

MICHIGAN FARMER

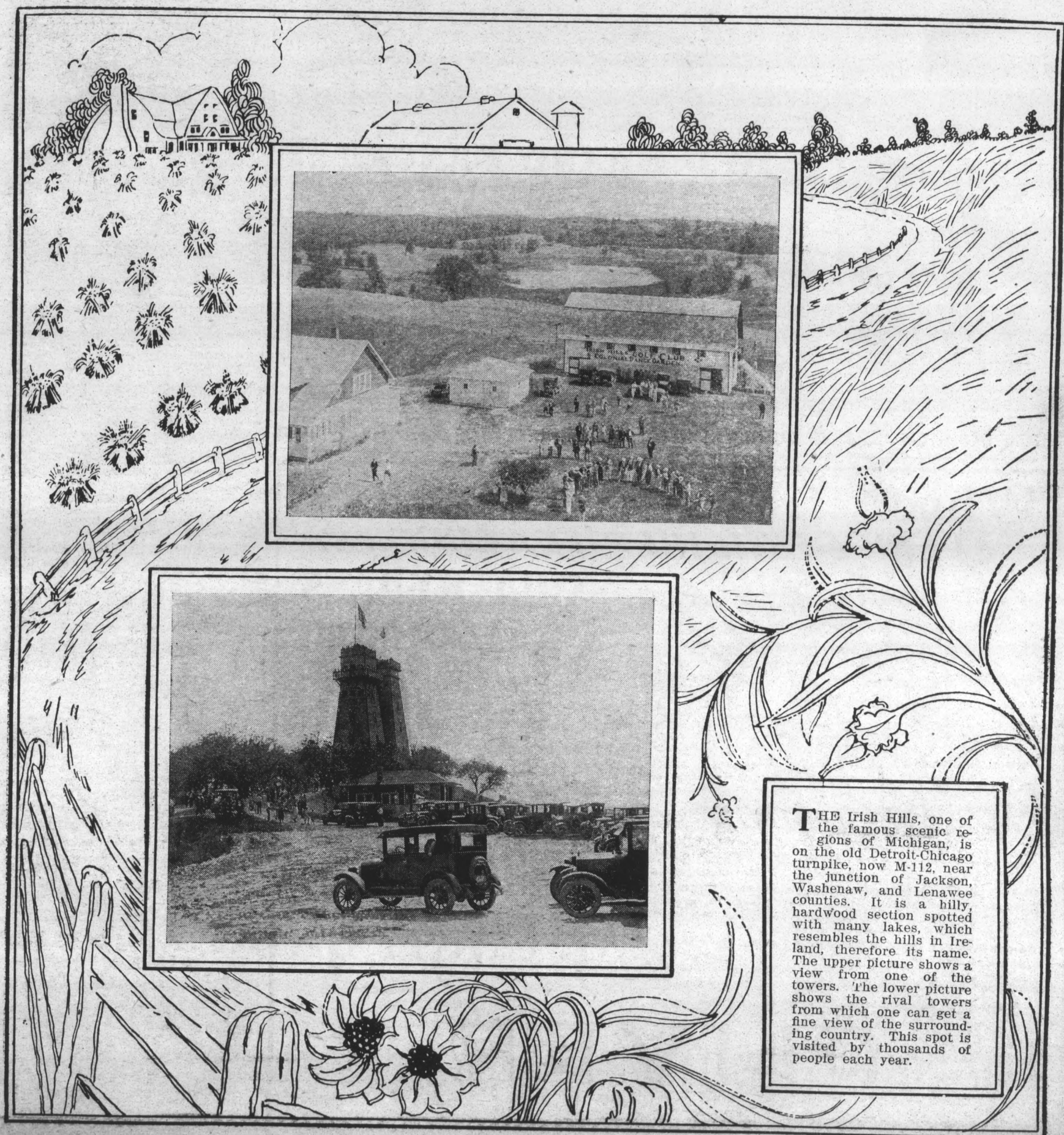
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Whole No. 4798



THE Irish Hills, one of the famous scenic regions of Michigan, is on the old Detroit-Chicago turnpike, now M-112, near the junction of Jackson, Washenaw, and Lenawee counties. It is a hilly, hardwood section spotted with many lakes, which resembles the hills in Ireland, therefore its name. The upper picture shows a view from one of the towers. The lower picture shows the rival towers from which one can get a fine view of the surrounding country. This spot is visited by thousands of people each year.



What has been your experience with or without good fence? We will pay \$5.00 or more for each letter that we use. Write for details, catalog and 3 interesting booklets that tell how others have made more money with hog-tight fences.

UNIVERSITY of Illinois, for six years past, has seeded sweet clover in oats. Each acre of pasture obtained feeds one cow 43 days without other feed. 43 days' feed at 8c per day (usual pasture rental) makes each acre bring \$3.44 extra every year or feed equal in value to this load of hay.

RED BRAND FENCE

"Galvannealed"—Copper Bearing

makes it possible to save this \$3.44 per acre. On the Lincoln Ridge Farm, Van Wert County, Ohio, they sow half and half alfalfa and sweet clover in the oats. Makes a wonderful pasture after harvest, all the next year, and clear up to plowing time the second Spring. Every acre keeps from 2 to 3 Aberdeen Angus cattle fat and sleek.

Stock-tight RED BRAND FENCE can't help but give you extra profits for many, many years, from hogging

down, pasturing after harvest, saving blown down grain, rotating crops, etc.

Extra heavy zinc "galvannealed" coating keeps rust out longer; copper in the steel fights rust to the core; picket-like stays, wavy strands, can't-slip knots make this the trim looking, hog-tight, bull-proof fence that pays for itself in 1 to 3 years on any farm. Ask your dealer to show you RED BRAND FENCE.

KEYSTONE STEEL & WIRE COMPANY
4923 Industrial Street Peoria, Illinois

News of the Week

Reports show that the Nicaraguan rebels continue with their activity. General Sandino, the rebel chief, is not dead as reported last week.

The Detroit Automobile Show had a record attendance and also made a record in the number of orders taken.

Over one hundred people are claiming to be relatives of the late James Duke, the multi-millionaire tobacco king, in an effort to get a share of his estate.

Orders have been issued to the Belgian trolley company in Constantinople that conductors must eject passengers who have been eating onions. This order is effective until weather is warm enough to open the windows.

The new Ford flivver, with the new Ford two-cylinder engine in it, was forced down at Emma, N. C., because of ice on the wings. The pilot, Harry Brooks, was attempting a non-stop flight to Miami from Detroit.

Sears Roebuck and Company has picked a second site for a store in Detroit. One on the west side on Grand River and Oakman Blvd., and the other on the east side on Gratiot and Van Dyke. The purpose is to run retail stores.

At the annual winter fur auction in New York a choice half silver fox fur brought \$685, the highest price since the war.

German auto dealers are endeavoring to establish a heavy tariff on American autos. It is part of a general move on the part of Europe to stop the invasion of American-made autos.

Lindbergh took his first submarine ride on January 23 when at the naval base, Coco Solo, Panama Canal.

One thousand marines have started on an eight-day hike in Nicaragua to get to the stronghold of the rebels.

The Central and South American countries objected to the United States' plan to ban foreign aviators flying over the Panama Canal, when it was proposed at the Pan-American conference at Havana.

Admiral Chas. P. Plunkett, commandant of the Brooklyn navy yards, predicted that war between the United States and its commercial competitors was not far distant.

In the Bell Telephone company's laboratories at Hoboken, N. Y., a loud speaker has been perfected that will carry the human voice one mile.

Ted Mosley, who left Daytona Beach, Florida, in his plane for New York with films of the Coolidge reception at Havana, has not been found.

Secretary Hughes denied at the Pan-American conference that the United States wanted to rule Latin-America. Peace, he said, is the sole aim of this country.

Eddie Stinson, Detroit aviator, was the first to complete a non-stop flight from Chicago to Tampa, Florida.

Major-General Geo. W. Goethals, who directed the construction of the Panama Canal, died in New York last week at the age of seventy.

The Ford Motor Company has moved its offices from Highland Park to Fordson.

Forty-eight suspected communists were executed by the authorities in Canton, China.

The cost of living has decreased in Detroit more than in any other large city in the country since June, 1920. The decrease is 24% while Washington, D. C., showed the next greatest decrease, 19%.

The new Ford flivver plane flew seventy miles in thirty-five minutes in a trip from Asheville, N. C., to Spartanburg, S. C.

The Society of Automotive Engineers is considering means of decreasing automobile upkeep by standardizing tire sizes and lubricating oils. There are 36 different tire sizes at present.

Lindbergh has resumed his diplomatic flights after spending several days fishing and hunting in the Panama zone. He started for Columbia, January 25th.

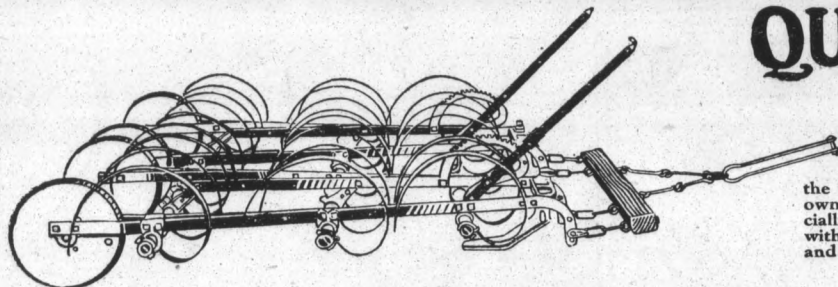
The U. S. Navy department has ordered one hundred nine-cylinder air cooled engines for use in giant airplanes.

The British Columbia legislature will demand the Canadian government to open again the Alaskan boundary dispute with the United States.

The Mississippi senate voted down a bill which would tax unmarried men and widowers without dependents ten dollars each. The bill was to apply to men between thirty and forty years of age.

Please Mention The Michigan Farmer When Writing to Advertisers

Where else can you find EVERY DESIRABLE FEATURE in a QUACK GRASS HARROW?



You will like the way the Oliver M J Harrow tears up quack grass. The sharp pointed teeth dig deep and pull the roots of the grass to the surface. Farmers who have used it say there is nothing like it.

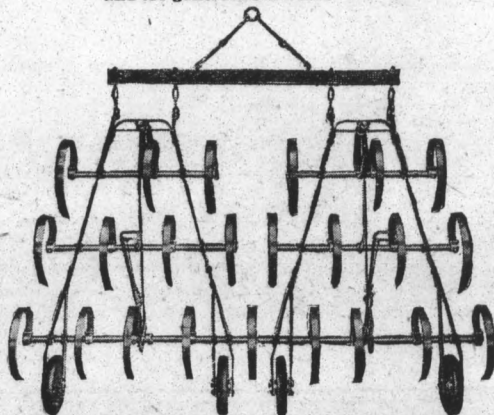
Great Clearance for Trash

Knowing the importance of great clearance for trash in a quack grass harrow, Oliver has designed the M J so that it frees itself easily of heavy weeds. The frame is placed above the toothbars. Placing the wheels in the rear of the frame allows a great deal more clearance than if the wheels were placed on the tooth bars. These wheels are equipped with chilled cone bearings which are wear resisting and dust proof.

Quack Grass, Alfalfa or Reversible Teeth. The Oliver M J Harrow is fitted for use with horse or tractor power and in addition to the quack grass teeth can be equipped with alfalfa teeth, or reversible double point teeth.

Write today for our new literature on quack grass control

Each detail of construction in this harrow has been worked out to provide the best and longest possible service to the owner. It is built strong and is designed especially for quack grass work but it can be used with equal success in preparing the seed bed and for general field work.



Note that the position of the wheels and the spacing of the teeth give maximum clearance for trash.

OLIVER

OLIVER CHILLED PLOW WORKS

"Plowmakers for The World"

General Office and Works

South Bend, Indiana

DEVOTED
TO
MICHIGAN
VOLUME CLXX

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY
ESTABLISHED 1843.

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

QUALITY
RELIABILITY
SERVICE
NUMBER V

The Farm Flower Garden

A Practical Way of Adding Beauty to the Farm House

By E. Genevieve Gillette

I HAVE been asked so many times if there is no way that a busy woman living on a farm can have a pretty flower garden. The idea seems to be prevalent that a pretty flower garden takes "oceans of time" and, of course, the farm women—generally speaking—do not have an "ocean of time" to put on things they call unessentials. I have lived on a farm myself so I know something about the million and one duties which every day keep the farmer's wife going at a strenuous pace. No matter how many the modern conveniences in the house, there is always plenty more that should be done and so those things which are not absolutely necessary go without doing. Not that flowers are not important, but that they are not as important as some other things and the consequence is that most farm gardens boast of many vegetables but lack the lovely blooms which gladden every person's heart.

I am not so sure that this condition is the least bit necessary. We usually find ways of doing the things we want most to do and if we go about it right I think we may help the woman who wants to have flowers in plenty. I am sure the big business men are right when they say that their clerks work with more efficiency when they have a little flower on their desks and doctors always have said flowers were often as good as pills in helping a patient recover. Is it too much to say that flowers on the dinner table make vegetables taste a lot better? We know that their effect on the human being is remarkable! They represent beauty. And this age, if no other, recognizes beauty as an essential element of life. What automobile manu-

facturer does not know that his car has to be "good looking" to sell?

Well! The farm woman must have flowers. She needs flowers and wants flowers. And she has so little time to grow them. Are we going on forever making excuses for our inability to use our heads? Perhaps I am wrong, but I really and truly think I can add a little which may help towards the solution of this problem. Why grow flowers which take so much time? There are plenty of things good gardeners are raising with ever so little trouble; in fair soil where vegetables would do well they would produce a mass of bloom. I think the sad part of it is that we have wasted our good winter evenings reading story books and then have wailed next summer when the dahlias needed so much

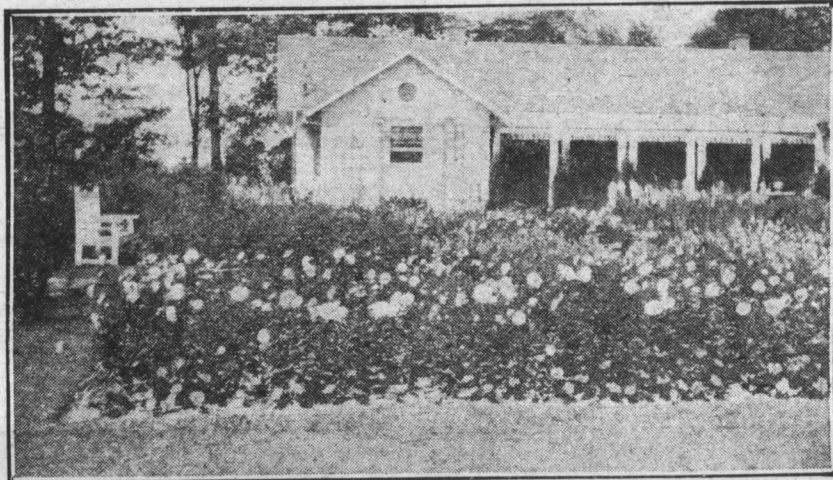
water. Had we studied a little before the cheery fireside, we would have known that even with excellent conditions, dahlias need a lot of attention, and then are often cut by frost before they throw half their flowers. There could have been other things substituted for dahlias—which are just as pretty and which year after year will survive the varying changes in the seasons. It is my purpose in this article to discuss briefly a few of these substitutes for the flowers the farm women are trying to grow.

For very early spring flowering there is no substitute, of course, for the bulbs such as jonquils, daffodils, narcissus, and tulips. You plant these bulbs in late October or early November, before the ground freezes, in a place where they may remain for at

least three years without disturbance. This place should not be close up to the house foundation lest no water reaches them, except in an unusually hard rain. They will just dry up and harden in such a place. It wants to be a well drained place with medium heavy soil and a southernly exposure if possible. The warm spring sun will strike them then and they will bloom early. After two or three years the bulbs will have multiplied and you will want to take up the bulbs, pull off the little bulbets, and plant everything back again in more spacious quarters. There are many varieties of these bulbs. The early yellow Easter flowers of our grandmother's are the trumpet and double daffodils; the white ones with the orange "eye" are the poet's narcissus. And narcissus, is by the way, the recognized scientific name for daffodils—and jonquils as well. The two latter names are common ones and, in different localities, apply to different flowers so are hopelessly confusing.

The tulips come in many varieties. Very early cottage types in gay colors; Breeder tulips in deep hues a little later; and most graceful and gorgeous of them all the Darwins late in May. The Darwins are two or three feet tall and beautifully shaded. All these bulbs can be purchased from any reputable seedsman for as little as fifty cents or as much as two dollars a dozen. The very special Darwins are the highest in price. You can make a fine collection for two or three dollars to start with and let these multiply. That may seem like considerable money for a farmer to spend but when you consider the length of

(Continued one page 151)



The Beauty of Summer Bloom Should Be Enjoyed on Every Farm

America's First Agricultural Scientist

Benjamin Franklin Helps Agriculture as Well as Other Industries

By I. J. Mathews

THE civilized world today owes more of its material progress to Benjamin Franklin than to any other one man.

No matter in what light his activities are viewed, he stands out as the greatest combination of profound thinker and vigorous doer of all time. One cannot mention a phase of science, philosophy, diplomacy, statesmanship, or literature to which Franklin was not a very substantial, perhaps indirect, contributor. And quite contrary to the mine run of those who have a great wealth of ideas, Franklin was also very practical.

It is fitting that at this late date plans are being worked out in his home city, Philadelphia, for a \$10,000,000 memorial that will be utilitarian in purpose thus accentuating his most outstanding characteristic.

While Franklin was the greatest scientist of America, ranking even now ahead of our own revered and much appreciated Edison, he did not die a rich man. At the age of eighty-four years, he passed out leaving an estate worth about \$150,000 in addition to lands in Nova Scotia, some near the Ohio River and also about

three thousand acres in Georgia. He never lived on a farm nor were his efforts ever put forth exclusively in the field of agriculture but, in my humble judgment, he did what was more important through his electrical experiments and their consequent and future application to the field of agriculture.

With all the ideas that he worked out, he never took out a patent and never contested one that somebody else had filched from him as was frequently done. Speaking of inventions, he voiced sentiment which has since become a well known but little applied axiom of economics when he said, "That, as we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others by an invention of ours; and this we should do freely and generously."

That is certainly different from the philosophy now being applied. It seems that present day thinking always tries to keep down the output so it will be higher priced and more exclusive. Labor is always trying to re-

duce its hours which means decreased products and capital is always trying to increase its profits. In an Utopian world, every man would bustle into his job turning out all the product he could and thus we all would have plenty of everything since comforts are merely trading one man's product for that of another. I feel that very great fortunes are usually built up at the expense of either those who buy the product or those who make it. Every city that has a "gold coast" invariably has its slums.

If I were to name the one thing that more than any other has unlocked the shackles of the American farmer, I should say it was mechanical power applied to farm jobs. Power applied in the household has made it unnecessary in this day and age for a farmer to have two wives in order to raise his family. And of all the forms of power, the most convenient, cleanest, most adaptable is electricity. This power has unleashed the farmer's actual muscular energy for other more important work and during the next few years, we shall see it applied to

those treadmill jobs with which farms even now are quite replete.

Looking over the last ten years and anticipating the future, I do not expect to have many more gray hairs nor see the bald etchings on either temple reaching farther back towards my obstreperous cowlick before power lines are threading the country roads and thereby offering to farmers that willing "blue giant" that has so gallantly shouldered the burdens of other industries. Michigan has rivers galore and so long as water flows down hill, the rivers of Michigan can easily supply enough power to mechanize every farm and home in the state. Motors will even be "malting" the slop for the pigs a few years hence.

Even today, a thumbnail survey shows that this giant, capable of death on the one hand and deliverance on the other, has been the greatest of all farm benefactors. The tractor, the motor car, the truck—in fact, all of the internal combustion engines get very sluggish when their electric apparatus takes a holiday. The telephone emits only a disagreeable buzz when its batteries don't come to bat.

(Continued on page 137)

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home problems.

VOLUME CLXX

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DETROIT, FEB. 4, 1928

CURRENT COMMENT

Northern
Weather
Healthful

TOO often, many farmers in Michigan think of winter weather in the south as full of sunshine and health while cold winds and snow in the north are nothing but causes of sickness. There are advantages in our northern climate that are good for both the farm family and the live stock of the farm. The cold weather is naturally conducive to the development of vigor and ambition.

When a man is feeling good there is a thrill to battling a winter storm. The fact that storms are coming in winter is a constant threat to keep man busy during the remainder of the year. And the preparation for winter produces a real sense of satisfaction when the winds howl and the snow blows and we realize we have filled the hay mow, the silo, and the farm cellar as a protection against our wants.

Zero weather and the occasional sunshine of winter help to control contaminated soil on a poultry range, and to reduce the insect pests and fungous diseases in the orchard and garden. Many a farm poultry flock would be suffering from disease if it were not for the six months from November first to May first when the birds seldom use the soil of the range, which is partly renovated through the processes of nature.

People of the northern peninsula of Michigan find little fault with the cold in that section. One may have thought of northern Michigan as a place to which the Eskimos come down to do their fall trading, but the people of that land like the climate. The cold air gives them vigor and stimulates their circulation. They learn how to protect their families and their live stock from the severe storms of winter and they do not usually suffer from the cold.

We are learning the value of fresh air and a healthful diet as an aid to

fighting winter ills. Sleeping with the window open and eating vegetables and fruit help to keep up vigor and prevent colds. Too many pancakes and too much pork and too little fresh air and fruit do more to cause colds than working outdoors in wintry weather. We all appreciate sunshine and look forward to spring, but there is real joy in a Michigan winter, and the tingling of a near zero day may carry more pep and vigor than the mellow sunshine of a lazy day in the south.

A Michigan
Soil
Program

EVERY farmer is interested in soils. On them depends his entire business. Unless they are productive, it is impossible to succeed at farming.

But for nearly a decade, an undercurrent of feeling against soil improvement has existed. This feeling has been predicated on the need for reducing the total production of farm products to keep up prices. The result has been disastrous. Poor soils give low yields. Low yields make high unit costs. High costs mean unsatisfactory returns.

We farmers must get a new viewpoint. We must keep down total production and also costs. A reasonable supply of any product will aid in holding prices for that product on a safe level and low production costs will enable the farmer to enjoy profits from these prices.

These two ends are not incompatible. Both can be secured on one and the same farm. It can be done with better soils. Producing the same output on fewer acres will keep production and costs down. Growing three thousand bushels of potatoes on ten acres has profitable possibilities when the crop is selling at seventy-five cents per bushel; whereas, if that amount is grown on thirty acres, losses are inevitable. Furthermore, the larger yielding crop will show higher quality, thus widening the advantages through higher grading of the product.

Soil improvement is, therefore, fundamental in the present agricultural situation. Michigan farmers need, above everything else, a thorough-going soil program. During these next five years every available means of promoting a better understanding and appreciation of soils as a factor in successful farming should be used.

Fight
Weeds
Now

WEEDS bother most farmers only when crops are growing. Their minds are not troubled with these enemies of crops, when snow is on the ground. But winter offers real opportunities to fight them.

Many fields are weedy partly because the owner's hands put the weed seeds in the soil. He did not use clean grain, grass, or legume seeds when putting in his crops. If tares can be separated from good plants one time better than another, that time is before the seeds have been put in the ground.

Seed cleaning and grading should not be done in a hurry. The farmer should work carefully at the job. So winter is an ideal time for this task. All those little precautions that give the maximum of results can best be done when one is not rushed; the mill can be put in shape and carefully adjusted; the seed need not be crowded through so rapidly; if necessary, the supply can be taken to commercial graders and cleaners.

Also, one not only has the advantage of doing this work better, but he gets it out of the way before the spring rush is on. Not infrequently, where one has planned to clean his seed, the pressure of time, at the last minute persuades him to forego the trouble. So the crop suffers.

Then, too, about the barn weed

seeds can, in part, be prevented from getting into the manure piles. In cleaning the mangers, in feeding hay, and in other ways, the vigilant farmer will ceaselessly wage war against weeds. This militancy will have a cumulative influence, as the years go on, toward better farming.

The Value
of Good
Farming

A BULLETIN has just been issued giving the results of what is known as "Marrow Plots" at the Illinois Experiment Station. Three different cropping systems are practiced on these plots. One plot has grown corn every year over a period of fifty-two years. Another plot has grown corn and oats alternately during the same time; while a third plot, with some variations, has been growing a rotation of corn, oats, and red clover.

The results are interesting. Where corn was grown continuously without soil treatment, the returns during the last twenty-two years from 1904 to 1926 lacked \$6.33 per acre of meeting expenses. Even with soil treatment there was a loss of \$1.95 per acre.

With the corn and oat rotation the net annual loss was \$2.89 per acre with no soil treatment, but a net return of \$3.81 per acre each year when the land was treated with manure, limestone, and phosphate.

In the case of the corn, oats, and clover rotation, there was an annual net return of \$2.09 for each acre without soil treatment and with soil treatment a return of \$6.40 net per acre.

A valuation also has been placed on the land in these different plots. It has been carefully calculated that the continuous corn land is worth \$73.00 per acre with no soil treatment and \$161.00 per acre where manure, limestone, and phosphate have been applied. The corn-oats land is worth \$142.00 per acre where untreated and \$276.00 a acre where treated. While the corn-oats-clover land is valued at \$242.00 and \$328.00 respectively for the untreated and treated areas.

These figures suggest the financial advantages of good husbandry. They impress the importance of a carefully planned soil program, and it is our hope that Michigan farmers will think seriously of the results of these long-time experiments.

Fighting
Further Re-
clamation

IT does not seem reasonable to those who know the present agricultural situation that the government should engage in any extensive reclamation work at this time. However, there are several big projects under consideration, one in the Columbia river basin, involving the expenditure of three hundred and fifteen million dollars.

The opening of new lands at this time will delay progress in agricultural adjustment toward a profitable basis. Further, those who take up the reclaimed land will find it difficult to succeed because they will be bringing forth new production at a time of surpluses.

The best interests of rural America can not be served by the addition of more agricultural land. Our present acreage can produce considerably more under more efficient methods of farming, and there is also the thirteen million acres of land which have been abandoned during the past few years, much of which can be brought to profitable production when conditions warrant.

It is perfectly proper that the government should have a reclamation department, but its activities should, at this time, be limited to surveys of the land situation and to plans for opening new land when consumption begins to crowd production. While it is pleasing to note that agricultural

organizations are active in the fight against further reclamation of land suitable for agricultural purposes, the fact remains that our present Congress in all probability will, in spite of the agricultural dilemma, provide funds for new reclamation projects.

Having
Eyes They
See Not

DESPITE protests that there is no corn borer, that he has been with us a century, and that he is no worse than other insect, the menacing fact is that human quibblings will not prevent the billions of corn borers now in our country from eating.

Last week a Canadian farmer asked, "Do the people of this side still listen to the man who says there is no corn borer. On the other side, that would now prove his insanity. May the good Lord help us," he continued, "from those who have eyes and see not."

Explanation

THE other day I went to town and was gone all afternoon as I got chattin' with Oscar Smith on public questions like relief for rheumatism, the Saturday night bath, cure fer carbunkles and word "obey" in the marriage ceremony. And when I got home Sofie wanted me to explain what she called my prolonged absence from the field of duty. She says when there's work around I should help get it out of the way. Well, there ain't nothing I like better than to dispense with work.

Well, seeing as Sofie insisted on me elucidatin' on my afternoon off, I says me and Oscar was determinin' important questions. Oscar says, fer inst., we should leave the word "obey" in the marriage ceremony and I agreed with him, but it took two



hours tryin' to convince each other just where in the ceremony it should be put. Oscar says it should be left where it was and I say it should be what the man says "Yes" to.

You see where it is now it makes the womin tell lies and it ain't good to have womin tell lies right at the start. They learn how soon enough. You see if you get a woman to swear she'll obey, she ain't going to do it. But if the man would agree to obey he'd only be tellin' the truth, 'cause that's what he does anyhow.

But the marriage ceremony is just a fooler fer man. When he stands there and has "sweet sugar" say she is goin' to obey, it makes him feel like a cave-man and think she's his'n. That ain't so. She don't say it out loud, but she knows she's got him.

Of course, if it was in the ceremony that man should say "I obey" there wouldn't be so many ceremonies 'cause then man'd know what he's gettin' into, but the way it's now, just only married men knows that the one he used to call sweet sugar is boss. The poor young fellows what commit matrimony don't know what they are committing.

Oscar says he's boss in his family but he's foolin' himself, and if he is, I feel sorry fer his family. But, I don't know why married men is got to have the worries and responsibilities we do. The males in the rest of the animule kingdom don't. But I suppose fer the good of the world as it is and will be, we men is gotta be silent sufferers and every time we take a afternoon off we gotta explain, elucidate, and interpret what we did with our present, past, and future when we was gone. HY SYCKLE.

There are about two billion books in the world, according to Dr. F. H. Visetelly, well known language expert.

A Farm Filing System

This Progressive Farmer Has Worked Out a Practical Method

By J. M. Kinney

AT this season of the year we plan and work out things so that when the rush season is here our work can go on most effectively and smoothly. Perhaps a farm filing system is most appreciated during the busy months from April to November, but I believe that a farmer who has cared enough to store up for himself a collection of agricultural literature will always appreciate having every bit of that information available at a moment's notice.

