midst immune from fundamental laws of society and commerce," free from necessity to lower charges for services as other prices reclined until "public regulation is to become force," said Clifford Thorne, spokes-

man for shippers, in a brief filed with the commission in closing the investigation into transportation rates.

Railroads constitute the only great industry in the country which have not been "compelled by the laws of commerce and industry to reduce prices and reduce costs," says Mr. Thorne, who asserted that railroad earnings would stand a reduction, fixing them at the rate of more than \$1,000,000,000 annually during the last few months; that fewer miles of railroads were in the hands of receivers last year than any year since 1912. The wage bill of American railroads has been cut \$400,000,000 annually by the Labor Board since 1920, while all the rate reductions allowed by the railroads in the same time only cost them \$186,000,000 in revenue.

### THE CONDENSED MILK MARKET.

**T**HERE is little to give encouragement to manufacturers of condensed milk products as yet, as both the export and the domestic markets are showing little activity. If anything, domestic demand is better than export but that is only because export buying is practically at a standstill. The American relief has done no buying of late.

The price trend on case condensed is slightly downward. That is due, without doubt, to the decline of sugar prices. Quotations on evaporated milk have a wide range as a result of the anxiety of many manufacturers to dispose of their product even at very low prices. All bulk goods are moving at a little higher figure because production of that class of goods is lighter and manufacturers are not so eager to sell. There is some export demand for skim-milk powder.

### WETZEL'S BIG POLANDS SELL WELL.

**A** BIG crowd showed up at the recent auction of Big Type Poland-China hogs on Charles Wetzel's & Sons' farm near Ithaca, and the demand for good stock was much in evidence through the active bidding of the patrons. The thirty-seven head of bred sows and gilts brought an average of \$53, the highest price paid being \$100. The sale was auctioned by Wm. Waffel and J. B. Rowell. Following are the top sales:

1. John Proctor, Perry.....\$ 86
2. E. A. Walling, St. Johns.... 70
3. Henry Wittig, Wheeler..... 67
- 4 1/2. Wm. Giles & Sons, Ithaca.. 100
7. Wm. Giles, & Sons, Ithaca.. 80
10. Glen Pompie, St. Louis..... 56
11. Glen Pompie, St. Louis..... 68
12. M. B. Hower, Parma..... 67
13. Delbert Conley, Ithaca..... 56
14. Wm. Giles & Sons, Ithaca.. 57
36. John Proctor, Perry..... 56

### EBERSOLE'S DUROC SALE.

**T**HE expectations of Albert Ebersole, the proprietor of Westview Duroc Farm at Plymouth, were surpassed by the results of his recent auction of splendid Durocs. There was a good attendance and bidding was spirited. Thirty-five animals brought an average of better than \$42. Every animal stayed in the state. Here is a list of the sales:

1. Wm. D. Goslin, Emmett.....\$58
2. W. J. Deer, Royal Oak..... 50
3. D. Weston, Northville..... 57
4. Mr. Sallow, Farmington..... 56
7. C. Benton, Northville..... 71
9. C. T. Goslin, Redford..... 60
14. Wm. H. Goslin, Emmett..... 31
15. Wm. D. Goslin, Emmett..... 40
16. E. H. Mack, Milford..... 34
17. Walter Thompson, Salem.... 51
18. Freeman Lincoln, Ann Arbor... 44
19. E. S. Vanderson, Jr..... 34
20. Mr. Petzold, Detroit..... 43
21. Wm. D. Goslin, Emmett..... 38
22. E. L. McCartney, Ypsilanti.... 38
23. J. R. Gibson, Northville..... 36
24. W. A. Petzold, Detroit..... 34
25. G. Renwick, Salem..... 41
26. John Warden, Ypsilanti..... 38
27. R. Gibson, Northville..... 28
28. J. D. Wilson, Northville..... 33
29. E. L. McCartney, Ypsilanti.... 31
30. R. Gibson, Northville..... 30
32. W. D. Goslin, Emmett..... 61
33. F. Lincoln, Jr., Ann Arbor..... 76
34. J. P. Renwick, Salem..... 47
35. H. Munn, Farmington..... 45
36. W. J. Deer, Royal Oak..... 41
37. C. T. Richter, Northville..... 35
39. H. Munn, Farmington..... 42
40. F. Lincoln, Ann Arbor..... 44
41. Gus Barnhart, Northville..... 38
42. F. Lincoln, Ann Arbor..... 37