The writer has planned and developed his own filing system over a period of at least a dozen years, first as a student, then as an agricultural teacher, and finally as a farmer. I like my system and believe in it, hence the offer to the readers of the Michigan Farmer.

There is a system more or less common and that is to arrange bulletins, etc. in classes such as dairying, or farm crops and usually provide some sort of container for each class, but I have failed to find this system flexible, or enough of a time saver to warrant the time and expense involved.

A set of alphabetical index cards size three by five inches and perhaps two hundred blank cards of the same size costing in all not over fifty cents will last a long time. First, I set to work to index my set of Michigan Board of Agriculture reports. Each of these books contains all bulletins, circulars, etc., except extension and quarterly bulletins, put out by the college and experiment station for that year, in bound form. Suppose we make out a card for the bulletin—Michigan Potato Diseases—Michigan Special Bulletin No. 125.

Potatoes

Michigan Potato Diseases
Mich. Special Bul. No. 125
State Board of Agr. 1924
Page 454.

Place card in index set under "P" in some sort of box, even a good shoe box will last a long time if you have nothing more elaborate. These books have a far greater value when we know that we can find any information within their covers in a few moments. Our collection goes back to 1908 and a few years ago the lady who bosses in our house sometimes was inclined to look with disfavor upon that row of black books in my bookcase.

One summer morning she asked about a certain weed that had appeared in our garden and instead of saying there is a weed bulletin somewhere, she was handed a card from the index which read "Weeds, Michigan Weeds, Mich. Bd. of Agr. 1912, Page 269." She read and re-read parts of that bulletin many times that summer, and similar

incidents have occurred many times since.

Unbound bulletins especially Farmers' Bulletins from Washington, D. C., I index them much the same way as the others except to place a number, beginning with No. 1, on the upper right corner of the card and the same number on the upper left corner (bound edge) of the bulletin. They may be placed upon a cupboard shelf, though a deep drawer in a desk or filing cabinet would be very convenient.

Sometimes it is difficult to select a key word from the title and two or more cards may be made out, i. e., a bulletin dealing with "small fruit" and containing a good article on strawberries, which interests me, may need two cards: one for "fruit" and another for "strawberries."

The quarterly bulletins from our experiment station contain many short timely articles and experimental results not important enough for a bulletin alone. They are my favorites for they are always short and snappy. I make out a card for each article that seems of interest to me.

Each card should show the full title, name (bulletin or circular, etc.), number, and date. The station publishing should be given except "Farmers' bulletins" which are always from Washington. The title, name, and number help in replacing a valuable bulletin should it be lost. The date aids in selecting the latest literature because in some subjects a bulletin but a few years old may be of little value.

Now for our farm papers—some people do save all their papers. I never have because I like the clipping system better. A group of clippings in an envelope, perhaps, usually has little value—you forget all about them. A small clipping may be pasted on an index card along with name of paper, date, key word, and title. Make out a card for large clippings and fasten the clipping in a book—one of the Mich. Board of Agriculture reports.

Suppose that some stormy day this winter we decide to make a study of sweet clover from all its angles so as to feel more sure of ourselves next spring. Let's look at our card index and there in one place we find a small group of cards referring to all our available information from bulletins to farm paper clippings and we settle down to a few hours of profitable reading—what satisfaction.

It is estimated that a workingman requires from one-fourth to one-third of a gallon of drinking water per hour in the summer months.

"Experience is a dear school, but fools will learn in no other."

If you want extra traction and long tread wear in addition to balloon tire comfort, be sure you get this quiet-running new-type Goodyear All-Weather Tread.



"You ought to know this"

A man in your town sells the best tire you or anyone else can buy for the money you want to pay.

He has your size and type of tire in stock for you right now; he will get it out, put it on the rim for you, fill it with air.

And all the time that tire is serving you, he will be here to service it and see that you get the maximum results out of it.

This neighbor of yours is your local Goodyear dealer; the tire he has for you is "The World's Greatest Tire"—Goodyear.

Your Goodyear dealer's service will save you money. Save you time and trouble. Pay you bigger returns on every tire you buy.

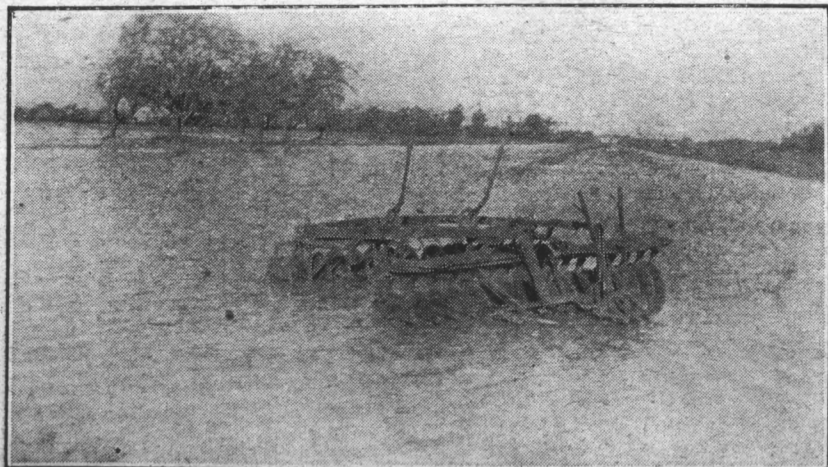
It is part and parcel of the Goodyear policy: to build the greatest possible value into Goodyear products, and to provide facilities so that users can get all this inbuilt value out.

Goodyear makes a tire to suit you—whether you want the incomparable All-Weather Tread Goodyear, the most famous tire in the world, or the lower-priced standard quality Goodyear Pathfinder

The Greatest Name in Rubber

GOODYEAR

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Not the Farm of a Careless Farmer, But the Result of a June Rain on the Farm of John Pudleiner, Berrien County

FIGHT FOR EQUALIZATION FEE

ADVOCATES of the McNary-Haugen bill, including the equalization fee provision, have made a hard and bitterly contested fight before the House committee on agriculture in behalf of what may be aptly termed the principle of the thing. They have shown no disposition to compromise. With them it is the equalization fee or nothing. At this time, however, it is evident that they are leading a forelorn hope so far as the passage of the bill through the lower branch of Congress is concerned.

Unless several members of the committee experience a radical change of mind the equalization fee plan is doomed. No bill containing the equalization fee feature will be reported out of the committee. Several congressmen on the committee who were ardent supporters of the McNary-Haugen bill last winter have declared that they will not support the bill containing the equalization fee on the grounds that they want to pass a measure which the President will sign.

It is now thought that the House committee will report out and that the House will pass a McNary-Haugen bill without the equalization fee provision. It is also indicated that the Senate will pass a McNary-Haugen bill including the equalization fee and that the two bills will go to conference where they are likely to be pigeonholed because of the inability of the conferees to agree.

GRANGE FARM RELIEF BILL
BEING GROOMED

NOW that the equalization fee plan seems to have little chance for enactment, Louis J. Taber, master of the National Grange, says he thinks the time is ripe to give the National Grange's farm relief plan featuring the export debenture plan a fair hearing on its merits.

This plan secures for farmers almost exactly the same benefits as are sought through the equalization fee plan, and avoids most of the objections urged against the McNary-Haugen bill by President Coolidge in his veto message of last spring. It is a logical supplement to the protective tariff system, a supplement fully approved and contemplated by Alexander Hamilton when our protective system was first inaugurated. The executive committee of the National Grange has been in session in Washington for several days consulting farm leaders from various sections together with congressional leaders who are helping to whip the bill into final form.

WESTERNERS WANT TARIFF
ADJUSTED

IN view of the probability that they will not be able to pass the McNary-Haugen equalization fee bill, and realizing the impossibility at this time of securing legislation reducing the tariff on manufactured products which farmers buy, several Western congressmen have introduced bills providing for increases in the rates on farm products and the removal from the free list of numerous products that enter into competition with American farm products.

FARMERS OPPOSE RECLAMATION
BILLS

OPPPOSITION to the Federal government appropriation funds for new Western irrigation projects was stressed by National Grange Master L. J. Taber of Ohio before the House committee on irrigation and reclamation. He declared that the development of new agricultural lands by the government should stop until the farmers' dollar has reached par. He could not see the need of increased

acreage since there were 20,000,000 acres of abandoned farm lands in the country.

In spite of farmer opposition, it is now indicated that the Columbia River Basin project, along with several other reclamation projects will get favorable action in Congress this winter. It is interesting to note that every one of the members of Congress who are advocating these reclamation projects voted for the McNary-Haugen bill last winter on the grounds that the disposal of the agricultural surplus is the biggest question before Congress in the attempt to enact farm relief legislation.

RESERVOIRS FOR FLOOD
CONTROL

THE construction of reservoirs on the tributaries of the Mississippi river as a means of flood control was advocated by Senator Capper before the House committee on flood control. Senator Capper said he believed that flood control on the lower Mississippi cannot be carried out successfully without controlling the flood waters of the Ohio, Arkansas, Missouri, and other tributaries. "Five or six reservoirs on the Arkansas river would have prevented floods in Kansas, and held back the water that swelled the Mississippi flood. These reservoirs could be located in the natural storage basins in Colorado and western Kansas, and the waters could be used to irrigate thousands of acres of semi-arid land in these western states."

MAY UN-MUZZLE MUSCLE
SHOALS

THE Muscle Shoals power-fertilizer disposal question is believed to be nearer a solution than ever before. It is predicted that the House military affairs committee will report favorably on the Madden bill, providing for leasing the plant to the American Cyanamid Company, and that it will pass the House. Congress is desirous of reaching a settlement of the vexatious problem this winter.

Instead of making money at Muscle Shoals under the present plan of sell-

ing power to the power companies, the government is adding to its deficit, which now totals \$1,600,000 in a little more than two years, and every year we continue present operations, and fail to accept the proposals offered in the new bill, says Representative Madden, we add almost \$1,000,000 to our deficit.

CAN'T FORCE REDUCTION IN
PLANTING

THERE is no law to prevent the Department of Agriculture from advising farmers against over planting, according to Secretary of Agriculture Jardine. Action to prevent over production is taken through extension workers of the department. Through the appropriation act the department has authority to collect statistics, interpret them, and disseminate such information. Hence the departmental specialists may advise growers to cut down their acreage. Whether this advice is followed or not depends entirely upon the farmer.

BARGE SERVICE TO INCREASE

THE prospective tonnage that could be handled by the Mississippi river barge line is limited only by the equipment and efficiency of barge service. This is the conclusion based on a survey made by the Department of Commerce at the request of the Secretary of War.

As a result of this survey it was determined that there would be available for Mississippi river barge transportation cargo to the extent of 6,995,525 tons. This amount of cargo presents a very significant comparison to the 1,251,276 tons transported by the barge line on the Mississippi in 1927.

AT MERCY OF FOREIGN
MONOPOLIES

LEGISLATION is urgently needed to protect American producers and consumers against foreign monopolies in essential raw materials, especially potash, sisal, and rubber, according to Secretary of Commerce

Herbert Hoover, who testified before the House judiciary committee, on the Newton bill providing for an amendment of the Webb-Pomerene export trading act, so as to enable importers of essential raw materials to avail themselves of the provisions of the act by forming associations for importing purposes without danger of violation of the anti-trust laws or the Federal Trade Commission act.

"When any American uses rubber, potash, sisal, nitrates, coffee, mercury, camphor or iodine," says Secretary Jardine, "he is using a product controlled largely by a foreign combination or monopoly. The United States is the world's greatest market for foreign-controlled products."

SUPREME COURT CONSIDERS IM-
PORTANT ISSUE

HAS the state the right to destroy one man's property to protect the property of another man, even though it be for the common good? This is the question that the Supreme Court is asked to decide in a case arising under the cedar rust law of Virginia, which provides for the destruction of cedar trees that are near apple orchards to prevent the spread of the rust on the apple trees. Counsel for the state contended that unless cedar rust is controlled by the destruction of infected cedar trees near orchards, the apple industry of the Valley of Virginia was doomed to destruction. Counsel for the property owners who are contesting the right of the state to destroy cedar trees, insisted that the law was unconstitutional because it proposed to destroy valuable property of one class, who regarded the red cedar as highly desirable for ornamental purposes, for the benefit of another class who raised apples. It was further contended that if the cedars must be destroyed, the owners were entitled to damages covering the depreciation in the value of property through their removal.

BETTER CO-OP SALESMEN

THE time is at hand for a new line of sales talk in behalf of co-operative marketing, says J. W. Jones of the Division of Cooperative Marketing in the Department of Agriculture. Field men must know and discuss marketing if they are to sell memberships.

Heretofore men unfamiliar with the technique of marketing have promised more in the nature of a reduction in margins than was possible. Many organizations have been formed with their membership expecting a much larger portion of the consumer's dollar than there was any possibility of their getting. Reduction of margins generally depends on farmers dispensing with unnecessary services which they have overvalued.

USE OLD BEET CONTRACT

OBJECTION to the labor provisions of the new beet contract offered by the factories has been raised on the ground that the minimum flat rate was not low enough. As a result the contract has been abandoned for this season. There is general belief in the principle of the sliding scale for labor incorporated in these contracts. It is hoped by some of the growers that the proper figures can be agreed upon in Michigan by another season.

Artichokes, both the "globe" and the "Jerusalem" varieties, are close relatives of the common sunflower.

A kind of Indian corn is grown in Missouri because the large cobs make good corn cob pipes.

A new daylight screen for motion pictures uses a surface of colored strips continuously moved over two cylinders.



Leap Year in the Stone Age



"Invisible Values" . . .

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sure in advance of
what only time and
use will prove?*

SCORES of the items which you buy from day to day must be taken on faith. Strong claims may be made—quality may be argued—yet how may you be sure that what you buy will meet the one test that counts—that allows of no evasion—the test of time and use?

You cannot be an expert on scores of different varieties of merchandise. There is, however, one certain, sure, safe way to buy everything you want.

Send for your Montgomery Ward Catalogue. Select your needs at your leisure. Mail your order. Back will come merchandise which is absolutely certain to give you those "invisible values" you demand. All that you buy from Montgomery Ward is guaranteed to be as represented. The facts about quality are clearly stated in the catalogue. The items are illustrated. You are the sole judge of whether the things you buy are satisfactory. If you are not pleased you can have your money back. How can we make so sweeping an offer?

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expectations. We can do this because we test everything we buy.

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So that with our all-inclusive guarantee you get lower prices. In fact, you will not find so great a variety at such low prices even in the greatest stores of the largest cities.

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And then note the money-saving prices. Buying from Montgomery Ward is easy, safe and certain to satisfy.

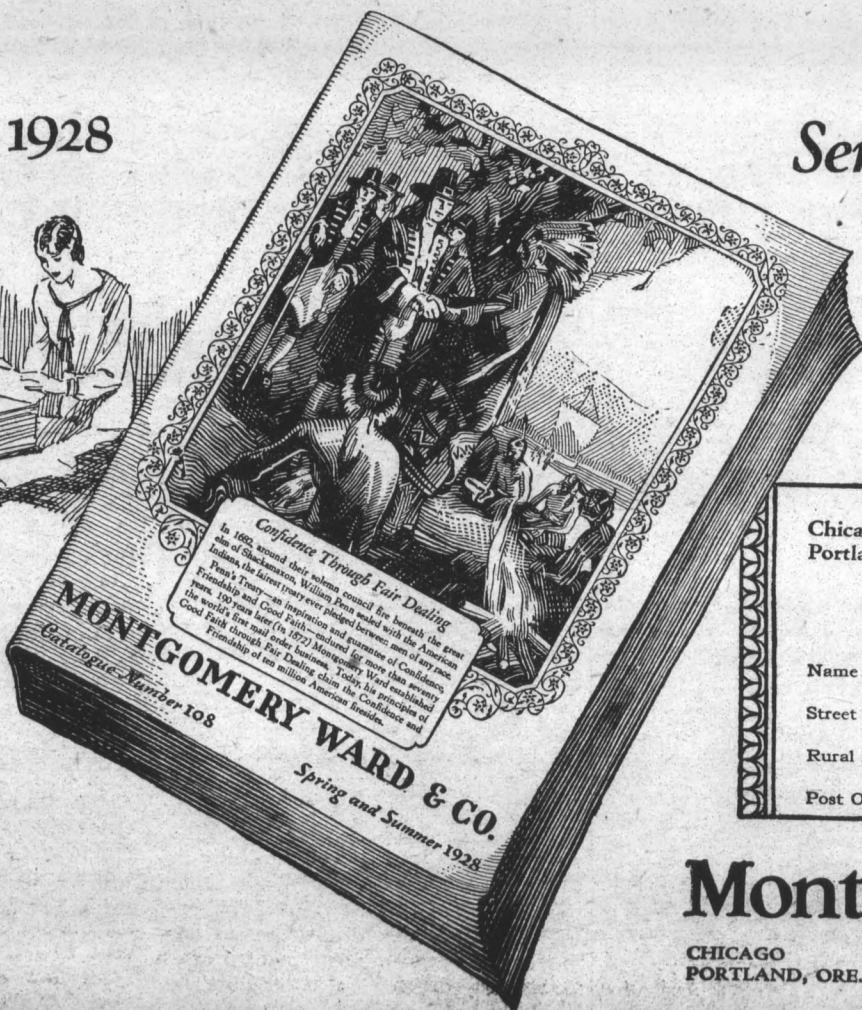


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Today, Kellys are consistently giving two and three times the mileage they did seven or eight years ago, yet they now cost no more than any of the better-known makes.

The explanation is very simple. The public demand for Kellys led to such large production that our manufacturing costs have been constantly lowered, thus making it possible for us to offer you far better tires than the old Kellys, at half the cost.

If you have never used Kelly-Springfield tires, it will pay you to get acquainted with them.

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100 Lbs. Net—Frozen large dressed Herring, \$6.50; round Pickrel, \$7.00; headless Pickrel, \$9.00; yellow Pike \$12.00; Salmon \$12.50; Tullibee Whitefish \$9.50. Remit with order. Package charge 30c per 100 lbs. We charge 1/4c per lb. more in less than 100-lb. lots. Send for price list of all varieties fish.

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JOHNSON FISH CO., Green Bay, Wis.



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No Buckle
HARNESS

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a new 1928 model Walsh No-Buckle harness on 30 days free trial. Use it. Prove to yourself that it is stronger, easier to handle. Outwears buckle harness because it has no buckles to tear straps, no rings to wear them, no buckle holes to weaken them. Eleven years success—thousands in use.

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Hence costs less. Walsh special steel-tested leather—all particulars of eleven styles explained in big, 1928 catalog.

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For introductory purposes—for a limited time this wonderful new Aladdin Kerosene (coal-oil) Mantle Lamp is being offered at Wholesale Price. The Aladdin is the ideal home light giving full sixty candle power light on a gallon of common kerosene. Quality of light nearest of all to sunlight. Beats gas or electricity. Odorless, noiseless, smokeless and troubleless. Simple and absolutely safe—can't explode. Saves its cost in few months in oil it saves.

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Be the first to write and also learn how you may even get yours FREE by helping us introduce the Aladdin in your locality.

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AGENTS WANTED

Burns 94% Air
Only 6% Kerosene
Beats Gas or Electric



HOME-MADE SNOW PLOW

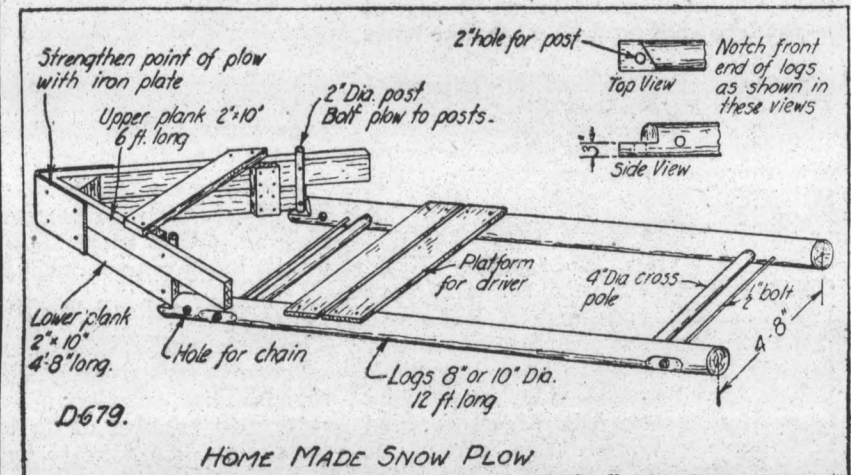
I AM sending you diagram and description of a home-made snow plow which any farmer can make and use for plowing out his private roads or for work on the public roads where the authorities do not do this work themselves. It is drawn by horses and sure does wonderful work in plowing the road for sleighs and automobiles.

"The plow is made by taking two timbers 10 or 12 feet long and 8 or 10 inches in diameter. Bore holes sideway through the logs and mortise in good sized poles or timbers 4 feet 11 inches long, so the width will be a little greater than an automobile tread, preferably using a three inch hole if an expansion bit is available. From the front end of the runners measure back about three inches and cut down towards the front at a slant,

for baling straw directly from the threshing separator.

With this device the wind stacker is removed, the large power driven baling press is brought rather close to the rear of the separator and belted to the cylinder pulley which was used to drive the wind stacker. The straw from the rear of the separator drops on an automatic conveyor, which carries it back and up into the feeding hopper of the press, where it is forced down by the automatic feeder. The straw is thus fed into the press without any hand labor at all, and two men can tie and move back the bales as fast as the average threshing machine will handle it.

Thus this simple automatic device will take the place of three and often four men in the baling operation. In addition it will often save one or two men used in stacking the straw so it



as shown in the diagram. Starting where the slant is cut, bore a hole vertically clear through the runners and place two-inch hard wood sticks in each. Build the plow on these sticks, as shown in the diagram.

"The team is hitched to the plow by means of log chains which may be put through holes bored sideways through the runners back of the stakes a few inches, then around the top part of the plow and then to the front part of the driver's platform. These chains passing over the top of the plow help to hold it down to the ground."

We are very glad to get the directions for making this device, as it should be easily made and apparently would be effective in moving the snow. We would suggest that the addition of a half-inch rod put through both runners close to the cross pieces, with the heads and nuts notched back a little so they would not strike and put on extra large and heavy washers would add a lot to the strength. Also that a 2 by 6 brace spiked securely on top of the runners would prevent twisting if one runner strikes a bump or a stone. Further, that it would be worth while before putting crosspieces and runners together to coat all the parts liberally with creosote or with coal tar to prevent decay. Then if the thing is pulled under shelter and tipped up on blocks against the wall, it should last for years and years; whereas if left outdoors on the ground, five or six years service is about all that could be expected.—D.

SAVING LABOR IN BALING STRAW

ONE of the largest factors of the cost of baling straw and other roughage is that of labor, and any improvements in baling methods which will decrease this factor of the cost will be right in line with the new movement towards decreasing production costs through better engineering and the use of labor-saving machinery. A good example of this is the new type of automatic conveyor feed press

will keep during rainy weather. Most important of all, however, is the saving in straw which spoils during the first rainy spell. We have all seen the straw which we had planned to bale for market and bedding get thoroughly water soaked before we could get the baling started, with the result that a third of the straw spoiled and the cost of the remainder was increased because the spoiled straw had to be moved out of the way. With the new method, not a forkful of straw need be lost, and the bright color and good quality of the straw should bring a considerably better price on the market. It is conservatively estimated that the saving in labor and in wasted straw and the higher quality of the product will cut the cost of the baled straw in half. Figure out for yourself whether such a device will pay, with the greatly increased demand for straw for feed, bedding, packing purposes, strawboard, and paper, and just recently the new type of insulating board.

Still further possibilities are in sight for such a device in connection with the combine. It has already been demonstrated that such a baler can be hitched behind the combine, the straw fed directly into the baler and the bales tied by a man who rides on the machine, and then kicked off to be picked up later, or perhaps elevated on to a low wagon and hauled away.—I. W. Dickerson.

ABOUT BUZZ SAWS

EVERY little while one reads or hears of some person sent on into eternity prematurely through the bursting of a buzz saw. Buzzing up wood is dangerous enough business at best without courting disaster and flirting with the undertaker. The high cost of living is a real problem, but funerals are even more expensive. A cracked, wobbly buzz saw belongs on the junk heap, not on the sawing arbor.—S. P.

"Only a sore throat"

Don't ever underestimate the danger of a sore throat; if neglected, it may develop into something serious—as many know to their sorrow.

The same goes for a cold; pneumonia at this time of the year is your great enemy.

At the first sign of cold or throat irritation, use Listerine full strength as a gargle. Keep it up systematically.

Being antiseptic, it immediately attacks the countless disease-producing bacteria in mouth and throat, and halts many an ailment before it becomes dangerous.

During winter weather, when you are usually subjected to poor air and sharp changes in temperature, it's a good idea to use Listerine every day as a mouth wash and gargle.

This pleasant and easy precaution may spare you a trying and painful siege of illness. Lambert Pharmacal Company, St. Louis, Mo. U. S. A.

Never neglect a sore throat



THE NEXT TIME!

The next time you buy a dentifrice ask for Listerine Tooth Paste at 25c the large tube. It has halved the tooth paste bill of more than two million people.

More than 50 diseases

have their beginning or development in the THROAT. Some, of mild character, yield to an antiseptic. Others, more serious, do not. At the first sign of an irritated throat, gargle frequently with Listerine. If no improvement is shown, consult a physician.

LISTERINE

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Better Apples and More of Them

by timely use of Calcium Nitrate. To better the set of fruit, make the apples stick on, make the foliage vigorous and healthy, and prepare new wood for the crops of coming years

Apply Calcium Nitrate just before blossom time

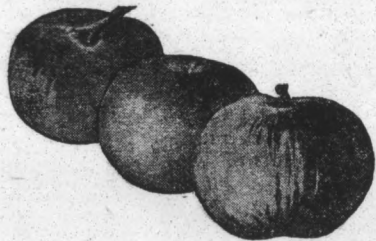
The cost is small; the returns very great. Calcium Nitrate is now the preferred form of fertilizer nitrogen for use in orchards. It is the most soluble of all nitrogen fertilizers. It will dissolve itself in water which it draws from the air. It contains both nitrogen and lime. A ton of Calcium Nitrate has as much lime as 1,000 pounds of ground limestone.

Calcium Nitrate (Nitrate of Lime)

Ask your Experiment Station or County Agent for information.

Send for booklets telling about this and other nitrogen fertilizers, mentioning this paper.

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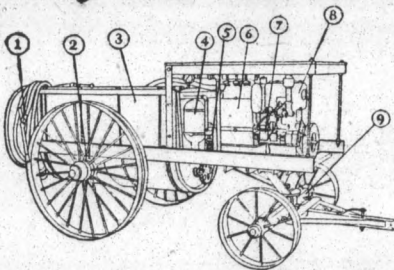
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FREE! Send this coupon for full description of any size sprayer and free subscription to The Orchard Products News.

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DRAINING ROAD

They are building a new county road passing my land. There is a piece of swamp where the road goes through. This swamp is quite full of water in the spring. They have also found a still lower place in my land where the water can be drained off, and they want to dig a ditch and let the water drain into my land. What right have they to do this?—J. B.

The county road commissioner has no more right to turn surface water upon adjoining owners than a private person would have. The only place where the water can be lawfully discharged is into some water course.

NATURALIZATION PAPERS

I took out first naturalization papers in Chicago but before taking second papers I moved on a farm in this state (Michigan). The papers are six years old and I would like to make application for second papers but do not know where to write or what should be done in this case. Please advise.—C. L.

Write to the clerk of the court in which your first papers were obtained, stating the facts, and asking for directions.—Rood.

LICENSE TO SELL

I am about to enter a contract to sell poultry powders for a company in Illinois. In selling this, I will have to canvass from house to house. Does the state of Michigan require a man to have a license for this kind of business?—E. A. K.

If the goods are shipped to Michigan only as the orders are obtained and to fill them, it is interstate commerce and not subject to regulation by Michigan laws or police regulation, and no license is required. This is because the state cannot pass any law that will interfere with the United States regulation of interstate commerce, except so far as is necessary to protect public health and safety against importation of disease and so forth.—Rood.

EMERGENCY HAY CROP

I moved onto a farm last fall where no clover nor alfalfa was seeded. The only thing left for hay for next year is 10 acres of timothy that was pasture most of the summer, and 10 acres of mixture of June grass timothy and weeds that were not cut last year. This will be all right to feed horses and dry cows to keep them from starving to death and that is all. What can I sow next spring that will give me a crop to harvest next summer or fall to feed to milch cows? How many acres to the cow? I can raise several acres of oat hay for the coming harvest if it is any good.—R. C.

For an early spring sown emergency hay crop, oats and peas make a fairly satisfactory combination. A mixture of a bushel of oats and a bushels of peas sown at the rate of from two and one-half to three bushels of seed per acre is usually recommended.

The feeding quality of this hay is good and it is ready to harvest during mid-summer. The above suggested mixture is especially good for the upper peninsula and the northern part of the lower peninsula but does not yield quite so well for the southern part of the lower peninsula.

For the southern half of the lower peninsula soy beans are frequently used for this purpose. The Manchu, Ito San, and Black Eyebrow varieties being quite satisfactory. Soy beans should be sown the latter part of May or the first of June in 28 inch rows at the rate of 35 pounds of seed per acre. On heavy soil that is in a good state of fertility, soy beans are sometimes drilled in solid, using 90 pounds of seed per acre. The first mentioned method of sowing soy beans is the one

which usually gives best satisfaction.

The seed should be inoculated and sown at from one-half to one inch deep. If planted too deeply, a poor stand is likely to result.

The average yield of soy bean hay is from one and one-half to two and one-half tons per acre. The feeding value of soy bean hay is pretty much the same as that of alfalfa hay. Soy beans are ready to harvest for hay about the first of September. Weather conditions are not always favorable at this time but losses are not usually great.

Oat hay has a fair feeding value but does not usually yield as well as either soy bean hay or oat and pea hay.—C. R. Megee.

BILL OF SALE

I gave my sister a bill of sale of all my live stock consisting of twenty-three head of cattle and four horses. Now I have been told that the bill of sale will not hold as I did not describe each animal. Will it hold or will it not? Is it necessary to describe each animal in a bill of sale? If it will not hold, are my rights in stock the same as they were before bill of sale was made out? Does a bill of sale have to be recorded to be legal? If I filled out a bill of sale myself, would it be as legal as one filled out by a justice of the peace?—R. E. A.

A sale of personal property accompanied by delivery is valid without any writing at all. The writing is merely a confirmation of the transaction, and though irregular, would be sufficient. Such papers do not have to be recorded.—Rood.

TO START A LAWN

What can be done to get a sod on my lawn? In front of my home I have five maple trees standing about 18 feet apart and 20 feet from the house. These trees are at least 14 to 16 inches in diameter, and very tall. I have tried seeding after having good dirt drawn on for seed bed, and have tried lawn seed and also orchard grass, but it comes up very spindling and as soon as a little dry weather hits it, it seems to grow yellow and dies. I had it sodded with heavy sod one time and this does not last. Can you suggest some way to get it seeded?—F. W.

There are many places where a poor lawn is the result of too much shade and in many instances the trees are so close together that none of them are able to develop properly so as to make a beautiful specimen. So that it would probably, in this case, add greatly to the final development of the grounds to remove some trees so that they would stand at least 36 feet apart and if they stand in straight rows some could be removed irregularly so the whole would seem to be planted that way. Except along the road, trees for the most part should be planted unequal distances apart so as to make the planting as natural as possible.

There is one special grass seed that will grow in shade, this is the Chewings Red Fescue, but very few seed houses have this in the pure form. All of the fescues will do well in the shade but if this special kind can be obtained, it is far superior to the others.

If there is any orchard grass in the lawn, it should be removed before seeding to this special grass, as orchard grass becomes the most obnoxious weed we have in a lawn and can only be removed by deep plowing or taking out each individual clump. The seeding should now wait until early spring.—O. I. Gregg.

There are no polar bears, or any other land animals, in the south polar regions, according to the Explorer Stefansson.

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VOTE FAVORABLY ON EXTENSION WORKERS' BILL

THE House and Senate committees on agriculture have voted to report favorably the Capper-Ketcham bill, with amendments providing that in future appointments of county agents and home demonstrators there will be an equal distribution of appointments among men and women. The bill largely increases the appropriations for farm and home demonstration and 4-H club work.

FARMERS OPPOSE RECLAMATION WORK

AT hearings before the House committee on irrigation and reclamation, the fact was disclosed that the proposed Columbia River Basin project, the development of which is being urged upon Congress, would bring into cultivation 1,883,000 acres and make 1,117,000 acres available for grazing. The cost to the Federal government would be upwards of \$350,000,000.

Speaking in opposition to the project before the Washington Farm Hands Club, A. S. Goss, master of the Washington State Grange, said that in making extensive inquiries in Washington, Oregon, and Idaho he had found that 90 per cent of the farmers of the Northwest are opposed to the government beginning development of the Columbia River Basin Project at this time, or until the question of agricultural surplus disposal was settled. The railroads, banks, and dealers are promoting Northwestern reclamation schemes, according to Mr. Goss, but the farmers out there feel that they cannot stand any more government-made competition.

BACK McNARY-HAUGEN BILL

THERE are apparently more farm organizations back of the McNary-Haugen bill than in former years. Some farm organization representatives feel that a mistake has been made in attempting to change the new bill after it was introduced as the last word in farm organization demands. There is also some basis for the belief that if Congress passes a surplus disposal measure this season it will not contain the equalization fee provision.

The National Grange export debenture plan will be introduced in the House by Representative Marvin Jones of Texas.

ONE-FOURTH DELINQUENT

THE goat of our present tax system seems to be the owner of general property, especially real estate. He is assessed and taxed with seemingly no consideration being given to his tax paying ability or the earning power of his property. The result is that an ever increasing number of citizens find themselves unable to pay the exorbitant taxes imposed upon them and thus their real estate is confiscated.

Probably few people realize the seriousness of the situation. According to figures made public a few days ago by Auditor General O. B. Fuller, property valued at \$950,467,998 was returned delinquent for the taxes of 1926. This included 8,275,445 acres which, it is alarming to note, represents nearly one-fourth of the entire acreage of our state.

These are cold figures, alarming in the abstract, but tragic to those who know from personal experience or intimate observation just what they mean in terms of heart-throbs, shattered homes and discouragement.

Why, in this enlightened, advanced age, should it be necessary that there be so much misery, heartache and confiscation of property in connection with raising the funds for the various governmental projects? Is it sound

public policy to go under a tax system which is discouraging home ownership and thus weakening the stabilizing influence of the American Home, which we all realize is one of the most potent factors in maintaining high standards of citizenship?

A fool can ask more questions than a wise man can answer, so maybe this is enough of these thought-provoking interrogations for now. I hope that you aren't totally hopeless and discouraged about this proposition and that if you have some new ideas along this line, you will pass them along to me to be relayed to the other readers of these articles.—S. Powell.

NO FOOD SHORTAGE

DR. O. E. BAKER, of the U. S. department of agriculture recently said that there is no cause for worry over food shortage for at least the next seventy-five years. The increase in efficiency on the part of the farmers combined with the use of additional available acreage will offset any demand which increased population may bring for some time to come.

The newly discovered chemical element, Ilinium, has been detected by means of the spectroscope, but has not yet been isolated.

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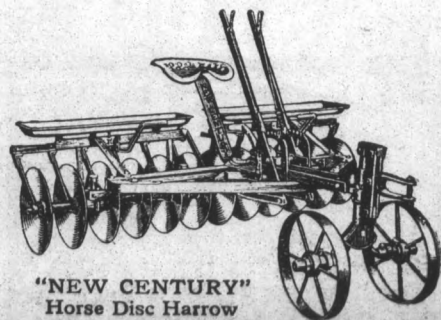
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Our Readers' Corner

Facts and Opinions by Michigan Farm Folks

FEDERAL FARM LOANS

DESPITE the publicity given Farm Loan associations, many farmers know little or nothing of this avenue of borrowing until necessity compels them to seek loans.

The Freesoil National Farm Loan Association has this fall received more than the usual number of inquiries, not only from those living upon land, either as owner or tenant, but from owners living in cities, who contemplate returning to their farms, as soon as their tenants' present leases expire.

Loans run for a generation, thus avoiding the expense of renewal, commissions or bonuses, every few years. The present interest rate is but five per cent and cannot be increased during the life of the loan.

Loans cannot be called as long as the installments are paid when due. Advance payments are accepted and loans may be paid off at the expiration of five years. The Federal Farm Loan system is cooperative, and the borrower gradually repays the loan by adding one per cent to the interest rate.

Every association carries ten per cent of its net earnings, annually to a reserve account. On September 19 this year, the Freesoil Association invested one hundred dollars in a registered Federal Land Bank bond. On November 1 the association received its first semi-annual interest on the bond at the four and one-half per cent rate.

There is more than two dollars in value in farms, back of each dollar in bonds issued. The twelve Federal Land Banks, jointly guarantee both principal and interest of the bonds. Another attractive feature of these bonds is the fact that they are tax exempt.—G. Pearl Darr.

REMINISCENCES

THE choice of Mr. Howard Nugent at Huron County's Champion Farmer evokes more than ordinary interest among the older residents for turning to Huron County biography and pioneer society records. We find Mr. Nugent is the son of pioneers both father and mother. His father was the son of Richard and Sarah (Pangborn) Nugent coming to Huron County in 1866 from Port Hope, Ontario. His mother was a member of the Slack family coming in 1868.

The elder Mr. Nugent saw the first school erected in the township; school house of logs was burned in the great forest fire of 7, 8, and 9th, October, 1871. Seventy-five per cent of all green forest in the thumb district was also ruined.

Mr. William Slack was one of the organizers of the first Huron County Fair held in the village of Verona Mills, October 20, 1869. Organizations were effected on July 4 of the same year. The Verona Mills were built by Jeremiah Ludington, a pioneer of Sand Beach. His son, Alman Ludington, was the first white child of record born at Sand Beach in 1851. Mr. Ludington erected a saw mill at Verona town line the winter of 1864-1865, having suffered a fire loss at the shore on June 28, 1864. He added two shingle saws to the Mulley saw and later a grist mill in 1866. This gave the name to the village. Before that time all lumber was sawed by hand by a pit three-man saw.

Before daylight on Washington's birthday three mills were fired by an exploding can of coal oil, the use of which was not common at that date, 1868. The saw and shingle mills were immediately rebuilt by Mr. Ludington

who accepted donations from letters to hurry rebuilding. The grist mill was not rebuilt by him. Among other donations was the gift of a great cork pine tree by Mr. Lorkoski.

The butt log of this tree yielded two planks that became world famed. They were donated to George W. Pack, a Cleveland lumberman. George Marten placed them on his sleigh and they covered the bunks so the chain had to be tucked around the edges to hook. The carf on the cant was more than five feet at small end. A man is still living that helped get them out and is janitor of County Court. The planks were from four to six inches thick and more than sixteen feet long. One was perfectly clear and received a metal at the Centennial, 1876. These mills were all burned in 1871, rebuilt and a flour mill added in 1887, burned again in 1881, flour mill rebuilt in 1883. Roller process was added in 1887, dismantled and moved to Lake City in 1895 and Verona Mills is but a hall of fond remembrance.

LIKES CATS

DON'T remember when the cat play began between the girls and boys but M. H. Hunt's article interested me. Thought maybe it would be well to show up the better side of the cat. A good cat, like a good dog, is extremely useful.

In my opinion, if naturalists who find so many cons against cats, would discriminate between cat characters as they naturally must between dog characters, horse characters or man characters, the poor cat would stand a fair show. There are good cats and bad cats, good dogs and bad dogs, good horses and bad horses, good boys and girls and bad boys and girls. But I never heard of a naturalist arguing that all these specie must go because a part of them were bad and useless, and often worse than useless.

Our family has had many cats. Sel-dom have we had bird and chicken-killing cats. Our premises were large and we found use always for several at all times. When we discovered one with a bird or chicken-killing propensity, it was promptly dispatched.

Another thing, we feed well our tabbies while they are bearing and nursing their kittens. This goes far to prevent bird killers. We don't kill off the baby kittens as is the practice with most people. We let them sort of half grow up, until they begin to show disposition and character. The objectionable ones are then drowned. For the better ones we find homes, or let them grow up, if we are in need of cats.

There is systematic and organized effort to improve all other kinds of domestic animals, but poor cat has been allowed to shift for itself. With so many odds against them, it's a wonder they do as well as they do. If naturalists would set about producing a superior strain, much or nearly all cat difficulties would disappear.—M. W. B.

Martha Peters saved a lot of seed from the best plants last year but she put the paper envelopes on a low shelf in the store room and the mice have eaten the insides all out of the seed. She says she is glad of it as it is much fun looking over the catalogues and selecting new seed, and the varieties which come in pretty envelopes always look more attractive and give a garden an optimistic start.—Sunshine Hollow.

Mushrooms appear to spring up overnight, but they really have a long period of growth under ground before they come to light.

AMERICA'S FIRST AGRICULTURAL SCIENTIST

(Continued from page 127)

and the radio once more enforces that "terrible solitude" when its batteries part company with the alphabet.

To even adequately sketch Franklin's contribution to science would take a volume—and then the half would not be said. And so we are going to be content with mention of the three things that he did that have meant the most to agriculture.

Was there ever a boy or man either who didn't get a kick out of the mysteries of electricity? Franklin built on what was already known. Before his time, electricity had been discovered and Leyden jars had been concocted for storing it. But the current theory was that it was caused by friction. With a glass tube sent him from England, which he had seen in crude experiments, he proved that electricity is everywhere, it is of two kinds, positive and negative, and you can corral oodles of it if you have a suitable lasso.

After performing his classic experiment with the kite, which really demonstrated that lightning and electricity were one and the same, he wrote a treatise on it—a lengthy explanation couched in the finest of simple English, for which he was justly famous and which in itself is no mean accomplishment. Just at that juncture in the international chess game, George III of England did not feel a bit kindly toward America because the colonies threatened to cut down his income by saying they would pay no taxes unless they had representation, and so his Royal Academy received Franklin's experiments with a poorly camouflaged gesture of respect, but did not bother to insert them in the proceedings. "How could a man out in the sticks work out any such facts as these" was the portent of their attitude. At that time the ten colonies were a mere fringe upon our eastern shore with a scant 400,000 population—less than one-fourth the present population of Detroit.

However, the French scientists, naturally feeling more cordial, duplicated the experiments, found that they worked O. K., and accepted Franklin as the greatest scientists of all time. Thus Franklin became the first colonial man with a reputation in Europe and yet remains abroad the most famous of all Americans except Lincoln.

Later the Royal Society saw that they had overlooked a good bet, said "We're sorry," recanted, and took Franklin in as a member without either initiation fee or yearly dues. It may be properly assumed that no Scotchmen were on the board.

The kite provided his foundation experiment with electricity. Franklin, like Bacon, took for granted the incredibility of his associates so he and his son only, went out one afternoon when the majestic thunderheads were floating in from the west. They made a kite out of a silk handkerchief and on the upright stick fastened a stiff pointed piece of iron, projecting up into the air about a foot and a half. A hemp cord ran down from this, nearly to his hand. Here another piece of silk formed a handle. Where the hemp left off, they tied another piece to which was fastened an ordinary door key. As the storm came on, occasionally they would wet their knuckles, put them up to the key and see an electric spark jump the gap. Each of them took a shock or two, then charged two Leyden jars and returned to the laboratory.

For seven years, Franklin's duties made it possible for him to delve into electricity and in that time he made an electric motor and several other applications of the newly found Messiah of Drudge. Like the Irishman who tried to steal some gunpowder by boring a hole in the end of the keg

with a red hot iron, Franklin one time tried to electrocute a turkey before some friends just to show that it could be done. But he did not have the apparatus rigged up just right and the juice missed fire and took his hand instead, so his description of the experiment throws some light on the "humaneness" of electrocution.

"The flash was very great, and the crack was as loud as a pistol; yet my senses being instantly gone, I neither saw the one nor heard the other; nor did I feel the stroke on my hand, though I afterwards found it had raised a round swelling where the fire entered, as big as half a pistol bullet."

"Poor Richard's Almanac" was begun by Franklin in 1732 and appeared every year for 25 years. It cost sixpence and if a farmer didn't have the money, he traded produce, stockings, tobacco—anything to get it. It contained weather predictions for the coming year fully as reliable as those on the almanacs now in circulation.

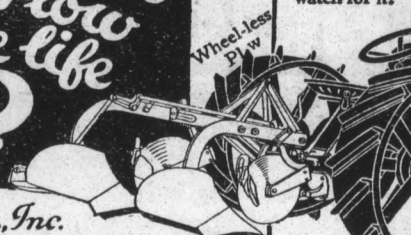
(Continued on page 142)

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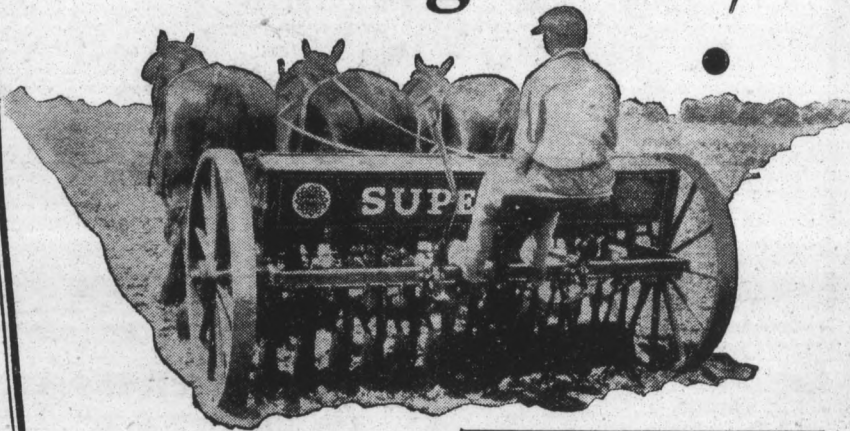
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ORCHARD AND GARDEN

VEGETABLE GARDEN PLANS

A WELL planned and carefully tended garden is one of the most pleasant and satisfying pieces of work. If the soil is properly prepared and a little attention is given the garden as required, the work need not become a burden on the members of the household.

If there is any choice in the selection of the garden site, avoid shady locations. The closer to the house the garden is the more care it receives and, like everything else, it responds to careful attention.

Almost any kind of soil, unless it is composed of bricks or stones, can be used for gardening if it is properly handled. A soil should be well drained. The use of tile is practical where natural drainage is not available. A water supply should be available so that it may be irrigated during prolonged drought.

Soil Preparation and Fertilization

Manure is the best fertilizer for vegetables and should be used freely. Apply in the fall and plow under at that time. If not available until spring, well rotted manure is preferable.

The liberal use of manure will build up any soil in a few years to a point where it will be easily and profitably worked. Applications of acid phosphate should be made yearly, using a pound per one hundred square feet of soil. This can be scattered after plowing and harrowed into the soil.

Work soils when there is no danger of puddling them. Soils should be worked as soon as they are dry enough to crumble easily. Level, shallow cultivation gives the best results. The object of cultivation is to destroy weeds, and this is accomplished easiest by never allowing them to get started.

Planning the Garden

Well planned gardens have the vegetables arranged in straight rows. These rows should run north and south, in order that an equal distribution of light may be obtained. It is also well to group the different vegetables which are to be planted at the same date so that the gardener may prepare a solid section of the garden for planting at one time. The groups of plantings should start at one side of the garden and gradually extend to the other side as the season advances. Weed control in the unplanted part is made easier by so planning.

A Suggested Plan

If a space twenty-five by fifty feet is available the following plan might be arranged to suit the needs of an average family.

First Planting—April 1st to May 10th.
Row 1—Leaf lettuce, early radish, and early turnips.
Row 2—Early peas.
Row 3—Early peas.
Row 4—Spinach and kohlrabi.
Second Planting—April 15 to May 15.
Row 5—Leaf lettuce, early radish, and onion sets.
Row 6—Onion seed and parsley.
Row 7—Onion seed.
Row 8—Beets.
Row 9—Carrots.
Row 10—Parsnips.
Row 11—Salsify and swiss chard.
Row 12—Early cabbage, cauliflower, and companion crops such as head lettuce.

Third Planting—May 1 to May 15.
Row 13—Bush string beans.
Fourth Planting—May 15 to June 15.
Row 14—Bush string beans.
Row 15—Bush string beans.
Row 16—Tomato plants.
This plan was laid out to have the rows arranged the long way of the garden. The first five rows of the

garden can be replanted, as soon as harvested, with sweet corn. Late turnips can replace row 12 when the cabbage and cauliflower have been removed. Late beets can be planted following the early crop. Winter radish may replace row 14 as soon as the beans are used.

GLENWOOD GARDEN NOTES

DOESN'T it puzzle one to make a selection of either seeds or plants from the descriptions given in seed and plant catalogs? Each one is the best of its class! A sure cropper! A money getter, etc., etc., in flowery, convincing words. By and large, it is all very confusing, leaving the reader in a very uncertain mind as to the selection best to make. Notwithstanding this phase of the matter, there are possibilities of humorous pleasure in the perusal of these catalogs, not unmixed with profit. Personally I enjoy a study of the colored plates and descriptions which sets forth the merits of the various fruits and vegetables. I like to conjure a mental picture of a crop thus idealized. Idle pastime! That is as one sees it. Harmless, innocent pleasure at most. Nor who can say what far-reaching practical results may have origin in a half hour study of plant and seed catalogs before a bright, cozy, winter hearthfire.

In strawberry plants I already have nearly a dozen varieties and had not intended to send for others this season—not till I had looked over the newest catalog, then I "bit" or was "bitten." "The very firmest berry ever grown!" "The perfect berry."

Now, what strawberry lover can visualize such a picture and not fall for it! I ask you. Not I. The lure is too strong.—M. N. E.

GROWING PEANUTS

As my son wishes to raise some peanuts this coming season I would appreciate it very much if you would please give me information as to their culture and harvesting; also the best variety.—P. C.

Peanuts are best adapted for regions with long, hot summers, however, they may be grown in Michigan providing they are planted on warm sandy soils. The soil should be well prepared the same as that for any other cultivated crop. The seed should be planted in rows thirty to thirty-six inches apart late in the spring after the ground is well warmed up. A better stand of vines will be secured if the shelled nuts are used for planting. They are dropped two or three in a place in hills about twelve inches apart. Keep the plants well cultivated and when they become of good size it is important to work the soil well up to the plant. Later cultivation should not be close enough to disturb the roots or the forming nuts.

When harvesting, the plants are lifted with a fork. The nuts are usually left on the plant until thoroughly cured before picking.

The Mammoth Bush and the Spanish varieties are adopted to culture here. The Spanish nuts are of smaller size, but the plant is of a low bush type and it will probably outyield the other variety.—R. E. Loree.

Simon Peck has taken the glass windows off the hen house and is going to use them for hotbed sashes. He allows it don't matter if they are broken as the hens will need plenty of violet rays next winter and the scientific folks say the glass filters out the part of the sun that's colored violet.

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Poultry and Egg Outlook

A Review of the Market Situation

By Marilla Adams

FAIR sailing under clearer skies than in 1927 is the early promise of 1928 to poultrymen. Production has settled into step with demand, the fear of "overproduction" has largely dissipated, no burdensome stocks are in reserve to depress the market, consuming demand for eggs and poultry meat is well sustained, and feed costs are moderate.

An examination of the principal price-making factors, including the tendencies in production, consumption, and such miscellaneous influences as stocks in storage, probable feed prices and foreign trade leads to fairly reliable conclusions. These can be summed up as follows:

Adjustment in Production

1. The signs of overproduction which were present early in 1927 have largely disappeared without a prolonged period of low prices, and output in 1928 promises to be in satisfactory adjustment to demand.

2. Improvement in other branches of agricultural endeavor will tend to prevent any marked expansion in the poultry industry in 1928.

3. The number of potential consumers of eggs and poultry in towns and cities is constantly increasing. Their buying power in 1928 is expected to average as high as in 1927.

4. Total income from poultry products in 1928 probably will exceed that of the past 12 months. Egg prices promise to average higher than in 1927 and poultry meat should at least equal the average of the past year.

Feed Costs Steady

5. No pronounced change in feed costs is expected, at least until the new growing season arrives when prospects for the new crops will dominate market values.

In the first half of last year, it appeared that the widespread apprehension regarding overproduction was well founded. Receipts of eggs from January to June at the four leading markets were the largest on record for that period. Dealers were slow to buy for storage, following several unprofitable seasons. The pressure of large supplies in this atmosphere of pessimism caused prices to drop until, on June 15, farmers throughout the United States received an average of only 17.8 cents a dozen for eggs, the lowest price on the corresponding date since 1915.

Receipts of dressed poultry during this same period were larger than in either of the previous two years, but about 10 per cent less than the average in 1923 and 1924. In addition, the reserves of frozen poultry in storage which had to be consumed along with the fresh receipts were over 30 million pounds larger than in the previous season.

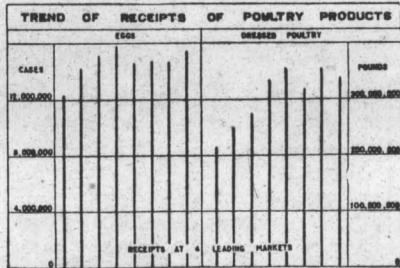
Conditions Improved

Beginning with June, however, conditions improved. Receipts of both eggs and dressed poultry from July to December, inclusive, were smaller each month than in the corresponding months of 1926 with the exception of October and November when receipts of eggs were fractionally higher.

One of the most important influences back of the change was the weather. From January to March, inclusive, temperatures were above normal in practically all parts of the country. Much of the increase in egg supplies in the first part of 1927 probably was due, not to the increase in flocks, but to the heavy winter lay and the early arrival of the main laying season, caused by mild weather. Having started to lay early, the hens stopped laying and started to molt early. The rise in feed prices and decline in eggs during the spring stimulated early and close culling and

caused some neglect of flocks. Heavy rains and floods in many parts of the country in the late spring interfered with the hatch and baby chick mortalities were above the average. Egg supplies were reduced slightly also by the fact that the Chinese war resulted in smaller imports of dried and frozen eggs and egg products during the spring and summer than in 1926.

Consumptive demand had been stimulated by the lower prices, so that not only were current receipts readily absorbed, but the large stocks of both eggs and poultry meat steadily de-



Annual receipts of eggs and dressed poultry at New York, Chicago, Boston and Philadelphia since 1920. During the past six years in eggs, and the past five years in poultry, receipts have shown evidence of stabilization with only slight changes from year to year.

creased. On January 1, 1928, holdings of eggs in cold storage, which on August 1 had totalled 10,746,000 cases, the highest on record on that date, had been reduced to 879,000 cases, compared with 1,096,000 cases a year previous and a five-year average on January 1 of 1,413,000 cases. Stocks of frozen poultry on January 1, totalled 117,678,000 pounds, were nearly 27 million pounds smaller than a year previous and compared with an average of 116,700,000 pounds on the corresponding date in the last five years.

Better Than Expected

The year in reality was far more favorable than had been commonly expected. The ability of the poultry industry to correct, in quick time, such degrees of over or under-production as are bound to occur with so many individual production units spread over such a large territory is one of its strongest assets.

No official estimate of the value of poultry products in 1927 has been made as yet, but it probably was 5 to 8 per cent less than in 1926. Since returns to farmers from their flocks in that year were estimated by the United States Department of Agriculture to be \$1,181,000,000, the largest on record, there is little reason for serious complaint over the 1927 figures. The average price paid to farmers for eggs in 1927 was 28.2 cents per dozen compared with 31.5 cents in 1926. Prices paid for chickens averaged 20.3 cents per pound in 1927 compared with 21.9 cents the year previous.

Egg production in 1928 probably will closely approximate the 1927 output. The unusually favorable weather which was a prominent factor in the heavy egg production in the first few months of 1927 probably will not be duplicated. The period of low prices last spring undoubtedly discouraged some producers who either have gotten out of the business entirely or curtailed operations drastically.

Business Influences

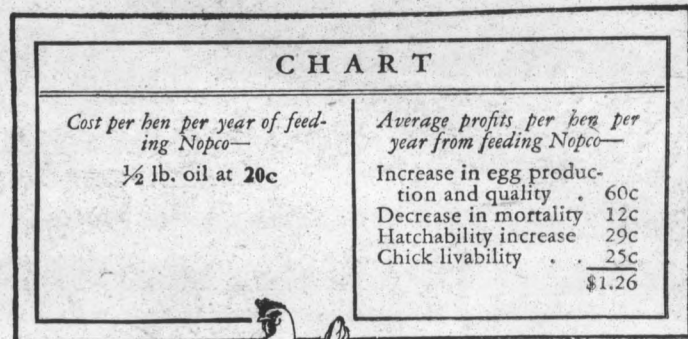
While the decline in business activity late in 1927 may have impaired the buying power of consumers to some extent, the recession promises to be mild and urban incomes are expected to be about the same in 1928 as in 1927. The regular annual increase in population will create some additional outlet. Dealers, on the whole, made a satisfactory profit on

(Continued on page 154)

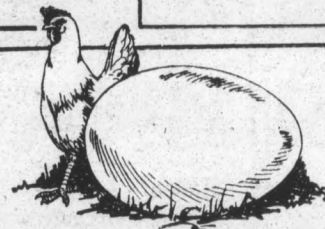
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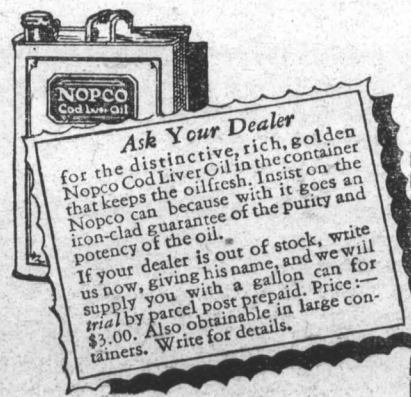
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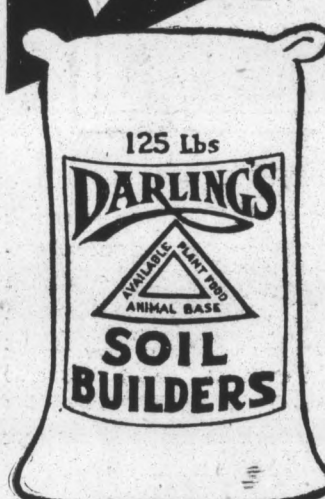
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Annual Meeting

GOOD RECORD FOR 1927

The Citizens' Mutual Automobile Insurance Company of Howell held its annual meeting at the home office on January 21. F. E. French of Elwell and Berthold Woodhams of Howell were elected as vice-presidents. W. F. Nank of Mt. Clemens, F. W. Comiskey of Detroit and Ross J. Robb of Fowlerville were elected as directors.