## White Diarrhea

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

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

"Gentlemen: I see reports of so many losing their little chicks with White Diarrhea, so thought I would tell my experience. I used to lose a great many from this cause, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 507, Waterloo, Iowa, for their Walko White Diarrhea Remedy. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after giving the medicine, and my chickens are larger and healthier than ever before. I have found this company thoroughly reliable and always get the remedy by return mail.—Mrs. C. M. Bradshaw, Beaconsfield, Iowa."

### Cause of White Diarrhea

White Diarrhea is caused by the Bacillus Bacterium Pullorum. This germ is transmitted to the baby chick through the yolk of the newly hatched egg. Readers are warned to beware of White Diarrhea. Don't wait until it kills half your chicks. Take the "stitch in time that saves nine." Remember, there is scarcely a hatch without some infected chicks. Don't let these few infect your entire flock. Prevent it. Give Walko in all drinking water for the first two weeks and you won't lose one chick where you lost hundreds before. These letters prove it:

### Never Lost a Single Chick

Mrs. L. L. Tam, Burnetts Creek, Ind., writes: "I have lost my share of chicks from White Diarrhea. Finally I sent for two packages of Walko. I raised over 500 chicks and I never lost a single chick from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor; they develop quicker and feather earlier."

### Never Lost One After First Dose

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes: "My first incubator chicks, when but a few days old, began to die by the dozens with White Diarrhea. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the Walker Remedy Co., Waterloo, Iowa, for a box of their Walko White Diarrhea Remedy. It's just the only thing for this terrible disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."

### You Run No Risk

We will send Walko White Diarrhea Remedy entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is for White Diarrhea in baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for package of Walko—give it in all drinking water for the first two weeks and watch results. You'll find you won't lose one chick where you lost hundreds before. It's a positive fact. We guarantee it. The Leavitt & Johnson National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of this guarantee. You run no risk. If you don't find it the greatest little chick saver you ever used, your money will be instantly refunded.

WALKER REMEDY CO., Dept. 507, Waterloo, Iowa.

Send me the [ ] 50c regular size (or [ ] \$1 economical large size) package of Walko White Diarrhea Remedy to try at your risk. Send it on your positive guarantee to instantly refund my money if not satisfied in every way. I am enclosing 50c (or \$1.00). (P. O. money order, check or currency acceptable.)

Name .....

Town .....

State .....

Mark (X) in square indicating size package wanted. Large package contains nearly three times as much as small. No war tax.



# The Gilt Edge Organization Reaches To Your Home



## Insures the Satisfactory Operation of Your Gilt Edge Furnace

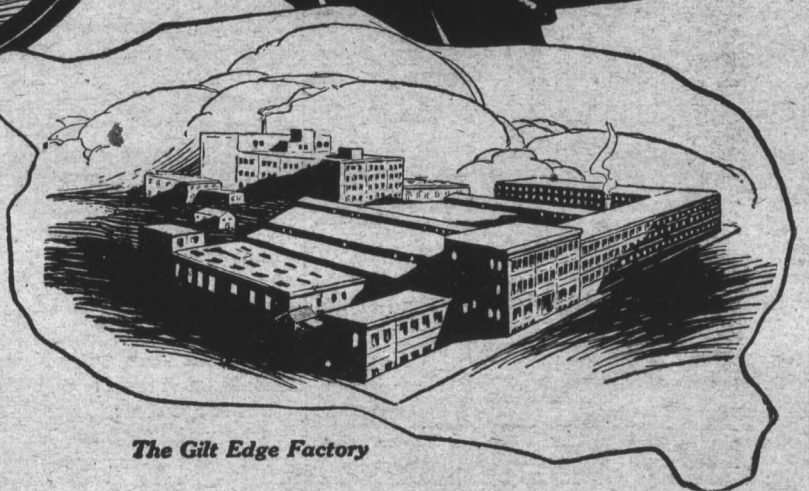
Remember this in choosing your furnace: The heating conditions of each home are different. Your neighbor's furnace, satisfactory in his home, might be an absolute failure in yours. No heater can "make good" if conditions are against it. To heat properly, the furnace must fit the home.