The report read by the Treasurer showed that the company had done the largest volume of business in its history during 1927. The total income was \$1,165,987.10. The company settled 20,609 claims, a total of \$955,145.08. The assets of the company have increased each year as follows:

Dec. 31, 1922	\$226,499.45
Dec. 31, 1923	375,945.95
Dec. 31, 1924	565,225.96
Dec. 31, 1925	704,152.41
Dec. 31, 1926	840,845.24
Dec. 31, 1927	929,602.78

It is a remarkable record that out of over 20,000 claims settled, only sixty of them were taken to the Circuit Court and fifty-seven of those were either adjusted before trial or dismissed and only three verdicts were obtained against policyholders and two of those have been appealed to the Supreme Court. Automobile insurance is now a necessity and the public has begun to realize that insurance companies are a necessity and that where claims are presented in a fair and reasonable manner, they are usually paid. Only those are contested in which they ask for unreasonable amounts or where the facts show no liability. The company has a state-wide organization and is prepared to continue its excellent service for the year 1928.

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News and Views

From INGLESIDE FARM—By Stanley Powell

OUR principal achievements here at Ingleside during the last two weeks have been along the line of carpentry. Very little really new construction was attempted, but a lot of repair work was done. Father Time has a weapon which he wields relentlessly to destroy everything made of wood. This devastating force is known as decay. It is as inevitable as death, but by proper attention given in time we can postpone considerably the evil day of obsolescence.

Among the fifteen or more different repair jobs which we completed, some took not over a half hour. However,



some of these smallest tasks were ones which we had been itching to get at for a long time and their completion brought no little satisfaction. More time than might have been expected was spent in rebuilding all the racks in our sheep barn. All

rotted and weak boards were replaced and new foundations placed under the rack so that they sat level and plumb once more.

By far the biggest thing we tackled was the rebuilding of all the horse stalls in the "big barn." We tore out the old partitions, mangers, and floor, and built six new stalls where seven had been before. The partitions, mangers, and floor were considerably the worse for wear anyway and for some time I had thought the old stalls were too narrow so I decided that as long as we were going to be doing so much repairing we might as well tear everything out and fix things up so that they wouldn't need any more attention for a while.

I suppose our readers have all sorts of ideas as to the ideal width of a stall for a 1,500 pound horse. The old stalls were four feet and seven inches wide in the clear and I always felt a little crowded when currying or harnessing a horse. Then too, from time to time, I would notice that Charlie or George had knocked a chunk of hide off a hip when getting up or lying down. By sacrificing one of the old stalls, six new stalls were made, each with an added ten inches width or five feet five inches. Possibly experience may prove that these are too much of a good thing, but thus far I am well pleased with them. Father-in-law says five feet is the ideal width.

Fewer Stalls, More Room

When we started out on this rebuilding project I supposed that it would result in our having stall room in that barn for only six horses instead of seven. I was quite surprised to realize when we had it finished that we had made it possible to stable twelve horses there, as each new stall will accommodate two horses for a short time. Of course, we wouldn't expect to keep a team in one of those stalls over night, but it could be done during the feeding hour when we have extra horses around for threshing, silo filling, etc.

To tear down and rebuild anything of this nature is considerably more difficult than to do the original work. There is a lot of prying, pulling of nails, and sorting material and so much wreckage and debris lying around that it makes the work much more complicated.

We did all this remodeling in the horse barn without purchasing a single plank or board, as we had a

sufficient supply of home-grown timber. This it seems is no small item nowadays. In fixing over our sheep racks we thought we were going to run out of planed hardwood so I bought one oak board an inch thick, nine inches wide and fourteen feet long. How much do you suppose it cost? I developed a new appreciation of our farm-grown timbers, planks and boards when I paid the bill—\$1.54.

In tearing out Charlie's old stall we had a regular big game hunt. Cleaning up down under the old manger we discovered and killed quite a few mice. Then when we began taking up the old plank flooring we found mice wholesale. Frantically wielding various weapons and using our feet mercilessly, we brought to an end the happy days of most of them. When the excitement subsided I placed thirty-two carcasses in a row out on the cement floor of the alley way.

During all this fracas all the cats that are supposed to patrol that barn were nowhere in evidence. Having to make a trip over to our house in a few minutes, I took along two mice to our family cat. Returning to the barn, I found the other thirty mice still lying where I had lined them up in a row. Pretty soon an old mother cat came along and started eating them. I thought she might get too many, so drove her away. She ran off with four or five in her mouth. Soon she was back again and the same process was repeated. She returned the third time and again sneaked away all she could carry.

Pretty soon I looked at where the thirty mice had been and there was that old cat busily feasting. I decided to leave her alone and watch the results. Believe it or not, she didn't stop until all alone and unassisted she had devoured the entire bunch of 30 mice! She looked like a snake that had just swallowed a frog or a bird. Her middle fairly dragged the ground. I was worried for her welfare, but that afternoon when we ran onto another nest of mice she was right on the job with a hearty appetite.

You may remember that I told in a previous article about repairing the grain boxes in the horse stalls last summer. I don't believe the mice had any holes in the bottoms or corners of these boxes, thus making for themselves first-rate self-feeders, but most horses slobber their grain more or less, so probably these mice fared pretty well without the necessity of wandering far from their nests. Possibly they weren't doing us any great damage, but I shudder to think what that many mice could do to a bunch of grain sacks.

Our new mangers have a plank floor and sides and should last a long time. The grain boxes have plank bottoms and are of liberal capacity and substantial workmanship.

Plowed January 12

Again we remark that this is a peculiar winter. We have had some quite cold days, but much of the time it has been unusually mild. We thought we were doing something quite out of the ordinary when we plowed December 14 and 15, but that record was altogether eclipsed when we plowed heavy clay sod on January 12. We could have plowed several other days that week but the headlands were too muddy.

About that same time our hired man dug up a woodchuck and found him wide awake. A newspaper report averred that a farmer in an adjoining county killed a snake that he found crawling around.

Walls for Dairy Barns

How They May Be Insulated

By I. W. Dickerson

AFTER deciding on the size and location for the dairy barn, the next question is the walls. Footings for the foundation walls, or the wide part at the bottom to give better wall support, is made almost entirely of solid concrete, since this is about the cheapest and the most effective material for distributing the barn weight over a comparatively large soil area. Usually a concrete footing two feet wide and twelve inches thick will safely carry the foundation walls of any good sized barn.

However, if it is to be built specially heavy, with high masonry walls and reinforced concrete mow floor or is to be loaded heavily with baled hay or mill feed, each wall footing and each interior post footing should be calculated carefully for the particular bearing conditions at hand. The safe bearing loads for different types of soil, the proper method of figuring footing sizes, and the proper methods of laying out foundations are discussed quite fully in the free bulletin "Foundation Walls and Basements of Concrete," by the Portland Cement Association of Chicago. The depth of footing should usually be enough to get below heaving frost, which may vary from one to six feet, depending on the soil and locality.

Basement Walls

Custom varies as to the materials used for the foundation walls, which in many cases also forms the stable walls; but the most common materials are reinforced concrete, concrete blocks, hard burned hollow clay tile, or rough stone. Hard burned bricks are sometimes used, but not often. If trouble from dampness is expected the reinforced concrete wall will probably be the most satisfactory. A ten to twelve inch concrete wall should be used for a large high barn, while eight to ten inches is sufficient for the average size. These sizes are usually sufficient for concrete blocks or hollow clay tile if of good quality and laid up in cement mortar. Stone walls are usually laid up sixteen inches thick.

Stable Walls

In many cases the foundation walls are carried up to form half or all of the stable walls, and the practice seems to be growing of using masonry walls clear up to the eaves. Having at least half the stable walls of masonry has two or three distinct advantages. One is that all this lower part of the barn walls is of material that is not damaged by ordinary weather, banked snow, heaped up manure, or by rubbing of stock. Another is that all the wooden parts are put well out of the reach of dampness and of damage from white ants or termites. And third is the much easier cleaning of the smooth masonry surface inside the stable.

Double Walls

The chief objection to the masonry stable wall, whether of concrete, concrete blocks, hollow tile, or stone is its being cold and subject to frost on the inside, unless proper insulation is provided for. The air spaces in concrete blocks and hollow tiles helps to some extent, but is not enough alone to prevent trouble from frosting. A double wall or a wall with a complete air space, is one of the simplest methods of overcoming this trouble, provided the airspace is filled with insulation or with some material to stop air circulation inside the air space. Equipment is now available by which a double concrete wall with a two-inch air space can be built without much additional labor cost. Concrete blocks are now available consisting of two separate halves about an inch apart but held together by large wires,

so they can be handled and laid as units. Also, a double wall of two separate four-inch concrete blocks laid two inches apart but tied together with strips of galvanized iron laid in each mortar joint, is rapidly gaining in favor. A double wall of two five-inch clay blocks tied together at each mortar joint makes a good wall for a small house or barn, while for larger buildings a twelve-inch and a four-inch wall are used.

To get anything like the real value of any double wall construction, the two walls must be as nearly wind and water tight as possible and the air space must be filled with something that will stop air circulation transferring heat from one wall to the other, and which will also not transfer the heat itself. Granulated cork is almost an ideal filling except for its cost. Dry sawdust is also very effective and is reasonable in cost, but has the disadvantage of losing much of its insulating value if it gets too damp, and in time will rot. Much the same can be said for mill shavings. Possibly

(Continued on page 158)



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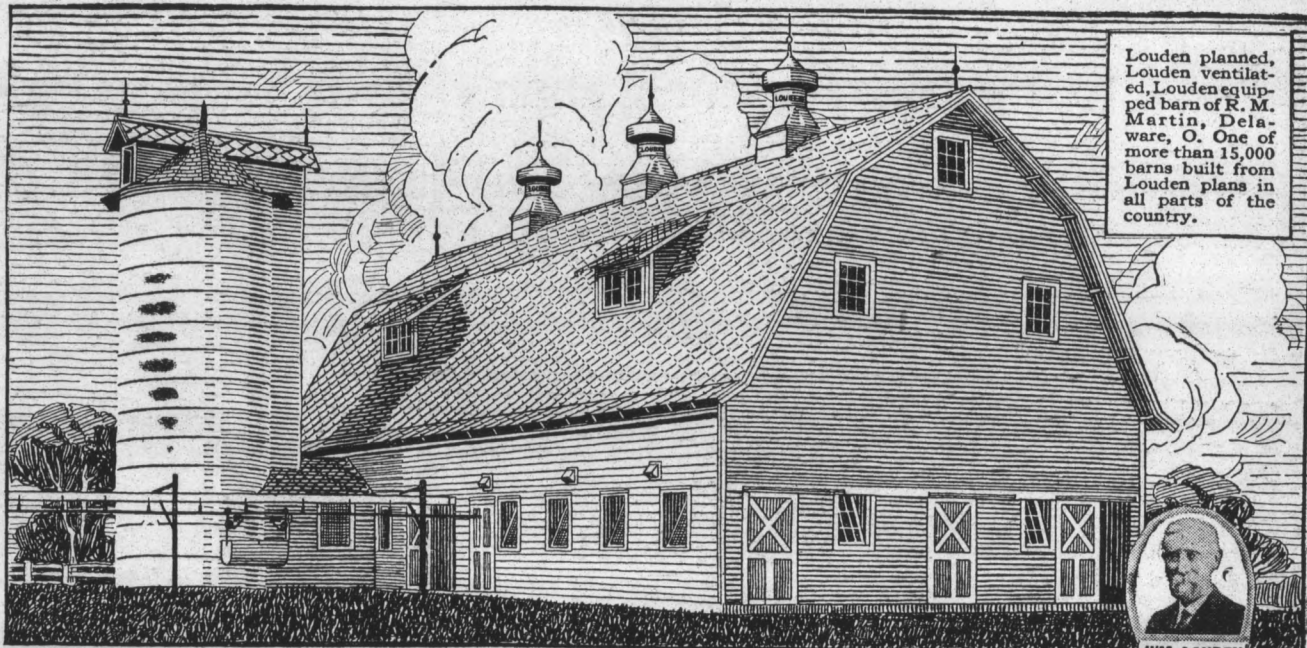


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Look at the high arched tooth which the center hitch buries into the ground at exactly the right draft. Complete flexibility of frame causes a hinging action on the teeth protecting them against breakage and preventing accumulating of rubbish from the field. Chrome vanadium steel in teeth and high carbon steel in body make an implement without an equal.

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Every year sees more of these sturdy general cultivators and quack grass diggers in use in this state. They are proving to be exactly suited for soil conditions of this state.

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Learn all about this cultivator for your crops' sake. Write distributor or direct to factory now.

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I WON'T forget it soon. I had a bump on my head the size of an egg, to remind me. Then I bought a flashlight. It has been worth its weight in Liberty Bonds.

I keep it loaded with genuine Eveready Batteries. I find they give a brighter light for a longer time. Those little cells are just alive with what it takes to make light. The Eveready Radio Battery people make them. You know they're good.

My advice to every farmer and farm-woman is to get the flashlight habit ... and get it quick!

30 YEARS' OLD AND AS GOOD AS EVER

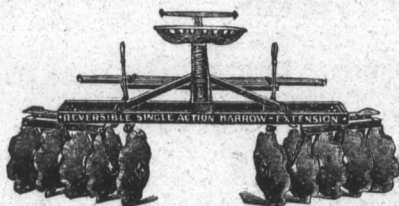
"I have a 'Cutaway' Harrow that I have had 30 years and there is a lot of good service in it yet if I can get the little cup that screws on the axle. I will appreciate very much if you will send it by insured parcel post."—J. C. Wakefield, Glencoe, Ala.

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"My father bought one of your 7-ft. disks 25 years ago and it is still in use; it was a little wooden frame disk and always did good work with light draft."—Ed. Frey, Remington, Ind.

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SKUNKS AND MINKS

I READ the article about skunks and minks by Hugh Brenningstall in a recent Michigan Farmer and also the reply to it by Frank Ireland. I have this to say about it. Skunks and minks may be friends to the farmer if they are scarce enough, but if skunks had killed more than half of Mr. Ireland's chickens one year and minks had killed nearly the whole of them the next year, besides taking a heavy toll of his old hens each year, I think he would consider them anything but friends, but that is just what happened to my chickens last year and this.

I do not buy baby chicks by the hundred or thousand, but let my hens incubate them in the old fashioned way. A year ago last spring I had about a hundred and fifty chickens hatched out and when the skunks got through with them I had just sixty left. Last spring I had about the same number hatched, and when the minks got through with them I had just two left.

There was no mistake as to what it was that took my chickens either year, for we caught three skunks as they were trying to get at the chickens last year and we caught a mink as he or his mate had finished killing my chickens this year.

If these chickens had been allowed to live till fall they would have been worth more than a dollar apiece. As I figure it out, I have lost considerably more than \$200 worth of chickens in the last two seasons. Rather expensive "friends" I call it.

Now we understand that there is to be no "open season" on mink this winter but it seems that the "open season" on my chickens lasts the whole year.—Mrs. Catharine Yape.

SQUIRRELS IN WALLS

Please advise as to how to get rid of squirrels that have worked their way into the walls of my house. Would it be possible to get a ferret? The squirrels are working hard and doing much damage.—M. C.

The present laws of this state prohibit the use of ferrets for any purpose. I doubt if a ferret would be of much value in this case at any rate. In my judgment the best policy to pursue would be a relentless trapping and shooting of the squirrels. I would try to locate the holes through which the squirrels enter the house, and their runways in their search for food, and then set traps baited with corn meal, oat meal, or other similar material in spots frequented by the squirrels. Peanuts are also good squirrel bait. Number one steel traps would probably be as good as any to use. In addition to the trapping, it would be an excellent scheme to shoot at the animals whenever possible with a small gauge shotgun. As in the case of rats, the most important thing is to keep everlastingly at it. If the animals are subject to continual harassment with traps and guns, they will leave the place for more congenial surroundings, even though not many are actually killed.—G. W. Bradt.

APPLE PRUNING

APPLE trees require comparatively little pruning for best results, while training the trees to a low-headed habit of growth is said to have decided advantages over the system that results in high-headed trees.

After the tree is properly started, little pruning will later produce a tree with a larger head, having a greater bearing area, with less effort on the part of the orchardist than will much pruning. This applies to all standard varieties of apples, it is said.

In a pruning experiment it was found that the root systems of the low-headed trees were more firmly

established in the soil and thus offered greater resistance to wind than did high-headed trees. This should be an important advantage, especially in exposed locations. The low-headed trees were also much larger and stockier in the trunks and branches and had larger heads with a greater bearing area than did the high-headed trees.

PNEUMONIA IS CONTAGIOUS

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

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

AMERICA'S FIRST AGRICULTURAL SCIENTIST

(Continued from page 137)

In every home it was put on a stick and hung by the fireplace. In the blank spaces, the farmers recorded the eggs gathered each day, amounts owed, babies born, etc. In fact, the present mania for almanacs whereon we can keep every bit of information from the date of the baby's first tooth to the number of quarts of fruit canned, had its beginning with Franklin's "Poor Richard's Almanac."

It was somewhat humorous, that in itself being a new thing in the colonies. For the first time in 150 years, Franklin struck a note of humor. In fact, about 90 per cent of what poses as humor at the present day is merely Franklin's wise cracks cracked over.

Benjamin Franklin was the first man to teach by the demonstration method. In the old country, farmers were applying a lot of land plaster to their lands. On a great clover field, beside a main traveled road outside of Philadelphia, Franklin wrote with the land plaster, "This has been plastered." For some years, the letters showed up and could be read because of the greater growth of clover. Legend has it that a few years later, the sign could be read because the clover was smaller and sparser here. If this was the truth, it would demonstrate in a nutshell the usual story of the use of land plaster in American agriculture.

Franklin invented the Pennsylvania Fireplace which is a forerunner of the present day furnace. He saw that an old imported basket made of yellow willows was sprouting in the ditch where it had been thrown. He reset these sprouts, from which has come all the yellow willows now growing this side of the Atlantic. And to all of his experiments he found a practical application. "What signifies philosophy that does no apply to some use," said he.

Speaking specifically of agriculture, he struck a chord never truer than now.

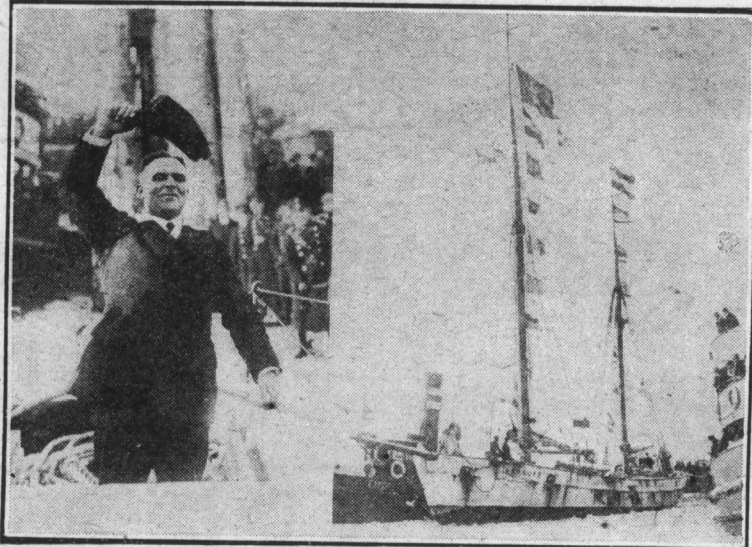
"He that by the plow would thrive, Himself must either hold or drive."

At a later time, in the twilight of a busy, useful four score and more of life, he wrote to a friend: "I think agriculture the most honorable of all employments, being the most independent. The farmer has no need of popular favor, nor the favor of the great; the success of his crops depending only on the blessing of God up on his honest industry."

WORLD EVENTS IN PICTURES



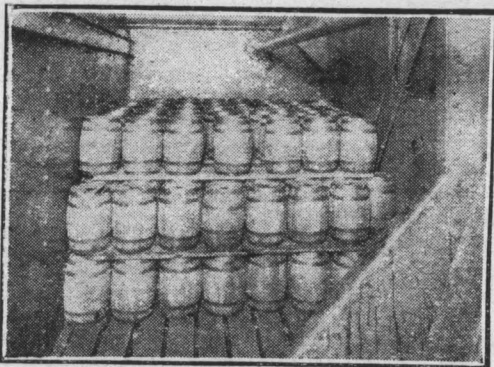
Early spring fashion approves this three-piece sport suit in natural colored Shantung.



Captain Kircheiss, noted German sportsman, received a rousing welcome in Hamburg upon his return from a two-year circumnavigation of the globe in his two-masted schooner, the Magellan.



Lewis Bruun, 21-year-old marine, heir to \$150,000, drives a truck.



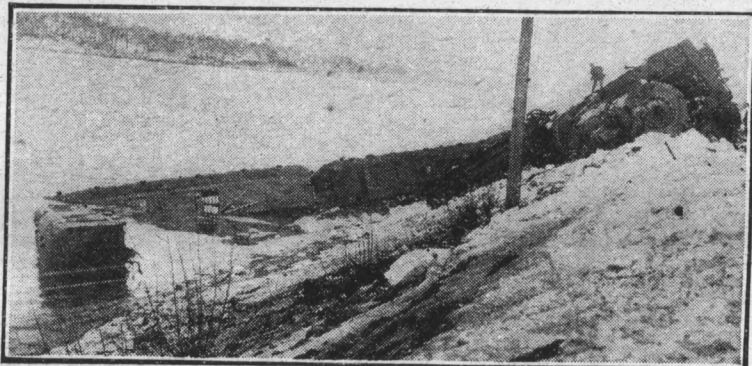
Gold exports from U. S. smash all records—here are \$11,000,000 in twenty dollar gold pieces on their way to Brazil.



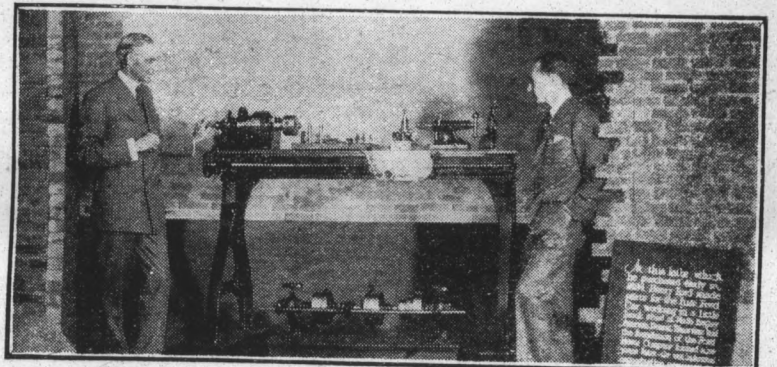
Berlin firemen are jacks-of-all-trades. Here they are raising a horse which had lost its footing on an icy street.



This searching party is digging out a motor bus lost for several days in the worst blizzard recorded at Godstone, England.



A snow slide in Oregon forced this train from track, killing two men and injuring many. Although but thirty miles from Portland, the injured could not be attended for three days.



"The Little Acorn" from which the great oak of 15,000,000 cars grew—this lathe is the one which Ford used to make parts for his first Ford car in the little brick shanty, Detroit, in 1894.



Preparations for Pan-American good-will Congress were rushed at Havana, Cuba.



History is reversed and the waves rule Britannia. This deluge in London, England, caused by abnormal tides flowing in from the North Sea, resulted in millions of dollars property damage.



A police dog will serve as guide in Washington for Senator Schall, who is blind.

HOLD on a minute," chimed in Miss Edwards, "there's more to club work than raising pigs and making money. Let Katie tell you about the good times we have."

"Oh, it's just glorious, Bob," exclaimed Katie O'Neal, her face alight with enthusiasm. "We have our community clubs and our county organization with Mr. Burton and Miss Clara as leaders. Last year we spent a week in camp near Lake Placid. Three county clubs joined together and there were two hundred boys and girls with a lot of leaders and agents like ours here. Training and exercises for all, with fishing and swimming. And on the last day the big ball game. Can you play ball, Bob? We've just got to beat Harmon County this year."

Mother Barton had been a smiling and interested listener. "I don't know anything about your club work, Mr. Burton," she announced, "but I can answer Katie's question. Bob was captain of his team in high school his last year."

"What do you play, young man?" demanded Ross Burton, rising to stride over and confront his new protegee.

"First base," answered Bob, grinning at this bewildering turn of club work.

"Can you hit?" Burton's question was bullet-like.

"Pretty well," said Bob. "I hung up .400 in the high school league my last year."

Yanking Bob to his feet, Young Burton executed a war-dance to the accompaniment of loud and unseemly yet infectious yells of triumph. "Oh, my sacred aunt," Burton howled, "won't I give 'Old Tuck' the surprise of his life. For two years I've been looking for a first baseman who could hit and he comes to me ready-made. Young man, you'll take up pig club work if I have to stand over you with a gun. Clara, did I have a hunch or didn't I?" Burton was off in new paroxysms of enthusiasm.

"You'll have to excuse him, Mrs. Barton," laughed Miss Edwards. "He's only half insane. You see, there's a deadly feud on between Ross and Bill Tucker, the Harmon County agent, who was Ross's classmate. The Harmon team has beaten us badly for two years. Ross would give a year's salary to 'rub it in' on his old chum. It may seem very frivolous to you folks," she concluded seriously, "but we do instill a lot of club spirit and loyalty through our social activities. We believe that farmers have too much of work and too little of play."

"Well, we'll see," commented Father Barton. "I'd like Bob to have all the good times possible and make money of his own if it can be done. But we've a hard year ahead. And so far as training for farming is concerned we don't know yet that Bob will be a farmer. We've never been able to do anything to brag about along that line."

"Wait until you see how acid phosphate brings out the corn on that lower field," prophesied Burton, "and

Under the 4-H Flag

By John Francis Case

you'll change your mind. With a fair season you should make money. Anyway, all of you folks come to the club meeting at Warford, Saturday. The state club leaders, Mr. Morton and Miss Rowan, are to be there and we expect to have a real rally of old members and new ones, too. We'll have the bred gilts right there ready for the new members to take away. No, I can't stop for music this time," as he rose to leave. "We'll come back again and make a night of it." Miss Edwards and the O'Neals lingered for a few moments' visit. From down the road they could hear Ross Burton singing in carefree happiness. "Join the club, Bob," was Miss Edwards' parting admonition. "You'll

pansive, but his words came sharp and clear as he rapped for attention.

"We're going to get right down to business," announced Burton, "but first you youngsters must let off steam. Here's Carl Benton, our old cheer leader. Start 'em on a yell, Carl."

A lithe, tow-headed youngster leaped to his feet. "Up and at 'em, fellows!" he cried. "The old rip-saw yell. Ready now." Up sprung the old members.

"Rip-saw! Buzz-saw! Who will we down? Harmon, Harmon. Brown! Brown! Brown!"

Applause swept the audience. "What's the matter with Burton?" asked the cheer leader. "He's all right!" came the answer, and Bob



never regret it." Katie O'Neal added a fervent plea. Bob Barton went to sleep that night with the pleasant sensation that even in this new community he was not to pass unnoticed, but might have opportunity for fun, for wide friendship, for all the things dear to the heart of a boy nearing young manhood. Father Barton had agreed that all would go to the big rally and Bob slept to dream far different dreams than had come to him after pondering a mystery.

Every section of Brown County was represented at Warford when Ross Burton, as acting chairman, called the meeting to order, greeting old members and welcoming new. Bob Barton had piloted the flivver along behind the Baldwins' big car, an uneasy feeling growing upon him that a poor boy would be out of place in such a gathering. But this feeling soon was dispelled as Ted Baldwin introduced him to boy friends, invariably adding, "Here's the bird who is going to play first and help us beat Harmon." In the same friendly manner Kate O'Neal presented the newcomer to girl friends. A bit shy and diffident, Bob soon warmed under the friendly atmosphere, and when the boys and girls formed into a group upon the stage of the town's largest hall it was among prospective members that Bob found himself. Well up front with the Baldwins and O'Neals he could see his own folks. Father and Mother Barton appeared interested but a little bewildered as to what it was all about. The club yells which kept breaking out, the snatches of song put them to wondering if order could come out of chaos. Ross Burton's smile was ex-

Barton, joining with a will, began to feel himself a real part of the gathering.

"What's the matter with Miss Edwards?" challenged Katie O'Neal. "She's all right!" boomed the reply.

"Now that we've both been complimented," said Ross Burton, bowing to the smiling home demonstration agent, "we'll just make Miss Edwards pay for her cheer. Give us 'Green an White,' Miss Clara."

"Up, everyone," commanded Miss Edwards. Standing on the platform, a radiant and vital figure of young womanhood which inspires followers, the girls' leader began the song.

"Here's to the good old Green and White, the flag we love.

Four-leaf clover, honor bright, fair as the stars above,

We'll be ever true to thee, we who are happy, glad and free

Here is our pledge of loyalty, old Green and White."

"By all the gods of music," whispered Bradley Barton to his wife, "that young woman can sing. We must have her out, mother."

Bob Barton, too, had thrilled to the song and its appeal. Each step in the progress of club work was a revelation. As captain of a strong baseball team, Bob had felt the call to leadership and the joy of victory. He had thrilled, too, when, as one of a hundred students in high school, the glory of the school had been portrayed in cheer and song. But here was something that seemed to strike down to the very fundamentals of good citizenship. It was as if some invisible bond of kinship had knit these boys and girls, these fine young men and young

women into one great family. In Bob's heart formed a resolve that not only would he align himself but that, serving under the banner of Green and White, he would be true to its idealism. In spirit before ever his name had graced the membership roll, Bob was a son of the 4-H.

CHAPTER VI

A Call to Achievement

MANY had been the cheers and songs before Ross Burton announced, "Enough for this time, folks. We'll get down to business now. After the talks by our state leaders we'll organize the county and the community groups, enroll new members and get lined up right. Always remembering that we should save the best for the last," and Burton smiled at Miss Rowan, "we will ask State Leader Morton to speak first. What's the matter with Morton, fellows?"

"He's all right!" chorused the crowd and the hand-clapping which followed as Morton rose to speak testified to the warm esteem in which he was held. A tall, lean man, considerably older than Young Burton, there was the same air of authority and poise, yet friendly comradeship about the state leader. Tanned by the sun and wind, an out-door man and not the "white collar" type which somehow Bob had expected, Ralph Morton proved in his opening sentences that he knew and loved boys and girls. Farm reared, he knew their problems, and his life was consecrated to their service and betterment. Smiling, Morton looked over his audience, then in a clear voice which penetrated to every corner of the big building, Morton began to speak.

"Friends," said Morton, "we'll cut out the bouquets I might hand you and your leaders and get right down to brass tacks. What they have accomplished speaks for itself. Here is the living evidence of achievement on the part of Ross Burton, Miss Edwards, and their helpers. Our National 4-H Club motto, 'To Make the Best Better,' is being exemplified. For the benefit of those who do not know, the four-leaf clover is our emblem. It means good luck. We pledge our head, our heart, our hands, and our health in better service to our club, our community, and our country. Could there be greater aim or achievement? I think not.

"There can be no greater achievement," Morton went on, "than the building of a better American citizenship. That is the real object of 4-H club work. It is the sincere desire of every leader from those in Washington to those who work with you in the open country, that through the training which we may provide for these fine young people the opportunity for earning, the inspiration of contact in social intercourse, a more happy, a more contented, and a more prosperous farm citizenship may result. It is a trite saying that 'Agriculture is the bulwark of the nation.' If this nation is to be safe-guarded

Frank R. Leet

Activities of Al Acres—Slim Spends a Restful Evening in the Classroom



through agriculture, the citizens of tomorrow must be business men and women capable of solving every problem which confronts them. The work of the 4-H is no experiment. It has been tried and not found wanting. It's ever-increasing membership, now pressing onward toward the million mark, is visible evidence that the movement is founded upon service. And real service is the most worthwhile thing in life.

"There is a challenge in our club membership," continued the speaker. "It is a challenge to idealism, to loyalty, to the spirit of fairness, to the joy of achievement. It goes farther than its hold upon our young life. It calls to the best in parenthood, making the home itself an integral part of our great plan. You are better fathers and better mothers," Morton swept the audience with his keen glance, "because your son or daughter has been enlisted under club banners. Out of club contact comes neighborliness which knows no boundary lines. This fine audience is testimonial to what I say. But there is another purpose which appeals to you who have grown gray upon the farms. It is to them I would speak now.

"The duties and aims of club work," went on Morton, "provide fine training for the member no matter what his avocation in life may be. Not all here will follow the plow nor in days to come take up the tasks of a farm homemaker. But we who lead, and we realize our great responsibility, think first of the farm. It is our privilege to impress upon young and plastic minds the importance and dignity of agriculture, to bring out its hidden beauties, to help make of the farm and home a year-round workshop which not only yields return for investment and labor but is the best place on earth to live. Into the community and home we bring, too, the spirit of play, the spirit of fair and friendly competition which is an aid to endeavor. We impress upon your daughter and son that they must 'win without boasting and lose without squealing.' To be a member, as I have said, is a challenge to the very best. It is a great honor, it has great reward. To you of Brown County, I pledge the best that is in me in aiding whatever you may set out to do."

"Some old boy," whispered Bob's seat-mate. "He knows his eggs." The seemingly flippant remark, nevertheless, was sincere tribute from a boyish heart. The hand-clapping continued until Morton rose and bowed. Then Chairman Burton introduced Rose Cowan, the state leader who as Morton's assistant worked with the girls' clubs. Small, dark, and vivacious, Miss Cowan caught the instant fancy of the crowd. A group of girls, led by Kate O'Neal, stood and cheered her as she rose to speak.

"Big folks and little folks, tall folks and short folks," began Miss Cowan, "I'm glad to be here, but I won't make a speech. To all that Mr. Morton has said, I'll just say, 'Me, too.' I'm to have a conference with the local leaders after this is all over and I'll tell it to them. You have such a glorious leader here in Miss Edwards that there's really nothing for me to do. But I do love the club work, and I'm so enthused over it all the time that I just bubble optimism. Isn't it wonderful, girls, that we have opportunity to do these things? Isn't it wonderful that we have girls like Miss Edwards to work with us? Isn't it great to have our community club meetings, our club camps, our meetings at the state fair, our trip to the international."

"Oh, girls," and Rose Cowan spread wide her arms in a gesture of enthusiasm, "isn't it just great to be alive! Alive with all the beautiful things around us, just calling us to be up and doing. Alive to share our friendships, our little secrets, our work, and our play. Working together in the best club, the best county, the best state, and the best nation in all the

world. Why, I never stop wondering that we have to urge folks to join the 4-H. It's the biggest, best thing in all the world—and those who don't get in may get smothered in our dust. Come on, girls, let's make this the best year ever in Brown County for the 4-H. Will we beat the boys? Well, ask the records, they speak for themselves."

Miss Cowan sat down while the crowd cheered and cheered until she was forced to rise and bow repeatedly. "Some pep, some pep," confided Bob's mate. "If I had a sister and she didn't get in the club I'd break her neck." Ross Burton announced that the club would proceed to organize, and when Bob Barton, with an approving nod from his father, came to line up with the group assigned to sow and litter contest work, he found that more than two hundred boys and girls were enrolled in Brown County in the various activities. Ted Baldwin also was to be in the sow and litter club, while Katie O'Neal was assigned to garment making. A happy, chattering crowd of youngsters, while the parents visited and made new friendships, Burton and Miss Edwards were storm centers of interrogation. Detaching himself from a group, Burton hurried over to shake hands with Bob. "We'll go get matters fixed up about that gilt," Burton announced, "and have her sent out home for you. But first I want you to meet another new member who may be your rival on the team."

With Bob in tow, Burton crossed the room to where a tall, handsome youth was in conversation with some of the older club girls. "Hal," announced the county agent as he caught the lad's arm, "I want you to meet Bob Barton, the new member I told you about. Bob, this is Hal Carson. He's captain and first baseman for the Warford High team. Going to join our club this year."

"Glad to know you, Barton," remarked Carson, and his glance was appraising and cool. "I hear you are a first baseman. Sorry, but you'll have to play somewhere else this year. I've got that job nailed down."

"How do you get that way?" Burton's words were bantering, but there was ice in them. "I'm running the club team and the fellow who plays first base will have to show he's the best of the lot. We may have a dozen candidates."

"Sure," replied Carson easily. "I know you're the boss, and I'm willing to take my chance. But I haven't led the Brown County league in hitting for two years and played first on Warford High for nothing. Any guy from the country who can beat me out is welcome."

"Probably I can't do it, but I'll be in there trying," said Bob. "I've played the outfield, but I like first base. The main thing is to have a good team."

Ross Burton flashed a glance of appreciation. So here was a lad who thought of the team first. To Carson he remarked, "I notice you said 'country guys,' Hal. Remember we are all 'country guys' in this club work. And how comes it that, knowing we needed a first baseman, you didn't join last year? We could have used you mighty well then."

(Continued next week)

Teacher: "When was Rome built?"
Boy: "At night."
Teacher: "Who told you that?"
Boy: "You did. You said Rome wasn't built in a day."

Telegram received by a father from his son who was at college: "No mon! No fun!—Your son."

The following telegram was sent in reply: "To bad! How sad!—Your Dad."

Uncle to nephew who has just started school: "So you go to school now, Billy?"

Billy: "Yes, Uncle."

Uncle: "Let me hear you spell puppy."

Billy: "I'm too big a boy to spell puppy. Try me on dog."

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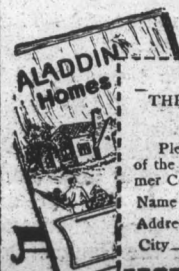
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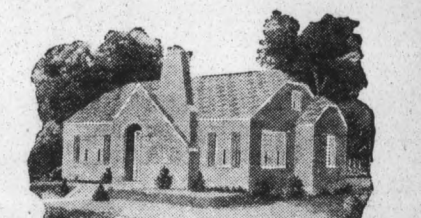
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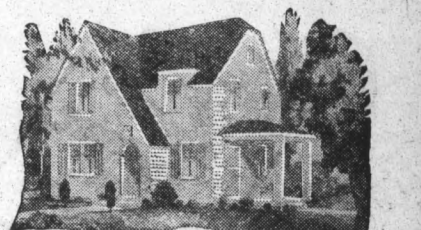
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Across Sahara via Motorcycle

Where Gas Was Unobtainable for Fifteen Hundred Miles

By Francis Flood



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WHY don't you boys trek right across the continent of Africa up here where it's interesting?" inquired our mild-mannered missionary friend, Mr. Patterson of Abeokuta, Nigeria. That was a challenge certainly.

Suppose someone were suddenly to suggest that you cross the North Sea on snow shoes, or shoot Niagara Falls in a mosquito netting, or round Cape Horn on roller skates. Would you even give it a thought? Neither would I. Neither would my traveling partner, Jim Wilson, give it a thought. He would just go ahead and do it!

sert itself, yet to cross. But we're started, and here is how it came about:

Jim and I had originally bought our tickets for passage on the U. S. Shipping Board freighters from New York to South Africa as a part of our year's trip around the world. We had stopped off, for ten days between boats, in Lagos, on the west coast of Africa, about 400 miles from the equator and were to board our freighter in two more days to continue on down the coast. Then we would cross civilized South Africa on the railroads and thus proceed on our way



Clothes Washed in the Municipal Wash House Are Hung on the Grass to Dry

Sometimes Jim seems to have very little in his head except the roots of curly hair, and sometimes he uses it for little else than a sounding board for his big bass voice. That may be one reason why, when someone suggested, five years ago, that we float for 500 miles down the Yukon River in a row boat, Jim immediately said we would, rapids, Arctic Circle, and all. And he did. I was traveling with him at the time and so, of course, I did too.

But Mr. Patterson's suggestion that we cross the Sahara Desert and the whole continent of Africa in an automobile had even Jim stopped for once. I was disappointed. Hadn't I asked this irresponsible young partner of mine to come along just so as to lead me into temptation? And here he was turning sensible just when we were threatened with something really interesting! I was desperate.

"That's a great idea," I enthused,

around the world. Interesting, yes, but very ordinary.

"You can ride railroads at home," suggested Patterson just as the serpent must have urged Eve in the Garden of Eden. And the trouble was that Jim like Adam, must suffer equally with his partner as a result of the temptation. "South Africa is developed and civilized and touristed the same as any other of Thos. Cook's domains, but here you're right in the middle of the black heart of Africa itself—and Thos. Cook doesn't run conducted motor tours across the Sahara Desert."

Jim's eyes glittered, and I knew that his brief moment of sanity was over.

I had read Beau Geste and had seen the motion picture showing the thirsty, lonely horrors of the desert about Zinder, through which our own route lay, and I wondered if Jim had been considering the murderous Tuaregs and



To Iron the "Flat Work" the Cloth Is Folded and Pounded on Flat Rocks

"only, we'll do it by motorcycle. That will be even more exciting."

And this time Jim is traveling with me, so you see what he's in for. This stunt has never been done before—and it's not been done yet for that matter for I'm writing this in a little mud hut a thousand miles in the African bush and we've got three thousand miles more, including the Sahara De-

Bedouins, the heat, the sand, the unmarked trail, the lack of water, the thousand miles of arid waste with no chance to get gasoline, repairs, or food.

He had considered these things and that is why he finally decided to make the trip.

Our tickets to South Africa were bought and paid for. We had



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only the next day to find out whether the motorcycle stunt was worth trying for our boat would sail in two days and there would be no more for a month. While I was trying to learn whether there was any trail, or if food and water could be had in the desert Jim was simply deciding whether to take one motorcycle or two.

I think we finally decided on two so that he could carry along his banjo and have company when I should fail. He can always pick on it, and I will stand for only about so much. If he breaks a gut string on the banjo it can easily be repaired.

That's another way Jim's funny. On our Alaska and Yukon trip he carried along a snapping soprano saxophone and when all else would fail, as it did sometimes, there was always a little jazz left in the tarnished bell of that ridiculous old musical abortion and he usually kept it as carefully soldered up as he did our famous jitney Oscar II. It did help, heavy and bulky as it was to carry all over western North America from Alaska to Old Mexico, and during those four months of wandering from chilblains to blisters we carried his battered saxophone. Many a meal and many a good night's rest were given us as a result, for when Jim is hungry he can pipe for his chop with the best and with the worst.

But to take a banjo, and a regular heroic size, full-blown banjo at that, bulky leather case and all, on a motorcycle trip across the Sahara Desert where every ounce of gasoline and oil that we could possibly carry would be sorely needed, to say nothing of such minor details as water and food, struck me as almost too much, if not quite. But if you are going to the North Pole in an airplane with my partner Jim you would take along a grand piano strapped to the cock pit if he should take the notion.

Jim is clever in his folly. Just as a canny wife will buy her husband a nice new refrigerator for his birthday present, so that he can have ice water to drink, Jim brought home one evening a shining little musical machine and presented it to me with a grand showing of charitable tolerance and good will. The instrument is on the order of a first cross between a pure-bred flute and a slide trombone sport and is sometimes called a slip whistle. It looks something like a hand bicycle tire pump and will carry the air with about the same results. It is simply a tin flute with a plunger that slides up and down its length occasionally stopping for a note. I had to accept his present, of course, and being shiny and capable of producing funny noises it appealed to me so that I wanted to keep it.

I've pared down the list of luxuries and comforts and even necessities when planning my kit and baggage for many previous expeditions of various kinds, but deciding what to carry on a 4,000 mile motorcycle trip across equatorial Africa was a new one on me. At the head of the list, however, stood the banjo.

Here was our problem: Africa, as you may remember, is shaped something like the broadside of a huge ham, and we were at Lagos, Nigeria, which is just on the lower edge of the thick part of the ham. Our 4,000 mile stunt included, first, a thousand miles of varying dense jungle, open bush country, and a high park like plateau. Then from Lake Chad, on the southern edge of the Sahara, our route lay over some 1,500 miles of desert and semi desert land, finally leading into another 1,500 miles of varying semi-arid and mountainous country to the Red Sea, on the east coast.

AS for the roads, for the first few hundred miles we were promised proper auto roads through the dense jungle. After that we would find several hundred miles of "dry season" roads which at that time could either be impossibly muddy or entirely out

of repair until several months later. There would be rivers to ford and other rivers to cross on the heads of natives or in dugout canoes. There would be bush and stumps, and rocks, and ruts to hack through, grades washed away, bridges and approaches gone, and really no road at all. Opinions seemed to differ as to the road, if any, through the desert region, and we could get no information at all concerning the last 1,500 miles.

Chief among the other complications was the fact that from the Lake Chad region east there would be no gasoline available for at least 1,000 miles and perhaps 1,500 and, of course, oil and repairs, tires, etc., would also all have to be carried for that entire distance, whatever it might turn out to be.

But with all these complications and items of interest, the day before our boat sailed south for civilization and the railways of South Africa, we told the captain we would stay behind and let him go without us. Good old Captain Seay slapped us on the back and in spite of all his common sense judgment must have advised, he bellowed out, "I'm for you, boys. Tackle the big stunt and let the comfortable railroads and ships go their way. And good luck to you!"

Our final preparation and start will be described next week.



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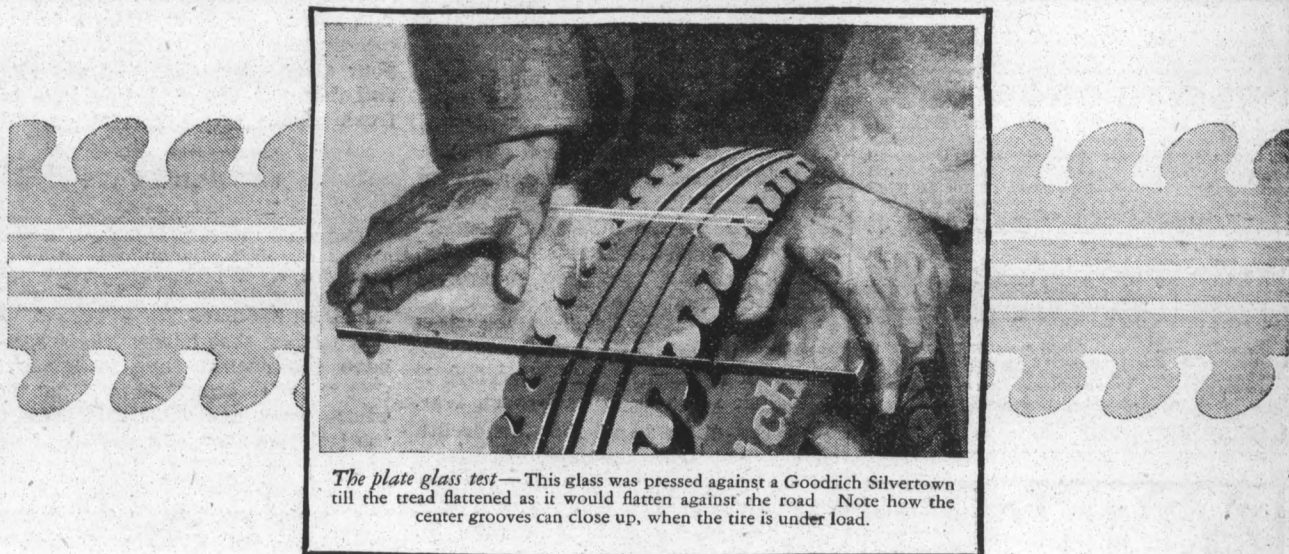
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Rural Health

By Dr. C. H. Lerrigo

GUARD YOUR COMMUNITY HEALTH

SOMETIMES I get a letter that expresses popular opinion so clearly that I think you folks ought to read it. Here is one:

"Why is such an amount of money raised every year to stamp out tuberculosis and at the same time patients who have the disease in an advanced form and otherwise are allowed to mingle with crowds and go to a place of business and write out checks for customers. If tuberculosis is a germ disease, I think a patient with a cough would be most likely to scatter germs by the wholesale by so doing. We have a very nice neighbor family who had a son that has had tuberculosis for three years who does the things mentioned above and they are intelligent people. In coughing this young man places his hand over his mouth instead of a handkerchief and then touches anything he wishes. Lately he has not been so well and has been running a temperature."

Undoubtedly this young man does a lot of damage though perhaps not so much as our inquirer supposes. If a single bacillus of tuberculosis was capable of spreading the disease there would be no escape for any of us. The resistance of the person attacked must be considered, however, and also the fact that the attacking germ must have favorable conditions of temperature and atmosphere in which to exist. I don't like our people to go around under the shadow of a constant fear of attack by some deadly germ. You readily defeat ninety-nine disease germs in a hundred and therefore it is foolish for you to have such fear.

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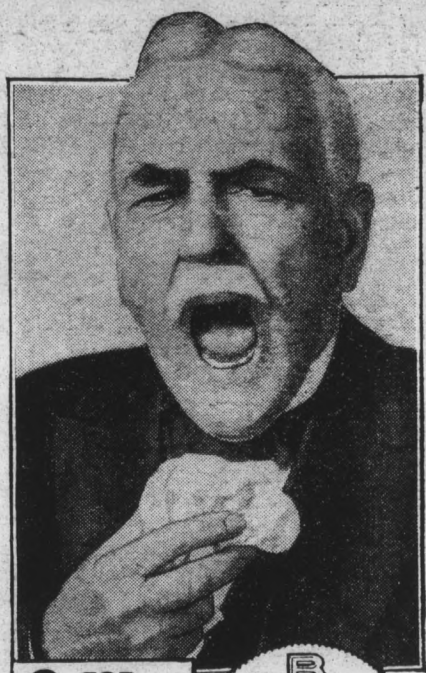
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FOR
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ASPIRIN

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Physicians prescribe Bayer Aspirin; it does NOT affect the heart

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid

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TRADE MARK
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The Misunderstood Jesus

Our Weekly Sermon—By N. A. McCune

THEY did not understand him, did they? Would we do any better? Here is what one eminent church leader says: "If Jesus came again, we would not crucify him—our age is too Christian to do that, but we would not accept him in our organized life. He could not be president or senator or bishop or church secretary. In our hyper-nationalism, our class-conscious selfishness, our racial feelings of superiority, and our sectarian loyalties, we still have much of the thing against which he protested. We would not crucify him, but we would not fellowship him. The taint of heresy and irregularity would be upon him, and he would weep over many who call upon his name; but there would be a multitude whom no man could number who would honor him for his works' sake."



We cannot call the roll of those who have been misunderstood and persecuted for truth's sake. It is too long. We may a few at random, with our eyes closed, so to speak. Begin with Paul, and we note what a time he had. Never was a man more unselfish, more aflame with the passion of love for his fellow man, and yet he had scarcely a week's peace for years. He was driven from one town to another, dragged before authorities, and subjected to violent personal assault, all because he had some religious ideas that were different from those to whom he spoke. As Dr. E. E. Slosson says, "When a new idea comes into the world, it has a majority of 1,750,000,000 against it." Here is Paul's list of his persecutions—condensed: "Of the Jews five times received I forty stripes save one, thrice was I beaten with rods, once was I stoned. . . . in perils from my own countrymen, in perils of the Gentiles, in perils in the city, in perils among false brethren."

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The trouble with many folks was, is, and I suppose forever will be, that they do not want to understand. They have prejudices more precious than diamonds set in platinum, and these prejudices must not be disturbed, whatever happens. It is one of the most baffling foes of all religious work. People—many of them—do not want to get ideas. They do not like this and that, and that's the end of it. A minister was explaining a new method in church finance, very simple and very practical. An old farmer who had been on the church board for thirty years, said, when the pastor was done, "Us never done it that way." And that was the end of it. Nothing is so darling as a prejudice. One thinks of the old rhyme:

"I do not like you, Doctor Fell,
Just why it is I cannot tell;
But this I do know very well,
I do not like you, Doctor Fell."

Savonarola was burned to death for preaching the truth as he understood it. Giordano Bruno suffered a like fate for his writings. When Copernicus had studied the stars for years, he became convinced that the earth moves about the sun, and that the earth is not the largest of the planets. However he did not dare publish his

book until an old man, and he received the first copy of it on his death-bed.

Science has had to fight most of its way. When Doctor Boylston allowed himself to be vaccinated for small pox, he did not dare go out on the streets of Boston at night for fear of mob violence. The clergy were against vaccination because they said it was an affront to God. If God sent smallpox it was people's duty to have the smallpox, for their soul's good. Anaesthetics had to travel the same road. When it was proposed that child-birth should be eased by means of an anaesthetic, there was a storm of protest, because in Scripture it states that "in pain shalt thou bring forth children." However, Sir James Simpson reminded his critics that when God formed woman out of man's rib, he caused a deep sleep to fall on Adam. That was a sockdolager, and the critics eased up—for a while.

When Seaman A. Knapp went south to see what could be done to fight the boll weevil and build up the worn-out southern farms, to his surprise he found almost all the farmers against him. They did not want the boll weevil, of course. He was a very expensive boarder, like the corn borer. But neither did they want to co-operate in new methods of tillage. Only by slow and easy stages was the fight against the weevil carried on, and the diversification of crops introduced. Prejudice is a very peculiar and a very insistent mental state. No one seems to be free from it, entirely. When it runs into moral value, it becomes indescribable tragic, as happened with the teachings of Jesus. When the time drew to the end of his ministry, he sobbed over the capitol city, how he would have gathered her children as a hen does her brood, but now it was too late. She was left desolate and alone.

SUNDAY SCHOOL LESSON FOR FEBRUARY 5th

SUBJECT:—Jesus Misunderstood and Opposed, Mark 3:19 to 35, and 6:1 to 6.

GOLDEN TEXT:—John 1:11,12.

"By the Way"

James was putting on his stockings just after he had taken a bath. He said, "Aw, ma, why did you make me take a bath. That hole in my stocking shows plainer now."

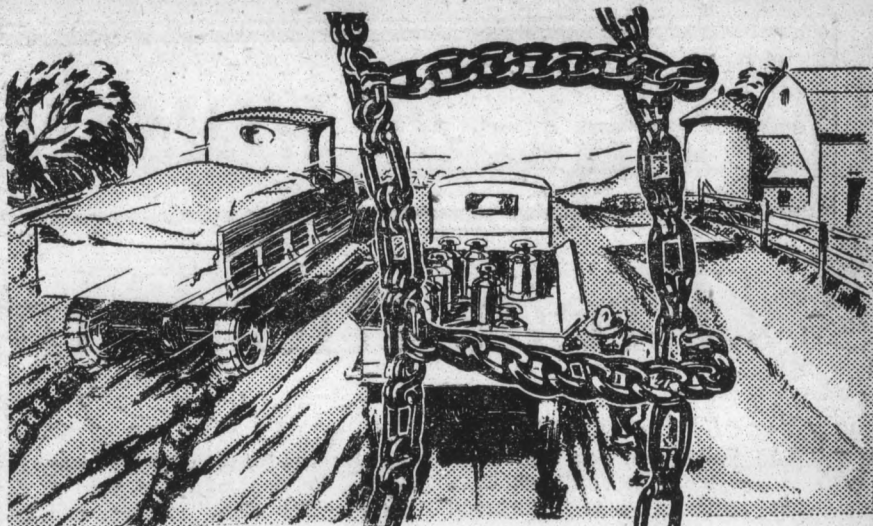
"Oh, mamma," exclaimed Bobby after seeing a dachshund for the first time, "I saw such a funny dog this morning. He was two dogs long and only half a dog high."

Young lady: "Were you pleased with the school, little boy?"

Little Boy: "Naw, they made me wash my face and when I went home de dog bit me 'cause he didn't know me."

A man bought a new machine and he had been riding only fifteen minutes but was going forty miles an hour. A policeman stopped him and said, "You are arrested for speeding. You were going forty miles an hour." "Forty miles an hour!" said the man. Be yourself. I have only been riding fifteen minutes."

The train stopped in a western town. A man thrust his head out of a window and excitedly called out: "Woman has fainted in here! Has anyone whiskey?" A man in the crowd reluctantly put his hand to his hip pocket and drew forth a bottle about half full and handed it up to the man at the open window. To the astonishment of all, the man put the bottle to his lips and drained the contents. Then as the train pulled out, he called back to the bewildered onlookers: "It always did make me nervous to see a woman faint."



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Easy to Take Off!**

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Traction
with
Dreadnaughts**

**They're Easy
To Put On!**

LET it snow, rain, freeze or thaw—the stickiest mud—the slickest surface can't stall the truck that is shod with Dreadnaught Tire Chains. You save time on the road as well as being sure of traction, sure of safety. Dreadnaughts slip on in a jiffy. The little Blue Boy Fastener (Painted blue) does it. Easy to put on—Easy to take off! Just three simple operations. . .



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DREADNAUGHT TIRE CHAINS

FOR BALLOON, CORD AND TRUCK TIRES

How Far Did LINDY Fly? FROM NEW YORK TO PARIS

Solve this Puzzle

The letters on the wing of this plane show the number of miles Lindbergh flew from New York to Paris. The letters in the alphabet are numbered—A is 1, B is 2, etc. Put down the number represented by each letter (C F A I) in the order they appear and you will have the number of miles Lindbergh flew from New York to Paris. Can you work it out? Send your answer today—no obligation or cost to you now, later, or ever. Be wise.

AND WIN BUICK or \$1800 Cash

I am going to give this beautiful new 1928 four door Buick Sedan, also a 1928 Nash Sedan also a 1928 Essex Sedan, also a 1928 Chevrolet Sedan—four cars and a large list of additional costly prizes—over \$5000.00. Cars will be delivered free to winners by nearest auto dealers. I have already given over fifty new automobiles to advertise our business and now YOU can get this new Buick Sedan or cash if you wish. You can win it. It costs nothing to try. First prize winner can have Buick or cash value of car (\$1295.00) and

\$505.00 EXTRA For Promptness!

Be prompt—just figure out what number each letter on the wing of the plane represents. Put them down in order shown. Mail me your answer with your name and address. That's all. Send no money. No obligation. All who answer can share in cash and prizes. In case of ties duplicate prizes given. Everybody rewarded. Hurry! \$505.00 cash extra for promptness.