That fact, investigation shows, is generally overlooked where heating troubles occur. A misfit furnace is often at the bottom of the trouble, although it may not be the entire cause. How to properly heat your home is a problem requiring a special study of the heating conditions of your home. That's where Gilt Edge Home Owner's Heating Service can be of invaluable help to you.

### The Gilt Edge Service Department

Within the large Gilt Edge organization is a well-equipped Service Department which gives real help to home owners and makes sure the right furnace for YOUR HOME will be installed.

All Gilt Edge dealers are familiar with this Service Department. Many of them have called at our factory and have seen just how our heating engineers work from plans of the home and determine which furnace will operate most satisfactorily under certain conditions.



The Gilt Edge Factory

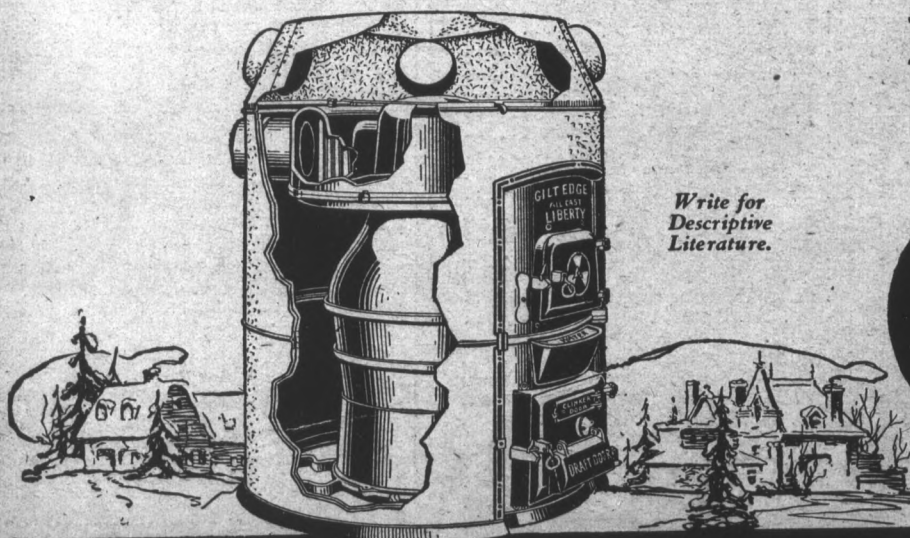
After a Gilt Edge furnace has been installed, this factory Service Department is still interested in its operation. We want to KEEP you satisfied with your Gilt Edge furnace and we are ready at all times to give you, through the dealer, the help of our Service Department.

### Service From Your Dealer

Your Gilt Edge dealer is equipped to give you service which in itself is complete enough to take care of most of your needs. He has made a study of Gilt Edge furnaces. He knows how to install them properly; how they should operate; how to repair them. He is a heating expert. The service he can give you, plus the Gilt Edge factory service, positively insures the satisfactory operation of your furnace — not only while it is new, but year after year. Gilt Edge Service sets a new example in the heating field. Only a Gilt Edge dealer can give you a service so helpful.

The Gilt Edge organization commands a leading place in the heating field because of the satisfaction Gilt Edge heating systems have given to home owners for 45 years. Your satisfaction, too, is assured. See the Gilt Edge dealer nearest you and have a talk with him.

R. J. SCHWAB & SONS Co.  
271 Clinton St., MILWAUKEE, WISCONSIN



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Descriptive  
Literature.

Pipe and Pipeless  
**GILT EDGE**  
FURNACES