T. W. Kelly, Mgr., Dept. 564

800 No. Dearborn St., Chicago, Ill.



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Your Share Of The Profits
On this square deal plan, Wengard, an Ohio partner, made \$430.00 for his share in one week. Montgomery, in Iowa, made \$216.00 for the first week he started. In West Va., Mason's share for a week was \$126.02. Hundreds are making \$200 to \$500 every month the year round. No wonder my representatives are enthusiastic. No wonder my men call this "the prize opportunity of the age".

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PROFITS GROW FAST

In addition to lubricating oils, I give you the opportunity for greater profits with my complete line of Columbia Paints and Roofing—well known brands in constant demand. There's a big business waiting for you wherever you are. No matter what you are doing now or what kind of work you've done, how young or old you are, if you are willing to work, follow my directions and have the ambition to make real money, I can **guarantee your success.**

Write Quick Don't wait if you want this chance. Opportunities like this can't wait. My organization for this year must be completed at once. If at the start you can devote only your spare time to this business, I can arrange that. Just say, "I am interested in your proposition" in a letter or on a postcard. Mail it and I'll send complete particulars by return mail. All it will cost you is a stamp. You can begin doing business and making money within a week without a penny more capital. First applications get the preference.

P. T. Webster, General Manager
302 Century Bldg.
Central Petroleum Co. CLEVELAND, OHIO

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defective workmanship and material for one
year. Any part that proves defective, if re-
turned, will be replaced free of charge.
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Rural Health

By Dr. C. H. Lerrigo

GUARD YOUR COMMUNITY HEALTH

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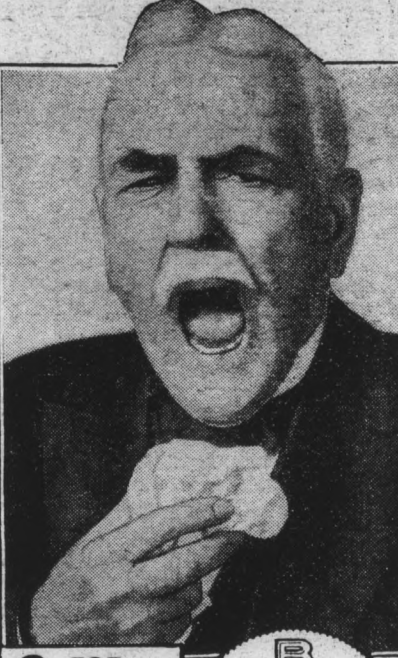
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We cannot call the roll of those who have been misunderstood and persecuted for truth's sake. It is too long. We may a few at random, with our eyes closed, so to speak. Begin with Paul, and we note what a time he had. Never was a man more unselfish, more aflame with the passion of love for his fellow man, and yet he had scarcely a week's peace for years. He was driven from one town to another, dragged before authorities, and subjected to violent personal assault, all because he had some religious ideas that were different from those to whom he spoke. As Dr. E. E. Slosson says, "When a new idea comes into the world, it has a majority of 1,750,000,000 against it." Here is Paul's list of his persecutions—condensed: "Of the Jews five times received I forty stripes save one, thrice was I beaten with rods, once was I stoned. . . . in perils from my own countrymen, in perils of the Gentiles, in perils in the city, in perils among false brethren."

Here is good old Athanasius, one of the big, brave, brainy souls of the early church. His teachings aroused suspicion and resentment, and he spent twenty years in banishment, sometimes barely escaping starvation. Probably no man greater in benevolence, courage, sincere humility was produced by the early church, yet he was misunderstood and persecuted almost from the day that he became bishop, for forty-six years.

The trouble with many folks was, is, and I suppose forever will be, that they do not want to understand. They have prejudices more precious than diamonds set in platinum, and these prejudices must not be disturbed, whatever happens. It is one of the most baffling foes of all religious work. People—many of them—do not want to get ideas. They do not like this and that, and that's the end of it. A minister was explaining a new method in church finance, very simple and very practical. An old farmer who had been on the church board for thirty years, said, when the pastor was done, "Us never done it that way." And that was the end of it. Nothing is so darling as a prejudice. One thinks of the old rhyme:

"I do not like you, Doctor Fell,
Just why it is I cannot tell;
But this I do know very well,
I do not like you, Doctor Fell."

Savarola was burned to death for preaching the truth as he understood it. Giordana Bruno suffered a like fate for his writings. When Copernicus had studied the stars for years, he became convinced that the earth moves about the sun, and that the earth is not the largest of the planets. However he did not dare publish his

book until an old man, and he received the first copy of it on his death-bed.

Science has had to fight most of its way. When Doctor Boylston allowed himself to be vaccinated for small pox, he did not dare go out on the streets of Boston at night for fear of mob violence. The clergy were against vaccination because they said it was an affront to God. If God sent smallpox it was people's duty to have the smallpox, for their soul's good. Anaesthetics had to travel the same road. When it was proposed that child-birth should be eased by means of an anaesthetic, there was a storm of protest, because in Scripture it states that "in pain shalt thou bring forth children." However, Sir James Simpson reminded his critics that when God formed woman out of man's rib, he caused a deep sleep to fall on Adam. That was a sockdolager, and the critics eased up—for a while.

When Seaman A. Knapp went south to see what could be done to fight the boll weevil and build up the worn-out southern farms, to his surprise he found almost all the farmers against him. They did not want the boll weevil, of course. He was a very expensive boarder, like the corn borer. But neither did they want to co-operate in new methods of tillage. Only by slow and easy stages was the fight against the weevil carried on, and the diversification of crops introduced. Prejudice is a very peculiar and a very insistent mental state. No one seems to be free from it, entirely. When it runs into moral value, it becomes indescribable tragic, as happened with the teachings of Jesus. When the time drew to the end of his ministry, he sobbed over the capitol city, how he would have gathered her children as a hen does her brood, but now it was too late. She was left desolate and alone.

SUNDAY SCHOOL LESSON FOR FEBRUARY 5th

SUBJECT:—Jesus Misunderstood and Opposed, Mark 3:19 to 35, and 6:1 to 6.

GOLDEN TEXT:—John 1:11,12.

"By the Way"

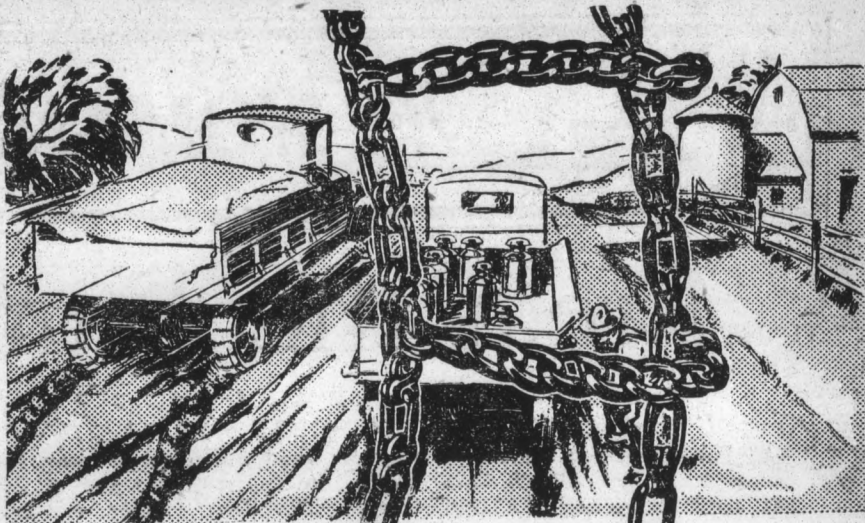
James was putting on his stockings just after he had taken a bath. He said, "Aw, ma, why did you make me take a bath. That hole in my stocking shows plainer now."

"Oh, mamma," exclaimed Bobby after seeing a dachshund for the first time, "I saw such a funny dog this morning. He was two dogs long and only half a dog high."

Young lady: "Were you pleased with the school, little boy?"
Little Boy: "Naw, they made me wash my face and when I went home de dog bit me 'cause he didn't know me."

A man bought a new machine and he had been riding only fifteen minutes but was going forty miles an hour. A policeman stopped him and said, "You are arrested for speeding. You were going forty miles an hour." "Forty miles an hour!" said the man. Be yourself. I have only been riding fifteen minutes."

The train stopped in a western town. A man thrust his head out of a window and excitedly called out: "Woman has fainted in here! Has anyone whiskey?" A man in the crowd reluctantly put his hand to his hip pocket and drew forth a bottle about half full and handed it up to the man at the open window. To the astonishment of all, the man put the bottle to his lips and drained the contents. Then as the train pulled out, he called back to the bewildered onlookers: "It always did make me nervous to see a woman faint."



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The WOMAN'S INTERESTS

Treat the Family to Muffins

Vary Basic Recipe and Serve Different Kind Every Day in the Week

WHAT better can you ask for at supper, lunch, or breakfast, than hot muffins. When the cold winds blow, there comes the joint demand of the family for hot bread to be served more often. Muffins are especially appetizing and the family need not tire of them as they can be fixed in a number of different ways. I always keep my basic recipe in mind and with a few alternations the family may enjoy a different kind of muffins every night.

My standby requires two cups of flour, four level teaspoonsful of baking powder, one-half teaspoon salt, four tablespoons of sugar, four tablespoons fat, one egg, and one cup of milk. I always mix and sift the dry ingredients into a mixing bowl. Then pour a little of the milk into the center of the dry mixture and stir up a soft batter with a little of it. Break the egg into the soft batter and beat it gently. When the egg is well mixed in, add the rest of the milk, and last the melted shortening. Then stir until the ingredients are thoroughly mixed.

If making cornmeal muffins, change the amount of flour in the foundation recipe, using one cup and two tablespoonsful corn meal and one cup of white flour. Increase the amount of baking powder one-half teaspoon. The amount of milk may have to be increased, but that can be told from the consistency of the batter. The shortening may be lessened to two tablespoonsful.

Graham muffins can be made by substituting graham flour for the white flour or by using half graham and half white flour. Add one-half a teaspoon of baking powder for each cup of graham flour used.

For bran muffins I use one cup of bran, one cup of cornmeal, one cup of white flour, one cup of milk, five teaspoons baking powder, one teaspoon salt, and one third of a cup of brown sugar.

I often make oatmeal muffins to use up the oatmeal that is left over from breakfast. Lessen the amount of sugar and fat in the basic recipe to two tablespoons each. Use the oatmeal in place of half a cup of flour. Mix the flour and the other dry ingredients, then add the oatmeal to these and proceed as with the other muffins. Cold cooked rice may be utilized in the same way.

Many fruits and berries can be used in muffins, giving a great variety of flavors. If fresh or stewed fruits are used, some of the juice may be used for part or all of the liquid in place of milk. In using fresh fruits, the amount of sugar may need to be increased, the amount depending upon the kind of fruit used.

Apple muffins which are very toothsome require one cup of chopped apples. Use this in the basic recipe replacing one cup of flour with a cup of graham. Add one-half teaspoon of cinnamon and reduce the amount of milk as the apples make considerable moisture.

Prune muffins may be made by using one cup of coarsely cut cooked prunes in place of the apples in the above recipe and instead of the cinnamon try a dash of nutmeg for flavoring. Figs, apricots or dried peaches

may be used in the same way for muffins, or one may use any of the berries. For berry muffins, use one cup of berries in the basic recipe.

The oven for baking muffins should only be moderately hot at first. After the first five minutes the temperature should be increased. A hot oven is needed to brown muffins, but if the oven is too hot at first they will not rise well before they bake and the texture and shape will not be so good. The baking generally takes from twenty to thirty minutes. When the muffins are done they should be firm to the touch, somewhat shrunken from the sides of the pan and nicely browned. They should be tender, light, and of firm texture.—L. H. Funk.

POWDERED HER NOSE ONCE IN A LIFETIME

I WAS much interested in the letter written by Mrs. L. L. B. of Ingham County. She is moved by a most laudable ambition to make herself attractive and her kitchen a fitting environment for herself. Let us hope that numerous others may be influenced by her.

A clause in one sentence of her letter brings to mind an incident to which I was witness a few years ago. In a group of ladies, some middle-aged and some elderly, was one in her eighties and another much younger but plainly "made up." Her hair was henna dyed and her complexion was very much dusted on. She said to the aged one, "Will you tell me what cosmetics you use?"

The little old lady of eighty sum-

mers answered: "I put some powder on my face one day in Christmas week in 1860. I think it must have been a good kind, as I have never had to use any since."

"Do you mean to tell us in all these years you have never powdered your face?" inquired her surprised friend.

"Yes," said the venerable woman, "that is the truth."

"Well," said the questioner, "that accounts for your complexion."—Mrs. E. O.

WHEN GUESTS INSIST ON HELPING

Questions Prove Distracting

When it comes to entertaining I prefer to do my own work. In my own kitchen I know just where all my utensils and food are kept and can prepare a meal much quicker than when strangers are trying to help. It is the questions: "Where is this? Where is that? How do you want this done?" that are so distracting to me when I am trying to serve a meal. To tell them or show them takes more time than if I did it myself.

When unexpected company comes for dinner, many times I have seated them in the living room and then leaving them to entertain themselves, I have hurried into the kitchen, got out the eggs, butter, and sugar and had a cake stirred up before they knew what I was really doing. While the rest of the dinner was cooking, my cake would be baking and it would take but a minute to frost it. But when it comes dish-washing time, my guests nearly always help.

I had but two daughters and they have been away from home since they were sixteen so I have had to plan my work carefully in order to do it without outside help.—Mrs. F. L., Menominee County.

Does Not Follow in Mother's Footsteps

When mother entertained company for dinner, she would have no help at all. After the guests were seated at the table, she brought on the food, hot from the stove and while they ate, waited on them continually. By the time they had finished, she was too tired to eat.

Observing mother's mistake, I manage much differently in my own home. My guests always help and I help when I am a guest unless my offers are refused. I love to visit while working, and if my cake fails I open a can of sauce and shed never a tear. I always sit down with my guests, and although I may get up occasionally to refill the bread plate or the coffee cups, I can enjoy my dinner as much as the rest.—Mrs. E. B., Tuscola County.

OCEANA TO HAVE HOME DEMONSTRATION AGENT

A HOME demonstration agent for Oceana County in the person of Miss Mary Seekell, of Albion, was selected recently by the county home economics extension committee in session at Shelby.

The appointment of a home demonstration agent was authorized last October by the Oceana County Board of Supervisors. Both the local committee and the Home Economics Department of Michigan State College have been searching for the right person for the position ever since that time. Miss Seekell was selected by the college from a field of ten candidates before meeting the local committee.

Miss Seekell spent the earlier years of her life on a farm near Milan, sixteen miles from Ann Arbor. She taught in the rural schools for a year before entering Albion College where she studied the art of home making for four years. Later she took an additional course in Home Economics at Michigan State College.

For the past two years, Miss Seekell has taught home economics in the South Haven High School where her work with girls has attracted much favorable comment.

The home demonstration agent will take over and enlarge the Home Economics Extension work for the women and the 4-H Club work for the girls which were so successfully organized by County Agricultural Agent Carl Hemstreet during the past three years. This will give Mr. Hemstreet more time to care for the growing demand for Extension work in agriculture by the men of the county. It will also mean an increase in the amount of 4-H Club work for the boys which can be done.

The ladies in several communities have already organized local home economic extension clubs so that they may be ready to get in on some of the projects when Miss Seekell begins her work here early in February.—C. H.



"Yum, Yum, They Smell Good." If Little Girls Are to Grow to be Good Cooks, They Need Mother's Patient Training

Two Women Win

Defend Rural Rights Against a Corporation

By Hilda Richmond

FOR the first time in our lives my sister and I had a case in court. I had served on the grand and petit juries, but never dreamed that the day would come when it would be necessary to defend our rights by that means. The suit was brought against them but for various reasons it was not heard until Nov. 30th of that year. It was a case of seeking damages for shade trees along our farm that had been unlawfully trimmed by the employees of a power company. The trees had been trimmed in March without our knowledge and consent.

All summer it was amusing to hear the comments of people on the case. Almost to a unit those who felt that we would lose, voiced their sentiments in the same words: "Two women against a corporation are bound to lose. You'll have the costs to pay." It seems that corporations must have a strangle hold on the average citizen of this free and independent country of ours.

Naturally there were some who took a more hopeful view, and said such companies should be taught a lesson about trespassing on the property of farm owners. However, the number who spoke hopefully were far outnumbered by the other side. We have been wondering if this helpless attitude is what makes the line companies so bold in their work of tree cutting. If people make door mats of themselves, they must naturally expect to be walked upon. Many people drew down their faces and told us that corporations have the law on their side.

But, lo and behold! The case was presented to the jury, argued by both sides, evidence heard, and then the judge charged the jury and read the statutes of the state affecting such cases. The defense admitted from the first that the consent of the owners should have been obtained, and took up weary hours of time trying to prove that the damage was very

(Continued on page 159)

WHAT OTHER WOMEN MAKE

Minced Ham and Cheese Sandwich
Put through the food chopper, one-quarter pound of ham, three hard cooked eggs, and two peppers. Moistened with mayonnaise. Cut slices of white bread, butter and spread with a layer of the filling, a slice of cheese and top with lettuce and a buttered slice of bread.

Whole-wheat Casserole Stew.
½ can peas
4 potatoes
4 carrots
4 onions
Salt and pepper
1½ cups left-over meat in medium-sized pieces
½ cup whole wheat
1 lb. butter

Put all ingredients in a casserole and bake slowly, stirring frequently, until meat and vegetables are tender. Keep casserole filled with water and covered. Serve hot. The kind of vegetables and meat in this recipe may be varied according to taste. Any left-over gravy may be used.

Whole-wheat and Ham.

Work a good white sauce into two cups of cooked wheat. Fill a baking dish with alternate layers of this mixture and finely minced boiled ham. Let wheat be the last layer. Spread with bread crumbs and dots of butter. Brown in the oven.

Cheese Bits

Arrange saltines in a pan. Sprinkle generously with grated cheese and set in oven until cheese is melted.

Pineapple, Pear, and Cheese Salad

Arrange slices of pineapple on lettuce leaves on individual plates, and on each place a halved canned pear from which the core has been cut leaving a boat shaped opening. Prepare a mixture of thin strips of cheese, mixed with thin strips of

canned pimentoes, and shredded green pepper and fill the pear boats. Top with whipped cream salad dressing and arrange segments of green pepper on the pineapple slices. Serve with cracker toastwiches, made as follows: Split hard crackers and spread with butter rather thickly. Place in the oven, cover with thinly sliced cheese, brown delicately.

Combination Sandwich

Allow three slices of bread, toasted, for each sandwich; spread butter on one side of each slice of hot toasted bread. Spread peanut butter on one

slice, then a layer of toasted bread and a slice of cheese is placed between the second and third slice of toasted bread. Apple jelly may be substituted for peanut butter.

Try baking beans with small sausages instead of salt pork. If any are left over, they can be used for the basis of a vegetable loaf or make a change for sandwiches in the school lunch box.

Strong-flavored winter vegetables are best cooked uncovered in boiling salted water. If you would retain the vitamins, do not cook cabbage more than twenty-five minutes.

Save the lemon rinds for use when washing your hands. The acid will

help you to remove stains required in cooking.

THE FARM FLOWER GARDEN

(Continued from page 127)

time they serve you it is not much after all.

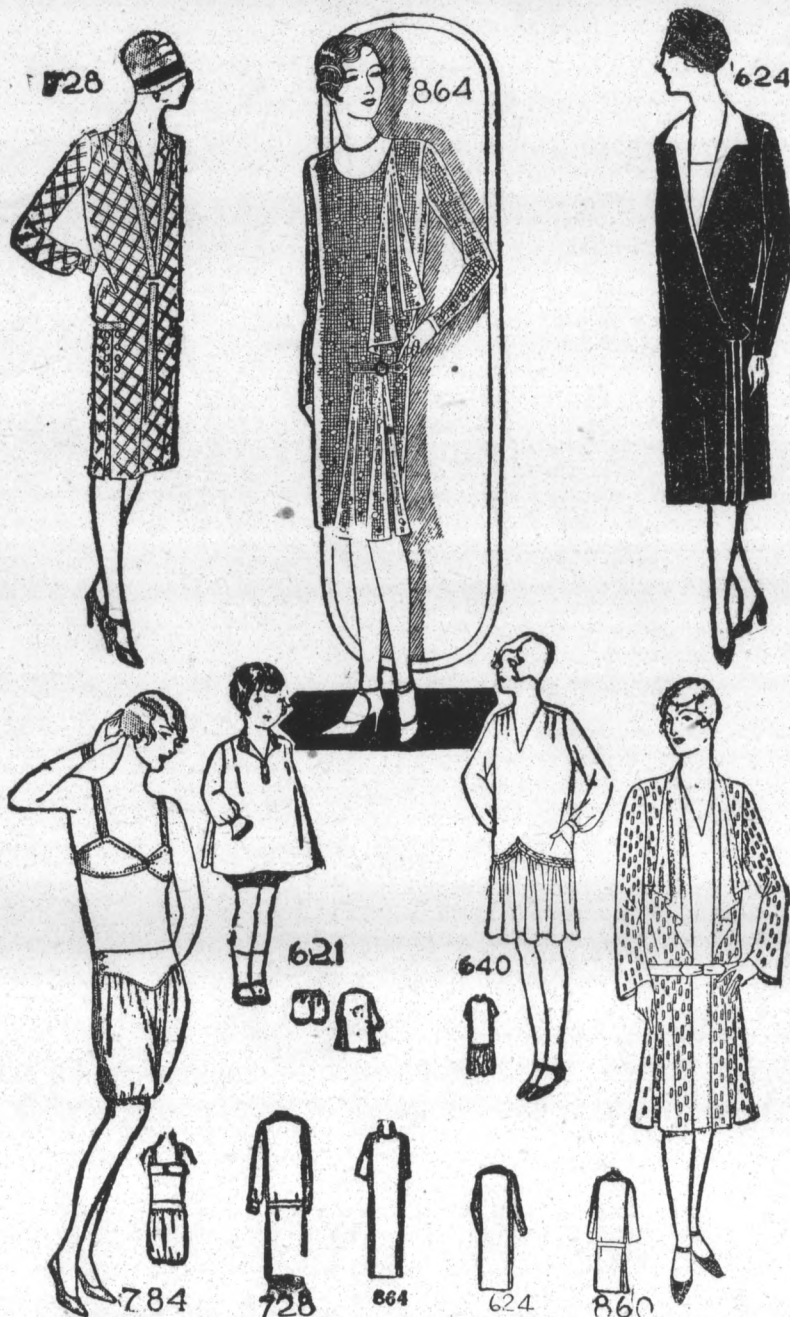
Now after the bulbs there come the perennials. A perennial is a plant which lives over out of doors year after year. An annual you plant in the spring; it produces its seed in the fall; and dies. Plants such as iris or peony are perennial and those such as zinnia and snapdragon are annual. So far as I can find out most farm women seem to be raising annuals. I think this is very bad when you are trying to consider the problem from the time angle. Annuals are so much more work and so much more disappointment! Somehow farm people have gotten into the habit of sowing seeds in the spring and this process is the first one that enters the mind. It is not impossible to make an easy garden with annuals but you have to choose the right annuals. The self sowing ones seed themselves in the fall and after lying in the ground all winter, come up early in the spring and later need only a little hoeing and a lot of thinning. Sometimes, if the fall is very warm, like the past fall was, the seeds sprout immediately after falling and the young seedlings are then cut by frost. If this happens the bed should be spaded and seed scattered just before winter closes in. Amongst this class we find a splendid assortment including cosmos, snapdragons, centuria, California poppy (now in lavender and pink as well as orange and yellow), nigella, pansies, verbenas, and several others. It will be seen that this type of garden must be set in a place where it will not be plowed in spring. If you depend upon this method of gardening you will also find that small beds are most satisfactory. There should be one for each kind of plant and the beds should be narrow enough to permit reaching across. This will make it easy to work in them with a small tool.

But perennial gardening is so much more satisfying. Maybe a little bit more expensive but quicker in results. You can buy what the nursery trade calls "field clumps." These are very large healthy plants which will flower immediately. They can be planted either in spring or fall. But if this is too expensive, try raising perennials from seed. Sow the seeds where you can tend them well the first year and later transplant them to a permanent situation allowing a great deal of space for their growth. Select the kinds of seeds very carefully. Do not rely on cheap, common seed packets. Send for the very best named varieties you can find in the very best catalog. It will pay you in the end. The first year they will be too small to throw much bloom but the second year they will surprise you. The third year they will be firmly established and all you will need to do thereafter for several years is loosen the soil around them two or three times a season, keep out the grass, and draw a loose covering of leaves or straw over them when the ground is finally frozen. Manure water put on three or four times during the summer will help. If you have a permanent kitchen garden if may be wise to set the perennials in rows in this. Put them far enough apart to be easily cultivated with the horse or hand cultivator. And water with manure water as before.

There are many fine perennials. One of the earliest is the iris which now comes in a riot of shades from palest blue to deepest bronze. They do not come from seed but are propagated by division of the creeping rootstock. Spanish and Japanese types are not yet well enough adapted to our growing conditions to be safe for the amateur. Keep the German iris and

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inch material to make it.

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you will not go wrong. After these come the long-spurred columbines. They are very dainty, in many unusual combinations and come from seed. Delphinium or larkspur come in many handsome shades of blue now. They even run into mauve and purple to say nothing of the late successes in white. They are very tall and stately, their spikes sometimes reaching eight feet under unusual circumstances and their foliage is very nice.

Achillea will give you dainty white flowers all the middle of the summer and coreopsis and gaillardia make masses of golden blossoms for two months or so. Shasta Daisy is an utilitarian flower of much loveliness. The new improvements on the old-fashioned pinks are very interesting. And for later in the season there are helianthus coming in all the shades of orange. Michaelmas Daisy and hardy chrysanthemum will do for the September and October blooming and

Mistakes I've Made

MISTAKES are our stepping stones; we profit by them. Women who have been privileged to manage a home for some time have had opportunity to gain a fund of experience through their mistakes that is both interesting and helpful, perhaps even a bit amusing.

Young housekeepers are particularly anxious to read about how you have profited by your mistakes. Right now is the time to send a letter on this subject. Yours may be one of the five to receive a special prize. Address your letters to Martha Cole, Michigan Farmer, Detroit, Michigan.

carry you up to frost with a pleasant picture. After you have experimented with these you may want to try astilbe, Canterbury bells, cerastium, anchusa, erigeron, eryngium, euphorbia, sweet rocket, lathyrus, lychnis, lythrum, monarda, oriental poppy, phytostegia, pyrethrum, sedum spectabilis, azure sage, veronica, and violas. You see there are very many!

Now I still have said nothing about the flowering shrubs, and for a busy person I do think flowering shrubs are a life-saver. For myself I could be satisfied if necessary with just shrubs because I could have something in bloom for almost every week of the growing season and in the fall and winter there would be so many berry-bearing shrubs that I could hardly use them all. All of the single roses are very pretty and have beautiful berries. The honeysuckles bloom at different times and have fruits of different colors. Golden bell blooms very early in springtime and lilacs take care of May.

So for my part I cannot see the necessity of sighing for flowers in the country. I know there are farm women who do so much outside work that there is just no energy left for anything else. But in the well regulated farm establishment there can be and should be a little place and time for blossoms of one kind or another. Perhaps their presence will help make long days much shorter.

PLANT SALSIFY THIS SPRING

ALL home gardens should contain some vegetables that can be left outside in the garden and gathered for use as soon as the frost goes out of the ground in the spring, enough so that they can be dug. Fresh vegetables are never enjoyed so thoroughly as during early spring, before radishes and lettuce are ready to use. Salsify can be left in the ground all winter, as freezing will not hurt them. They also store well in the cellar.

Grow salsify the same as carrots or parsnips. The flesh is white and has

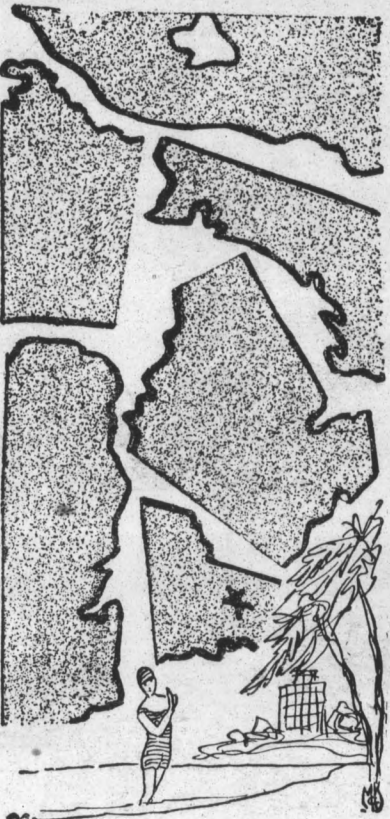
a very pronounced oyster flavor. When they are boiled and creamed, they are extremely delicious. The raw salsify can be grated and made into patties to resemble oysters, which when fried in butter or lard will possess a pleasant, fresh, oyster-like flavor.

Salsify fritters are very good. To make them, boil one bunch salsify and mash. To this add the juice of one-half lemon, two eggs, a spoon of salt, one cup flour, and two tablespoonfuls of sweet cream. Shape like oysters, dip into a beaten egg, then cover with crumbs and fry in deep fat. Serve while hot.—Mrs. C. H. F.

Our Little Folks

STATE SECRETS

Why people rave about this state
Is sure no frozen mystery;
I guess it had the loudest boom
'Twas ever heard in history!



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

(The answer to last week's secret was Texas and its capitol is Austin.)

GAME OF HORNS IS NOT AS NOISY AS IT SOUNDS

WHEN you get tired of making snow men and snow houses, here is a game you can play inside. It is called "Horns Up." First a leader is chosen who sits with hands resting on knees, facing the players. The leader names different animals, saying after nearly all "Horns up" at the same time lifting her own hands with the thumb and little finger raised and the tips of the other three fingers pressed against the palm. If she says "Antelope, horns up," or "Cows, horns up" all the players lift their hands in the same position as the leader's. But if she mentions an animal that does not have horns, even though she raises her hands the players keep their palms down on their knees.

Any player whose hands are lifted after the mention of an animal that does not have horns, is out of the game or takes the leader's place. Any player who lifts his hands without the fingers being in proper position and the players who do not lift their hands after a horned animal is called, are out of the game. When you play this game, write and tell me how you like it.—Aunt Martha.



Blatchford's

Chick Mash Special Trial Bag Offer! 100-lb. Bag \$4.25 f.o.b. factory (offer good only if your dealer cannot supply you)

Safely raises largest percent of the hatch. Highest in quality—best in results—most economical. If your dealer cannot supply you, send \$4.25 for 100-lb. trial bag f. o. b. factory—or, if you prefer, send \$1.00 for 10-lb. bag, postage paid by us anywhere within 1000 miles.

Blatchford's Other Steps to Poultry Success:

Step 2. Growing Mash Lowest feed cost during period of non-production.

Step 3. "Filling Egg Mash" No equal as egg producer. Top layer. Low cost.

Send for free envelope sample (specify which mash) and valuable poultry information—free.

(Dealer Distribution Wanted)

Blatchford Calf Meal Co., Dept. 6182 Waukegan, Ill.

Incubators

and Brooders 1928 Champion Belle City

We celebrate our 28th year by bringing out a line of new type incubators, with six of the greatest improvements made in 50 years. Belite walls, ten times stronger than wood. New triple-walled doors which forever fit. Copper heating tank, self-regulating safety lamp. New type egg tray in which eggs are instantly turned, deep nursery, egg tester. Send for my free book, "The New Day in Hatching." It shows the new inventions, the incubators, 80 to 2400 Egg sizes. Hot-Water, Oil, and Coal Brooders. 80 to 1000 chick sizes—as low as \$6.95. You cannot afford to continue in old ways. Hatch every fertile egg. Write me today. J. V. Rohan, Pres. Belle City Incubator Co., Box 14, Racine, Wis.

New Cut Prices

Send for this 1928 Incubator and Brooder Book—see the dollars our New Cut Prices save you. Two big well-known firms—Wisconsin and Ironclad—have consolidated—to cut costs and sell at lower prices. Don't buy until you get this money saving book. 17 incubators—14 Brooders to select from. Tells how to get eggs in winter; how to stop chick losses. 30 day trial offer. WISCONSIN-IRONCLAD COMPANY Box 231 Racine, Wis.

BOS QUALITY CLASS A CHICKS

From healthy heavy layers of large eggs. S. C. English White Leghorns, Brown Leghorns, Anconas, R. I. Reds and Assorted chicks at reasonable prices. No money down. Pay full amount 10 days before chicks are shipped or C. O. D. Special discounts. 100% live delivery postpaid. Catalogue free. BOS HATCHERY R. 2 M Zeeland, Mich.

40 BREEDS WONDERFUL POULTRY BOOK

The Nation's Great Poultry Manual. 132 Pages. Beautiful Pictures. Mrs. Berry's success with Hatchery. Blood-Tested, Pure-Bred Poultry and quail that lay at 4 months; feeding, housing, culling, disease and remedy information. Makes LOW PRICES on Pure Quality Fowls, Eggs, Chicks, Brooders, Supplies, etc. Send only 6 cents to help mail. BERRY'S POULTRY FARM, Box 13, Clarinda, Iowa

BABY CHICKS

WHITE LEGHORNS ONLY SHIPPED C.O.D. ANYWHERE LOW PREPAID PRICES Egg contest winners for years. Guaranteed and insured. Also cockerels, pullets, hens. Catalog and special price bulletin free. GEORGE B. FERRIS, 934 UNION, GRAND RAPIDS, MICH.

60 Hens Lay \$28 EXTRA a month

EGG a DAY made Mrs. Kelly, Iowa, \$1 a day EXTRA profit from her 60 hens. The egg yield quickly jumped from 11 to 43 eggs a day. Right in the dead of winter, too. Thousands of users report equal profits. YOU can do as well. We guarantee you can't lose. Get a trial package and start giving it to your hens.

EGG a DAY MAKES Hens Lay

Builds and tones the system. Starts the egg glands to functioning. Contains valuable egg-making minerals. Hens usually lay 3 to 4 times more eggs. The cost is far less than the profit. 65¢ pkg. supplies 250 hens 1 month. Buy from your dealer. Look for the EGG a DAY sign on his window. Or, order from us.

STANDARD CHEMICAL Mfg. Co. Dept. 25 John W. Gamble, Pres. Omaha, Nebr. Makers of Reliable Live Stock and Poultry Preparations Since 1896

POULTRY

GREEN FEED FOR YOUR FLOCK

EVERYONE wants eggs in winter when the prices are high. We expect the hens to lay as many eggs as they do in summer. But how can they unless we try to duplicate the summer condition as much as possible.

In summer they run on grass ranges and pick up green feed. In winter they cannot do so. Hens cannot be expected to lay a large number of eggs on a feed of scratch, mash, and grit only. They must be fed green feed, in some form, in addition to the mash and scratch feeds.

Sprouted oats is probably the best form of supplying green feed. And it is not so difficult to sprout oats as is commonly believed. Soak the oats overnight in a tub, or any other container, and then spread the oats in shallow boxes or trays, the layers being two inches thick. Then stack these trays near the furnace or in any other warm place. The oats will be ready for feeding when they are two inches long. A 12 by 20 inch tray should contain enough sprouted oats to feed a hundred hens. If you add a few drops of formaldehyde to the water in which the oats are soaked you need not fear of molds or any objectionable odors.

Some poultrymen feed cooked oats instead of sprouted oats. Others feed soaked alfalfa or clover leaves. Cabbage is one of the best green feeds for poultry in winter. You can buy a large quantity of cabbage and store it for winter use. Sugar beets, turnips, and other root crops can also be bought and stored for winter use.

Here is another cheap way of getting green feed for your flock in winter. Most of the grocers sell large amount of cabbage, lettuce, and celery in winter. He has a lot of the outer leaves of lettuce and cabbage, and the outer stalks of celery left after giving the customer what he wants. You may tell your grocer to save these left overs, and may offer to pay him a little. Usually your grocer should be glad to let you have the greens for nothing. If he refuses to do so it may pay you to change your grocer.—Y. B.

THE ALL-MASH METHOD OF FEEDING CHICKS

THE all-mash method of feeding chicks is rapidly gaining in popularity because it requires only one kind of feed. It is a much simpler method of feeding than the old method wherein a scratch grain was used. The Ohio experiment station has used the following all-mash method of feeding chicks for several years with good results. The mash is made as follows:

Ground yellow corn.....70 lbs.
Winter wheat middlings....20 lbs.
Meat scraps (50% protein)... 5 lbs.
Raw bone meal chick size.. 4 lbs.
Salt 1 lb.

Fresh or sour skim milk is fed until the chicks are ten or twelve weeks old. If semi-solid buttermilk is used, it has been the practice at this station to feed it in the form of a paste in troughs or smeared on the side of the brooder house. As much semi-solid buttermilk was fed in this way as the chicks would seat in twenty to thirty minutes.

Oyster shells were kept where the chicks would eat them at all times. The Wisconsin all-mash ration for chicks:

Ground yellow corn.....80 lbs.
Wheat middlings20 lbs.
Raw bone meal 5 lbs.
Grit 5 lbs.
Salt 1 lb.

With this ration skim milk or but-

ter milk is fed. It can be fed in the same manner as it was fed with the Ohio mash. This mash has been used for some time at the Wisconsin experiment station and the chicks are given all they will eat in fifteen minutes three or four times a day for the first two weeks.

The Purdue all-mash ration:

Ground yellow corn.....300 lbs.
Wheat bran100 lbs.
Wheat middlings100 lbs.
Meat scraps100 lbs.
Dried buttermilk 40 lbs.
Fine alfalfa meal 20 lbs.
Bone meal 12 lbs.
Salt 7 lbs.

The above ration is recommended by Purdue to be used until the chicks are ten or twelve weeks of age.

For very early chicks it will be necessary to add two pounds of cod liver oil to each one hundred pounds of either of the above mashes to prevent rickets or leg weakness. There is considerable interest in the all-mash method of feeding chicks which will no doubt increase in popularity very rapidly in the future and will no doubt be used by many small chick producers.—G. H. C.

PLENTY OF CLEAN LITTER MEANS HEALTHY HENS

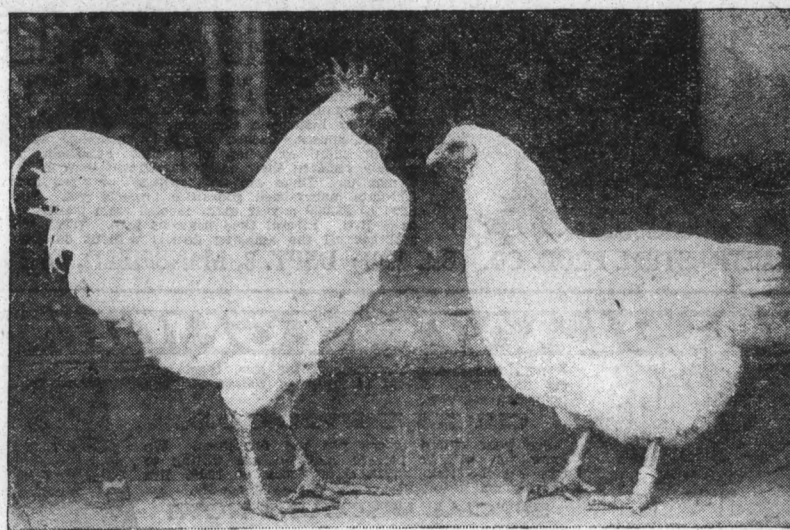
THE old adage, "All work and no play makes Jack a dull boy," may certainly be applied to the poultry flock. Plenty of fresh, sanitary litter on the floor of the poultry house is a playground for the hens and will more than pay for itself in assuring health, vigor, and more eggs. A laying hen is usually a singing hen and happiness is encouraged by plenty of good oat or wheat straw on the floor.

Practical poultrymen differ as to the respective merits of wheat, rye, and oat straw for litter. The writer has used each without any noticeable differences as to wearing and sanitary qualities. Rye straw is somewhat stiff and oat straw breaks rather readily. The best advice is to use what you have convenient. Many commercial poultrymen prefer straw from wheat but the advantages of it over the other straws from small grain crop are not great. The main thing to keep in mind is that the straw should not be moldy, wet, or dusty. If the straw is changed sufficiently to absorb all dampness there is not much to choose between any particular crop for litter purposes. It is well to keep in mind that the litter serves three main purposes; i. e., absorbs moisture from the droppings, keeps the mud and other foreign material from being carried into the nests, and lastly affords an opportunity to make the birds exercise which increases blood circulation and helps the appetites.—H. Q. H.

SELECTING BREEDERS FOR EARLY MATING

INESTIMABLE improvement may be affected in the farm flock by selecting for early mating a few individuals of superior egg producing merits. Where hens are well fed for winter eggs a few individuals will show unusual egg producing ability. These hens are very desirable breeding stock and should be selected for early mating purposes. There may not be more than a dozen or two of these superior laying individuals, but they are invaluable stock for upgrading the egg laying standard of the flock.

For years it has been the practice in improving the flock at Forest Grove Farm to select during the winter laying season two or three dozen pullets that matured early and evidenced



Mr. and Mrs.

discuss the cost of egg production

Mr.—Well, it'll be a sad time for us roosters.

Mrs.—So? And how is that?

Mr.—Increasing scarcity of hens. Too many of 'em going to the block because they can't produce enough eggs to pay their keep.

Mrs.—It's not always because they can't produce enough eggs. Sometimes they produce a great many eggs but it costs too much to produce 'em. No fault of the hens, but of the farmers.

Mr.—How are you going to remedy that?

Mrs.—My boss knows. He cuts down the feed bill by substituting DIAMOND CORN GLUTEN MEAL for part of the meat scraps. DIAMOND carries 40% minimum protein and is highly productive of eggs. Also, it is lower in fibre than meat. And it costs only two-thirds as much as meat scraps, mind you.

Mr.—H-m-m. Our boss has a head on him, eh?

Mrs.—Well I guess. He knows that some animal protein is necessary, but that a little goes a long way. Therefore he puts in 200 lbs. of DIAMOND for 200 lbs. of meat scraps, in a ton of mash. Saves \$2.50 on every ton—\$1.25 saved for every 100 lbs. of DIAMOND used to replace 100 lbs. of meat. And just as many eggs or more.

Mr.—Then you're not headed for the block for awhile, eh?

Mrs.—Not me. I'll be in your old harem for a long, long time.

Try DIAMOND as suggested. Poultry feeders and poultry feed manufacturers elsewhere are finding that it pays. Write us for circular containing a good egg mash formula.

Ration Service Dept.

Corn Products Refining Co.

17 Battery Place

New York City

40% Protein



The New BLUE HEN Brooder

Raises More Healthy Chicks at Less Cost

It meets every requirement—an ample-magazine stove that maintains required temperature in all climates; extra-large, re-inforced hover which spreads even heat to its outside edge—a GUARANTEE to operate satisfactorily. Dependable, efficient—built to last.

Made also with the BLUE FLAME OIL BURNER

Write for the Blue Hen Book of Brooder Facts—FREE.

LANCASTER MFG. CO. 911 W. Janet St., Lancaster, Pa.



A Live Money-Making Proposition to User Agents Write Us TODAY

Pioneer Leghorns

Have been bred for high egg production for many generations. They are particularly well adapted to commercial egg farms. Their large size and rugged constitution enable them to stand up under extreme conditions. Every male and female inspected by authorized state inspectors supervised by Michigan State College. The free catalog tells all about them.

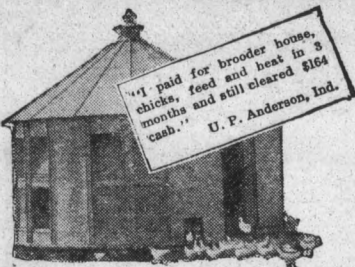
MICHIGAN ACCREDITED—PURE BARRON STRAIN
Our catalog shows pedigrees and gives a full description of the pen we imported direct from Tom Barron, England. The males in this pen were out of a 298 egg hen that laid eggs weighing 30 ounces to the dozen and were sired by a 301 egg male. The females records range from 259 to 271. This is the foundation you get in Pioneer Leghorns. Many males direct from this pen now head our matings. We are breeders and have spent many years with this one strain.

Write for Special Discount Now
PIONEER POULTRY FARM R. No. 10, Box 10 Holland, Michigan

MICHIGAN ACCREDITED CHICKS

Buy your chicks from heavy laying flocks that are officially accredited by inspectors supervised by Michigan State College and of prize winners at the Holland Poultry Show, having the best display on Barred Rocks in the production class. White and Brown Leghorns, Anconas, Barred Rocks, S. C. R. I. Reds. 100% live delivery. Postpaid. Send at once for free catalogue. Full particulars and detailed prices.

HILLVIEW HATCHERY, C. BOVEN, Prop., HOLLAND, Mich., R. 8, Box M



MARTIN STEEL PROD. CO. (Est. 1901) DEPT. 8, MANSFIELD, OHIO.

Amazing New-Type Brooder House Pays for Itself Quick, or No Cost

No more gambling with poultry profits! No more heartbreaking chick losses! For now an old, well-known manufacturer makes the most startling offer in poultry history—a surprising new development in brooder houses, backed up by a complete poultry raising plan so remarkable that hundreds have already received their entire investment back in 2 to 3 months. There are no "strings" or "red tape." Absolute money-back guarantee protects you. Makes \$500 to \$2,000 a year extra income from poultry easy as A-B-C. Liberal time payment plan. Write today and get all the amazing details without obligation.

HIGHLAND LEGHORNS



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

CHICKS SHIPPED C.O.D.

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

SPECIAL DISCOUNT NOW!

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

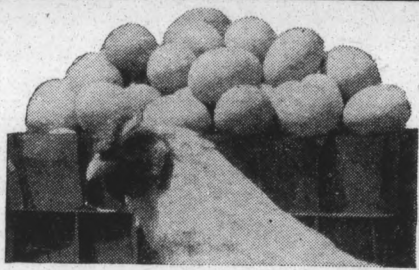
Highland Poultry Farm, R. 9, Box C, Holland, Mich.

Chick Insurance

Our insurance plan protects Chick buyers during first thirty critical days. Fill your egg cases! Build productive flocks from "State Farms" White and Brown Leghorns, Barred and White Rocks, Rhode Island Reds, and White Wyandottes, Ducks, Geese, and Turkeys.

Egg Strains State Farms Chicks are from heavy-yielding egg strains. Free catalog tells you what you want to know. May we send it?

State Farms Association
Masonic Temple, Kalamazoo, Mich.



SUPERIOR BRED CHICKS

Superior Leghorns are those Michigan Accredited Leghorns that, for years have demonstrated their ability to make good under actual farm conditions. Careful breeding on our modern breeding plant has resulted in remarkable egg production of this strain. Special Discount now.

GET OUR BIG 64 PAGE CATALOG—IT'S FREE

See in pictures our modern breeding and trapping plant 600 pullets in R. O. P. Record of 285 in R. O. P. last year. Every breeder inspected and passed by authorized state inspectors. Hanson, Tancred, and Barron bloodlines carefully blended in Superior Strains.

SUPERIOR POULTRY FARMS, INC. Box 360, Zeeland, Michigan



VILLAGE VIEW Chicks direct from farm to YOU

Write today for complete information about these heavy producing White Leghorns and Barred Rocks. Carefully bred strains that are produced to make good on your farm. Free range flocks carefully mated for best results.

FREE CATALOG GIVES LOW PRICES

Before you order your chicks get this free catalog that tells all about these money makers. You will be interested in the high quality of our stock and pleased at our prices. A postcard brings the information. Write today.

Village View Poultry Farm, R. 3, Box 2, Zeeland, Mich.

DUNDEE MICHIGAN ACCREDITED CHICKS

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

DUNDEE HATCHERY & POULTRY FARMS — DUNDEE, MICHIGAN

HOLLAND HATCHERY

It will pay you to investigate one of Michigan's oldest and best hatcheries. Twenty years' experience. Every chick hatched from rugged free range breeders officially accredited by inspectors, supervised by Michigan State Poultry Improvement Association. Large percentage of business to satisfied old customers. White Leghorns (English type and American), Barred Rocks, Anconas. Your Michigan Accredited chicks bought of this old reliable concern with an established reputation for square dealing are sure to please. 100% live delivery prepaid. Get our FREE catalog before placing your order. VAN APPELDORN BROS., R. 7C, Holland Hatchery & Poultry Farm, Holland, Michigan.



BIG PROFIT PRODUCING CHICKS

Michigan Accredited Chicks that are bred from proven blood lines. Every breeder wears a sealed leg band indicating official approval by authorized state inspectors. Immediate shipment. **BIG DISCOUNT NOW! PAY \$1.00 DOWN—BALANCE C. O. D.** Pay for your chicks when you get them. Send \$1.00 and we will ship C. O. D. Get our big new catalog. It is free. It will help you. Your choice of three profitable breeds. 100% live delivery guaranteed. BRUMMER FREDRICKSON POULTRY FARM, Box 20, Holland, Mich.

WOLF SELECTED CHICKS

CHICKS C. O. D. SEND ONLY \$1.00 Our chicks are from leg-banded stock selected by expert poultryman. You can feel safe for you know every chick is up to highest standard for egg production and breed type. Get our special wholesale price on brooder stoves when bought with chicks. **SEND FOR OUR BIG CATALOG.** It tells all about our pedigreed males and special pen matings. Also gives details about our high producing utility birds. Valuable book free with each order. Prices reasonable. Write today. WOLF HATCHING & BREEDING CO. BOX 42 GIBSONBURG, OHIO



8 Varieties
Record
of
Performance
Male
Matings

Our Pure Blood

—SELECTED CHICKS
—BIG EARLY ORDER
—DISCOUNTS—15 VARIETIES
This year we introduce to you our Record of performance pedigree male matings up to 316 egg records direct from British Columbia and Ontario, Canada, including bloodtested, trapnested pedigree White Leghorn matings, 220 to 313 egg records. Winners of many prizes. Every bird standard culled. Get FREE circular of chicks, hatching eggs, and brooders before buying elsewhere. Broiler chicks 9c up.

Beckman Hatchery, Box 57, Grand Rapids, Mich.

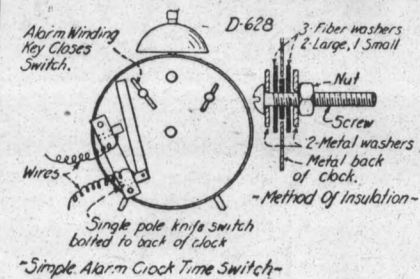
superior laying qualities and mate them to males of outstanding merits. While I purchase each season several hundred baby chicks to replenish my laying stock, I find that my own mating produces some very excellent stock and I plan sooner or later to do my own mating.

In the selection of breeding stock attention should be paid to early maturity, individual performance, and breed conformation. I like to encourage early maturing stock as I find that early winter eggs are more profitable than later in the season. The average farmer is not in position to trapnest. However, trap-nesting is the only reliable method of determining individual egg production. The small owner, by making a close study of his flock, may, from skilful judging and close observation of his flock, sort out the individuals that evidence superior laying qualities and, quite reliably, depend upon such stock for breeding purposes.

I want stock for mating of strong constitution, active and heavy feeders. It is the busy, happy hen that lays the eggs. I like to adhere to breed type. I want uniformity and distinct individuality. I want stock I can depend upon to reproduce true to egg strain selection. Breeding stock judiciously selected and mated is an excellent and dependable method of improving the farm flock.—L. C. R.

A SIMPLE ALARM CLOCK TIME SWITCH

In a recent article on poultry house lights we noted an alarm clock time switch which is much more complicated than necessary. I am enclosing sketch (D-628) of a similar switch



which we have used for several years and have found simple and reliable.

You will note that an ordinary single throw time switch is fastened to the back of the clock with two small bolts, such as stove bolts or those from ordinary dry cells. These bolts must not touch the metal of the clock. A short extension may have to be soldered to the alarm key to move switch arm for contact.—O. A.

If these small bolts are put through holes in the insulating base of the switch and do not touch the metal contact posts at either end or the screws which hold them to the insulating base, it should not be necessary to insulate the bolts from the metal back of the clock. Still it is easily done and will add another element of safety and might help to prevent a bad short circuit. To insulate the bolts, make the holes in the metal back enough larger than the bolts that there will be an eighth of an inch clearance all around the bolt. Then put on the bolt first a metal washer larger than the hole, then a fiber or pasteboard washer larger than the hole, then a fiber washer or two larger than the hole, then a metal washer and nut to hold the bolt solid, then the switch with washer and nut to hold it solid.—I. W. D.

POULTRY AND EGG OUTLOOK

(Continued on page 139)

the eggs stored last spring, so that they are likely to be willing to get in the market this year at a price somewhat higher than in 1927. Demand for poultry also, is large, as evidenced by the distribution of the large supplies of both fresh and frozen poultry in 1927.

Feed costs are much the same as they were a year ago. Corn and oats

and some by-product feeds are higher, but wheat is lower. No reason is evident for any big change in these comparisons until the new growing season starts. Conditions then are most likely to favor a lower range, especially in corn, than prevailed in the late spring and summer of 1927.

The poultry industry expanded rapidly from 1920 to 1923, but since then it has been going through a period of stabilization. This is illustrated on the accompanying chart. Annual receipts of eggs at the leading markets from 1922 to 1926 averaged 15,117,000 cases. While supplies in 1927 were about 5 per cent larger than in 1926, they failed to equal the figure reached in 1923. Moreover, they were only about the same as the average of the six years from 1922 to 1926.

Receipts of dressed poultry at these same markets in 1927 were about 5 per cent lighter than in 1926. They were almost exactly equal to the average of the five years from 1922 to 1926.

Compared with three or four years ago, market receipts in 1927 did not show any increase, so that the overproduction fright last spring was mostly a case of seeing ghosts.

The expansion in output since 1920 has been accompanied by a steady growth in the number of consumers. From January, 1920, to January, 1927, the population in towns and cities apparently increased from 74 million to nearly 92 million, a gain of more than 2,200,000 persons a year. This expansion in consuming capacity is accentuated by the tendency toward larger per capita consumption of poultry products, as a result of the raising urban standard of living.

Taking a longer view, the poultry industry is likely to become increasingly prominent in the general scheme of agriculture in the course of time. The per cent of profit is not likely to be greater than it has been in the last five years, however, as that margin has been sufficient to call forth an increase in production as rapid as the growth of demand. But there is an opportunity for individual producers to increase their returns through furnishing products of consistently high standard for those consumers willing to pay a premium when assured of unvarying fine quality.

THE EARLY HATCH MEANS MOST PROFIT

AS the early bird gets the first worm," so does the early hatched chicks bring the most profits. The increased returns from early hatched chicks are due to several things; namely, better gains, higher prices, and a steady demand for broilers.

The Kansas Experiment Station has done some conclusive work which goes to prove that the early hatched chick makes the most economical gain. The results are as follows:

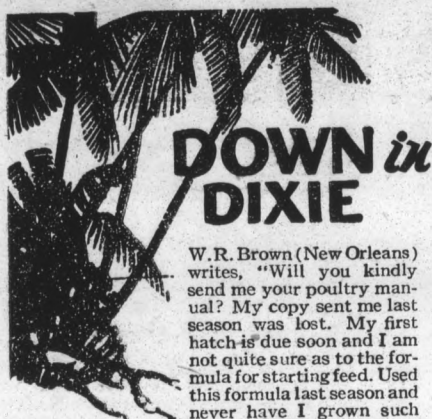
	Weight at 12 Weeks	Weight at 16 Weeks
Hatched March 18	42 ozs.	72 ozs.
April 16	35 ozs.	52 ozs.
May 13	29 ozs.	46 ozs.

These same chicks were put on the market with the following results:

	Price per pound	Value of each bird
Hatched March 18	25c	\$1.12
April 16	25c	.82
May 13	20c	.57

These facts are an added incentive to the farmer to have his chicks early hatched. There will be several pullets in the hatch that will return a greater profit if they are from early hatched chicks. One well-known poultryman has this to say about early hatchings:

"Early hatching means early-maturing, winter-laying pullets; it means getting the broilers on the high-priced market; it leads to early culling and getting the cull hens to market for the September Jewish holiday trade."—H. Q. H.



at it twenty years. No loss, no weaklings, and amazing growth."

Put BUTTERMILK in your POULTRY FEED

Don't be fooled — make sure that there is enough buttermilk in your mixed feed.

Add at least 10% Collis Process Pure Dried Buttermilk; you will have healthier chicks, early laying pullets and fatter broilers.

FREE! If you have not received our booklet "Feed from Egg to Market"—send us your feed dealer's name—the book will be mailed to you free.

COLLIS PRODUCTS CO.
Dept. 65 CLINTON, IOWA

Free Poultry Bulletin

A new bulletin just issued by the American Poultry Experiment Station gives the latest advice and methods of one of the world's greatest poultry authorities, Prof. T. E. Quisenberry.



This free bulletin tells how to feed and start your baby chicks—how to raise them from start to finish so as to avoid bowel trouble, leg weakness, coccidiosis, toe picking, and other chick troubles. It makes plain new methods of saving on feed, and how hens can make better use of their feed. It explains how to cut feed costs, get more eggs, cut down labor and some of the things which are responsible for sickness in poultry, such as colds, roup, chickenpox, infectious bronchitis, worms, etc. Why should any poultry raiser follow "hit and miss" methods? This Bulletin makes these new ideas as simple as A B C. They are endorsed by Government and State poultry experts. A hundred other important short cuts to success are explained in this FREE Bulletin.

One poultry raiser wrote as follows: "This Poultry Bulletin gave me more 'boiled down' poultry facts than most books for which I have paid many dollars." W. D. Hogue of Alabama says: "I saved \$1.50 per hundred on feed following QUISENBERY methods." Another writes: "I wouldn't do without this Bulletin showing QUISENBERY'S 'New Way' to raise poultry for any reasonable amount. It saved me hundreds of dollars."

This Bulletin will be sent FREE to any of our readers who sends his name and address at once. Don't wait. Get your copy of this FREE Bulletin before the supply is exhausted. Write today to T. E. QUISENBERY, Director of the American Poultry Experiment Station, Dept. M, Kansas City, Mo.—Advt.

Gyphers Incubators



Standard of the World! For over 30 years producing strong, sturdy chicks from every hatchable egg. World famous Gyphers patented principles. New 1928 Price List and Book FREE

Incubators, Brooder Stoves, care of chicks, etc. Hatch your own, save money. Cut out this ad and mail with name and address for FREE Book. Do it TODAY.

CYPHERS INCUBATOR CO.
90-108 Pearl Street BUFFALO, N. Y.



CHICKS from Michigan Accredited Flocks

FREE! Get our big catalog before you buy! It tells why Knoll's Michigan Accredited poultry pay you better. Large, heavy, carefully selected birds. Good winter layers.

BARGAINS in White Leghorn, Heavy Type Brown Leghorn, Barred Rock Chicks. 100% Live delivery guaranteed. Strong, healthy chicks that live and grow.

BIG CASH DISCOUNT if you order this month. 10% deposit books your order—for delivery when wanted. Shipped C. O. D. Pay balance on arrival. See chicks before you pay. Write today. 10% discount on all orders received before March 1. Get ready now for bigger profits next season.

Knoll's Hatchery and Poultry Farm
R. R. 12, Box M.E., Holland, Mich.

POSSIBLY ROUP

We have a sick turkey. She has large white bunches on her head. She is blind in one eye and almost in the other. She can hardly see to eat. What is the trouble?—Mrs. V. R.

The turkey with the large lumps on the head which are closing the eyes may have roup. The lumps may contain hard cheesy matter. Possibly they can be opened with a safety razor blade and the matter picked out with the point of a knife. Then inject commercial roup cure. Such mixtures are soothing to the wound as well as healing. Iodine is also useful in destroying the infection. Place a little iodine on a bit of cotton and leave it in the wound so it will heal from the inside out. Whether such treatment is practical depends on the value and natural vigor of the bird and the time of the caretaker. Several treatments may be necessary before healing results.

Turkeys also have a disease termed swell-head in which certain parts of the head either fill with a colorless material or a cheesy matter. The swellings can be lanced and drained and then cleansed with roup cure, iodine or commercial disinfectant about the same as the treatment for roup.

THE BARN-POULTRY HOUSE

We want to start in chickens and would like your advice. We have a barn twenty by twenty-eight. How many chickens will that take care of? Then how would you go about remodeling it with the least expense? What kind of a floor, not using cement? We have about 5 acres of apple orchard. When you tell us the amount of chickens the barn will take care of, then tell us how much of this orchard the chickens will require. And about how much it will cost to fence it.—C.

A barn twenty by twenty-eight will contain 560 square feet of floor space. It is the custom to allow about four square feet per bird for the heavy breeds which would give the house a capacity of 140 Rhode Island Reds or Barred Rocks. When the ventilation and sanitation are good, Leghorns seem to get along alright with three square feet of floor space per bird. That would give the house a Leghorn capacity of about 186 birds.

In remodeling an old barn into a poultry house it is a common custom to use a straw loft to keep the poultry warm and then rebuild the remainder of the building as near as possible to the plans advised by the experiment stations. By addressing the Michigan State College Poultry Department, East Lansing, you can obtain their bulletins on poultry house construction and from the diagrams in the bulletins it will be possible to change the barn into a fairly satisfactory building for poultry. If you do not wish to use cement, either a lumber or a gravel floor will give good results.

The amount of free range that hens need is not definite and most hens do not wander far from their roosting house if the house is supplied with laying mash. If you can give the hens the range of the entire orchard and keep the orchard in clover sod, it will make an ideal range. Fencing costs vary greatly according to the quality of material. The best way would be to write Michigan Farmer advertisers for their fencing catalogues and select the type that best fills your needs.

CULLING BULLETIN

CULLING the Farm Flock is the title of an extension bulletin just issued by the Michigan State College. This gives in practical concise form the latest information on culling, one of the most important phases of modern poultry raising. Culling should be a year round job with the greatest activities during the later part of the summer. Send to the Michigan State College, East Lansing, Mich., for Extension Bulletin No. 58 and increase your knowledge of culling.

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LITTLE, tender bodies respond quickly. Bad feed is an expense. Good feed is true economy. For life, growth and health of your baby chicks, order Purina Chick Startena and Purina Baby Chick Chow from the store with the checkerboard sign. Startena contains cod-liver oil that's potent in vitamin D.

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OUR PAGE

Favorite Winter Sports

Described by Merry Circlers

WHEN November days are ending, and the mercury decending, I love to stand and gaze out o'er the lake, for I know the turbid waters will surrender to the slaughters of majestic old King Winter and his wake. So when the ice is strong enough I'll tell my work to can the guff, and go and get my skates and



Frances Howe is Fond of the Family Pet

hie away. I'll forget my earthly troubles as I'd burst a bunch of bubbles, for I'm agoing skating for a day. I'll tell the spring and summer that King Winter is a hummer, and the ice is just as smooth as it can be. And I'll tell my Unk and cousins, though the pastimes come by dozens, that skating is the winter sport for me.—Menno Martin.

What is filled with more joy and happiness than to place yourself upon a huge sled or coaster containing several happy, healthy, glowing boys and girls to race with the wind to the foot of a long hill? Isn't it great to feel the sharp, keen wind flee by your face and body and feel your blood tingle and see the cheeks and eyes of others glowing and sparkling from the effects of the bristling country air and the abundant fun and excitement?

Even the small child gets bushels of fun in taking his small sled, probably a gift from Santa, running and suddenly, for no reason at all, flinging himself downward upon his stomach, always landing in the correct position upon the sled and going spinning down the hill faster than words can explain. How he enjoys it! He piles from his sled at the foot of the hill and comes tugging to the summit with a smile on his face which has been thought to be seen only on the face of the Man in the Moon. Again and again he sets out on his happy journey.

Well, here comes the crowd and to the hill we go with our big coaster. Three cheers for coasting, for it's my favorite sport.—Zona Amos.

All dressed in warm garments, a jolly, laughing crowd of us boys and girls ventured out into the snappy, cold night air for our favorite winter sport with our skates and bob sleighs. The night was clear as crystal. There were many bright twinkly stars in the heavens and amid the stars was the great big moon. As we boys and girls passed along the road, we noticed that every object was robed in white, glistening snow.

We walked for about a mile and then we turned a corner. What a sight met our eyes! Below us was a

small lake thickly covered with transparent ice. Around this lake were several pine trees thickly covered with snow and behind these pine, large hills were to be seen.

We all assisted in building a large bonfire. Some of us boys and girls went up to the top of a hill. We, with much laughing, talking, and scarfs flying, and the fresh air whistling about our ears, descended the hill on a bob sleigh. Some of us put on skates and skated. Around, round the lake we



OUR LETTER BOX

Dear Uncle Frank and Cousins:

As I was looking through my scrap book, I noticed a poem. One which taught me, especially in grammar.

In the grades I never got it straight for I didn't like school and grammar never appealed to me. And I'm sure there is a number of you who have just entered high school who have difficulties in grammar, unless you are very intelligent or the subject is of great interest. So when I became a sophomore I had to know it backward as well as forward, and I did after I read this poem.

I wish to give a word of thanks to an old correspondent, Nina Neddermeyer, who told me to find my dislikes and try to like them, so I have and sure succeeded, and now I think school days are only joy. I am enclosing this poem and am sure it will help a good many younger M. C.'s. If not, I hope it will our enemy, Mr. Waste Basket.—Tom Marshall.

Short Grammar.

Three little words you often see
Are articles—"a," "an," and "the."
A noun's the name of anything,
As "school" or "garden," "hoop" or "swing."

Adjectives tell the kind of noun,
As "great," "small," "pretty," "white," or "brown."

Instead of nouns the pronouns stand—
"His" head, "her" face, "your" arm, "my" hand.

Verbs tell something to be done—
"To read," "count," "laugh," "sing," "jump," or "run."

How things are done the adverbs tell—
As "slowly," "quickly," "right," or "well."

Conjunctions join the words together
As men "and" women, wind "or" weather.

The preposition stands before
The noun as "in" or "through" the door.

The interjection shows surprise—
As "ah," how pretty! "Ah," how wise.
The whole are called nine parts of speech.

Which reading, writing, speaking, teach.

A good way to learn "your lessons" is an interesting way as this is. You are to be complimented on your successful efforts to like your dislikes.

Dear Uncle Frank:

Our Merry Circle contributors have written on subjects wide and varied and because of this variety I have taken a subject to which very few of you, I think, have given much thought, that is, hours, or even minutes of it, only seconds. My subject is common errors in pronunciation.

Little words which we use in conversation with our parents and friends are those we seem most likely to slight. When reciting before a teacher or talking to someone on whom we wish to make a good impression, we are apt to use the biggest words our vocabulary contains, to use them correctly and well and pronounce them as they should be. Why is this true? In my opinion the solution is that we are careful because we are going to receive something in return for our carefulness. Either a good mark a little praise, or someone's admiration. We neglect to speak well while talking with friends and our parents because there is nothing to be gained by

would go. Some of us would be hauled on a sleigh and some wouldn't. Many of us fall down, but with a grim smile at our pain and an audible gritting of our teeth, we would again start in with our fun and join in the jolly laugh of our comrades at our fall.

We then started for one of our friend's home. Here we were ushered in a room that had a large crackling fire. We all helped to make candy, get apples from the cellar and to pop popcorn. We pulled taffy, ate candy, apples, and popcorn and played games. Then in the early hours of the morning, with a merry good night to our hostess, we started for our own homes.—Wilma Enyart.

they are making the same mistakes themselves.

You wouldn't think of saying "paig" for "peg," in fact, it would be laughable, yet very likely you say "aig" for "egg" and "laig" for "leg." Do you remark to a friend that you have a new "mahawgony" table when you should have said "mahogany." Do you call your brother's prize winning hog a "hawg" or your own pretty pet a "dawg" instead of a dog?

These are only a very few of the mistakes so common and they are just as easily corrected. You would find it surprisingly comfortable to know that you are pronouncing your words correctly. I know it takes courage to say "ar-mis-tice" day when everyone about you is saying "arm-istice" day



The Laizure Juniors on the Laizure Horses

but effort brings its own reward as you will find for yourself—if you make the effort.—Copper Penny.

It is true that we should strive for perfection in pronunciation as well as in other things, but that is rather difficult sometimes when we are accustomed to localisms.

Dear Unc and the Rest of the Gang:

Here we are again! Just to start Mister Nineteen Twenty-Eight out right, we're writing this on the first of January. Really, I don't suppose there are more than seventeen or eighteen thousand other M. C.'s with this same happy idea, each one thinking that it's very original, but then, it's all fun.

I might pause here to make a New Year's resolution: to write oftener during this next year, but I don't believe I shall. From sad experience, I know that haphazard resolutions like that are too easily broken. And anyway, if I'm not delightfully mistaken, my immediate future is going to be pretty well taken up with burning the midnight oil—lots and lots of it. The real reason for this letter, to tell the truth, is that I very probably won't have time to write again for quite a while, inasmuch as this happens to be the last day of my vacation. At that, I suppose I should consider myself lucky, because I know of lots and lots of freshmen at State for whom this vacation was permanent—terribly permanent!

Well, J. Norman Hurd, it seems that the feeling is mutual between you and me. Ever since you wrote that article on "Success" I have been interested in you. If I had known you were a freshman at State, I should certainly have looked you up. By the time you read this, I shall have done so. '31 Rah! The same name "Rothfuss" you saw on the blackboard of Room 2, Dairy Building, and in the list of frosh basketball men—both of him are me!

(I ask you, Unk, doesn't that last sentence do me credit as an A student in English Comp.?)

I remember a picture of you, Uncle, and someone else in a not-so-recent issue of our mutual friend, in which you were the proud wearer of a dress and the "someone else" had on a college cadet suit which you said was yours. What college did you attend, and was military training compulsory?

What has become of all the really interesting old writers, like Helen the Piper, Helen Kish, "Tomboy," "Peter," Tom Marshall, not to forget our estimable friend Herb? Have they played us the scummy trick of getting too old? How very sad! Just three short months from now I expect to tap out my last adieu as an active M. C. Shall I make it funny, Uncle, or sprinkle in a few "weeps?" Dunt esk! I couldn't write a morbid paragraph about a first rate morgue! I thank you.—Guilford.

I presume the lamp of knowledge is burning nightly now for you. I was an M. S. C. cadet. Make your adieu what you want it to be. Have you heard from Hurd, yet? I think some of the M. C.'s referred to are just taking a vacation.

Dear Uncle and Cousins:

I received a letter from Christine Zeck, some time ago, boosting the radio fund and telling of the visit she paid to the Children's Hospital.

She wrote me about a plan she worked out and so I am asking you what your opinions are. Hope you all feel like doing all you can as that is just my feeling.

Christine said she would like to put on a play of some sort by our talented members. It could be presented at an auditorium she is sure she could get the use of for one evening. Folks would come if even at the price of twenty-five cents as they would be pleased to see such young charity workers who do it of their own free will. I agree with Christine that, if we could see how those children enjoy the radio, we would be anxious to get some more.

Well, Uncle Frank, hope you feel like Christine and I do. If you do, am sure this letter will be in print and the members will have a chance to give their opinions on Christine's plan.—Florence Sisson.

The plan you speak of is fine. The only hindrance is that M. C.'s live so far apart that they could not get together often for rehearsals. Let's have the opinions of others.

DEFIES MAN'S MASTERY

THIS hunter caught a ring-neck pheasant in his hands, alive and uninjured during the open hunting season. There had come a fall of new snow during the previous day and the night, and the pheasants had crawled under grass, weeds, and brush for shelter. The man saw a few inches of the tip of this bird's long handsome tail protruding out from under a clump of grass. The tracks told him



A Captive Ring-Neck

that the pheasant was not wounded. He threw his gun aside and grasped the bird in his hands.

Most wild creatures, taken home and placed in a comfortable pen and well supplied with food and water, would have quickly grown tame, feeding from their master's hand and permitting him to handle them. Not so this ring-neck, however. Man had been his enemy too long. For uncounted

generations, since his ancestors wandered through the gardens of Chinese temples and subsequently skulked in the Scottish moors, man had hunted his family, shooting them for food and sport. The well-learned lesson of hating and fearing man was not to be forgotten so easily.

The man kept him for weeks, giving him the best of care, and trying in every way to win his confidence. Even an eagle, the king of birds, would have been likely to have yielded his friendship in time, under such treatment. Not so the pheasant, however. When the man finally released him, out of sympathy for the longing for freedom that gnawed at his wild heart, this handsome bird was as wild and shy as the day he was taken.—Ben East.

A LATE HOME-COMER

I have been a silent ex-Merry Circler for some time. I was not at home at the time of the Home-Coming, so did not hear of it until too late to write.

I was a M. C. for several years and took an interest in the growth of the Circle, even since I have passed from the Circle. The boys' and girls' page is the first I read of the paper.

I was rather disappointed to think more didn't send to the Christmas Chest, but maybe it too can grow each year. Think each should be willing to contribute something for such a purpose.

I read Vic's letter when she told of saving interesting letters. I am doing nearly the same. I started by saving only poems but now I save good letters and pictures. Think in later years it will bring my past M. C. days back to memory.

Uncle Frank, I have been wondering for some time if the ex-M. C.'s were allowed to enter the Correspondent Scrambles or if we might have a Scramble for the ones not able to take active part.

Must close and leave space for others. Wishing the Circle the best of success, I remain—Ruby French, R. 4, Elsie, Mich.

It will be all right for ex-M. C.'s to join the Scrambles, or if there is a demand for one we could have an ex-M. C. Scramble. You are better late than never.

AD CONTEST

THE answers to the following questions will be found in the advertising columns of this issue. Please do not write out the questions. Also make your answers as short as possible. Number the answers the same as the questions. Put your name and address in the upper left hand corner of your paper, and M. C. after your name if a Merry Circler. Write your letter, if any, on another sheet. Ten prizes will be given: two fountain pens, three loose leaf note books, and five little boxes of candy. All who have correct papers and are not Merry Circlers will receive M. C. pins and cards.

Here are the questions:

1. How many ships does the United States Shipping Board have?
2. What is mounted on heavy weather proofed skids and easily moved?
3. What are the most marvelous motor car values in their respective price groups?
4. Who specialized for sixty years in making harrows?
5. What is the price of the greatest towel bargain ever?
6. Who has made reliable live stock and poultry preparations since 1886?
7. What is the greatest name in rubber?
8. What oil costs 20c a half pound?

This contest closes February 10th. Send your papers to Uncle Frank, Michigan Farmer, Detroit, Mich.

LETTER BOX ANNEX

Dear Uncle Frank:

I heard mother reading "Our Page" so I thought it would be a good idea to write. She has just finished reading Christine Zeck's letter. She said "So that is what the Merry Circle is for, to spread cheer." Yes, I think the Merry Circlers spread cheer wherever they go. I try to at least.

As I heard mother reading about Christine's visit, I remember the visit some of my relatives, parents, and my-

self made to the TB hospital near Plymouth a year ago. Then we visited the Work House. These were very interesting. I wouldn't try to explain it now, for I am afraid I would get something wrong.

I have been an M. C. a long time, but I have not entered into the contests and letter writing very often. It seems that mostly every time I read "Our Page" I read something about smoking, etc. As for smoking it is harmful to the body, and also spiritually. Drinking is the same also. The use of cosmetics is very harmful to the face, I think.

I look at smoking, drinking, use of cosmetics, and other things in this way: "Who shall ascend into the hill of the Lord, or who shall stand in his holy place? He that hath clean hands, and a pure heart"—Psalms 24:3,4. I think this is a very good reference. Don't you, Uncle Frank?

May God bless and guide the Merry Circlers and Uncle Frank, I remain, your niece—Clettie.

Yes, the Merry Circle is to spread happiness. The reference you give is good.

My dear Uncle Frank:

I have read "Our Page" for about a year. I have thought the letters very interesting. I've read a letter in "Our Page" written by a girl who thinks it's nice to see boys smoke. As for me I think smoking and drinking are terrible habits. In later years I would like to be a nurse.—Signe Broman.

I think you have a good idea regard-



Horst Beyer is the Artist

ing smoking and drinking. Nursing is a nice occupation for girls.

Dear Merry Circlers:

I'm one of those farmer's daughters who wouldn't live in town for three cents.

I have been reading your letters for several years and find them quite interesting. I like "Cooney's" letter as I sho' doz like to write odd myself sometimes.

I like the poem "Blessing on Thee, Little Dame," the two later ones were good although I never memorized them. I live on a farm about two hundred miles north of Chicago.

A dandelion was in blossom here the other day. That used to be the boys' sign to begin going barefoot. In a town farther north a woman picked a pansy last week.

I have curly unbobbed hair and haven't gone to a movie nor tasted pop for seven years and my face doesn't know what rouge and lipstick feel like. For pets we have "Ouch," the cat, "The Twins," two gray kittens, and "Scotty Allan," a dog named after the Alaskan dog trainer.—Bill & Dinah.

You have denied yourself many of the things that are popular and thought necessary nowadays, but that should not effect your happiness or enjoyment of life.

CONTEST WINNERS

This was called a mystery contest because there was more to it than most young folks would expect. The purpose was to see if the contestants could follow directions, the ad itself being very easy. Many had it correct but a large number missed out on following the directions. Those selected as prize winners are as follows:

Fountain Pens

Alva Roe, R. 3, Fremont, Mich.

Wilma Fox, R. 1, Orion, Mich.

Loose Leaf Note Books

Marion Tihart, Okemos, Mich.

Merle Elmore, R. 2, Cadillac, Mich.

Leroy Pease, Bloomingdale, Mich.

Knives

Marie Haan, R. 1, Fennville, Mich.

Evalene Norton, R. 1, Schoolcraft, Mich.

Justin Hakes, Homer, Michigan.

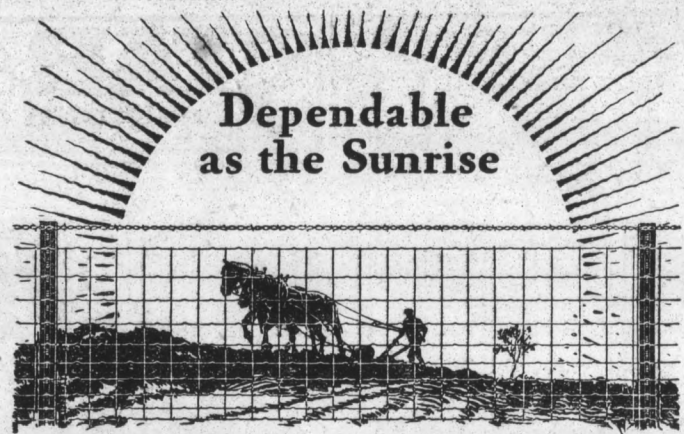
Evelyn Mitchell, R. 1, Bailey, Mich.

Lyle Tahner, R. 1, Pierson, Mich.

The Ad Corrected

Wanted—By a lady, an old table with five legs and mahogany finish.

Wanted—An old table with five legs and mahogany finish, by a lady.



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Fence satisfaction sure!

Here is a remarkable new value in fence. The best fence that experience, research and money can produce, and backed by a guarantee of satisfaction—at the price of ordinary fence.

We control every step in the manufacture from mining the ore to the finished product—only one manufacturing profit. We use our own special steel formula giving unusual strength and a particular affinity for zinc galvanizing. We cover every strand with a life-long super-zinc

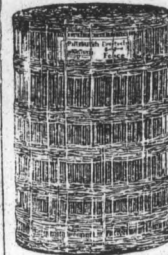
coating, bonded so closely to the steel that it will not crack or peel.

Lastly—our factory inspection is 10 times more thorough than the usual strict demands of engineers and testing laboratories.

The widest range of styles and designs—Pittsburgh Columbia Fence is of hinge-joint construction; Pittsburgh Perfect Fence is the electrically-welded, stiff-stay type. Both carry the same guarantee. The same high quality is found in Pittsburgh barbed wire, gates, steel posts and wire nails.

FREE: Valuable books

These remarkable Pittsburgh Fences are described in our new Catalogue—sent free on request. At the same time we will send you our useful book, Farm Records.



Pittsburgh Steel Co.

703 Union Trust Bldg. Pittsburgh, Pa.

GENTLEMEN: Please send us FREE your catalogue and farm record book.

Name _____

Address _____



Good fences make better farms

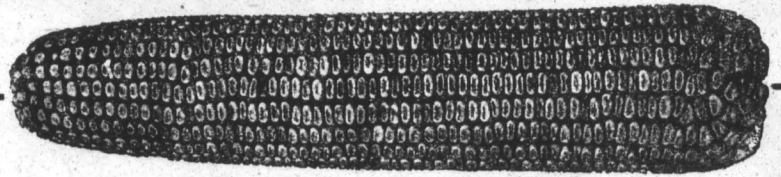
RUSSIAN SPRINGFIELD SPORTING RIFLE \$20.45

5 shot using the U. S. Army caliber 30, Mod. 1906 cartridges. Weight, 8 pounds. Length, 42 1/2 inches; barrel, 22 inches. Turned down bolt handle. Special price, \$20.45. Ball cartridges hard nose, \$3.50 per 100. Web cart. Belt, 40 cents. 380-page illustrated catalog with history of American arms and other Army and Navy equipment for 50c. Special circular for 2c stamp. Established 1865. Francis Bannerman Sons, 501 B'way, N. Y. City



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

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

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Dept. 56-B

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I'll show you how to make \$10 a day right while working in the field. Our work will not interfere with regular farm duties. Swisher.

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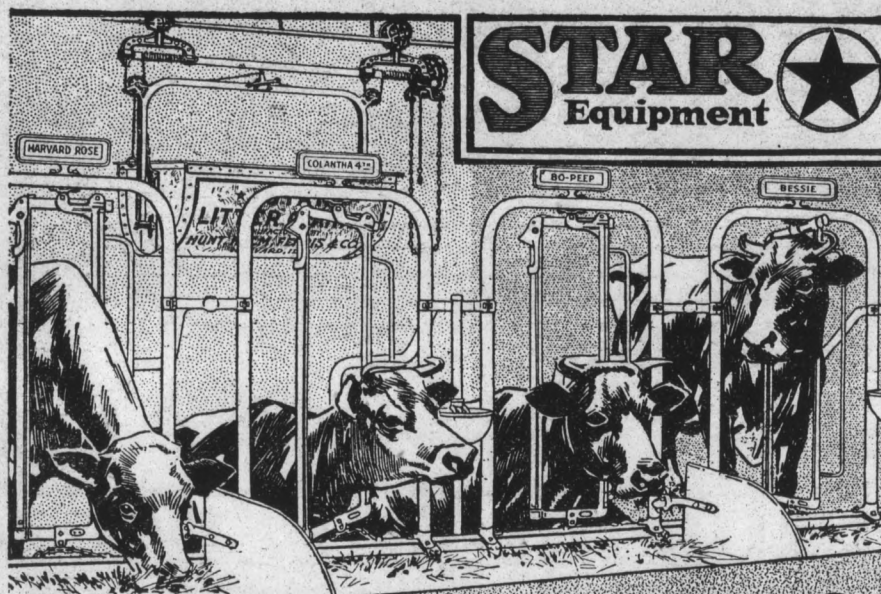
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Arizona, making as high as \$600 a month. Hundreds of others making from \$250 to \$500 every month.

FREE No experience necessary. We train you FREE to be Farm Fire Prevention Expert. Write at once for details of our amazing big pay offer for Farm and Small Town Representatives.

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No, it's not as easy as it looks because two, and only two, of the hats on the girls pictured to the right are exactly alike. Find them—mark them—send your answer today. \$500 big costly prizes will be given and duplicate prizes will be paid in case of ties to those tying. Costs you nothing, now, later, or ever. All who answer can share in cash prizes. Everybody rewarded. Send answer—learn how to get this prize.

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LIVE STOCK AND DAIRYING

FEEDING SERVICE INCREASES SALES

BY giving its customers correct information about feed costs and properly balanced feed mixtures, the Falmouth marketing association in Missaukee County is building up an unusually big business in dairy and poultry feeds. The volume of sales has doubled each season for the past three years.

Farmers from a wide area are buying feeds at Falmouth because they have learned that they will get just what they need for best results under their conditions. Many times it happens that a man will enter the co-op office with his mind made up to buy a certain brand of feed or feed mixture; but, when he has answered the manager's questions about the kind and quality of roughage fed, condition of his stock, etc., he is usually convinced that some other feed or combination of feeds is better suited to his particular needs. The feeding practice on each customer's farm is an individual problem, and it is so considered. The motto of the co-op manager is, so far as possible, to sell only what the customers need; and that is not always what they may think that they want.

Tom Berghouse is the manager of this marketing organization and Albert Fising is his bookkeeper and right-hand man. Both of these men know their feeds. On the office desk is a well-worn copy of a standard work on the subject of feeds and feeding. The function of carbohydrates, protein, and minerals in a feed have been dug out of this book. The percentages of protein in common poultry and dairy feeds have been memorized for instant use. When either of these men tell a farmer what he needs, they speak with authority; and the farmers themselves like this kind of service.

To facilitate the mixing of the various combinations of feeds, a No. 5 Disbrow creamery churn, of about 1,800 pounds capacity, has been rigged up in connection with elevators and sacking bins. The customer first gets his order for the proper feed mixture in the office. This order is then turned over to the mill foreman. Any home-grown feeds, if furnished, are ground and weighed, then put in the mixer with the proper amounts of other concentrates, bone-meal and common salt. Before the customer has lost his interest in the entertaining process of manufacture, his properly balanced and well mixed order for feed is sacked and ready to take home.

Today business men in every line recognize the value of service, and nowhere does the importance of intelligent service show to better advantage than in the selling of farm feeds. A properly compounded ration gives good results and satisfaction to the buyer, and this in turn is bound to bring increased business. The rapid growth of the feed business at Falmouth during the past three years appears to prove this.—B.

SIZE SUPPLY PIPE FOR DRINKING CUPS

What size supply pipe should we use for the water tank supplying the drinking bowls in our 38 by 80 foot barn? The tank is 8 by 14 feet and 6 feet deep, is 125 feet from the barn, and the drinking cups are about level with the bottom of the tank. It is not practicable to have the tank any closer to the barn.—F. S.

If this were mine, I would put in about 1½ to 1¾-inch pipe from the tank and at least part of the way

down the supply line in the barn. For the proper operation of drinking cups it is very essential that the water flows freely and promptly when the valves open; and with the low head that you have and the large number of cups you would have in so large a barn, you will need a large pipe to furnish a quick flow. The cost per foot for digging and laying and connecting up a large pipe is practically no more than for a small one; and the cost of the pipe and fittings probably would amount to only a few dollars on the whole installation; and it will not pay to skimp on size of pipe, especially when it will be in service for many years. Different makes of drinking cups vary as to the pressure and supply conditions which give best results, and the manufacturer's advice should be followed as to their installation.—I. D.

WALLS FOR DAIRY BARNS

(Continued from page 141)

some method will be devised for creosoting or treating sawdust or mill shavings so they will be both damp proof and rot proof. Even ordinary gravel, while not much of an insulation in itself, is far better than nothing at all in such an air space. The eventual solution of the double wall problem will probably be a thoroughly waterproofed insulation board which can be built right into the concrete or concrete block or clay block double wall.

It is, of course, possible to make a single masonry wall warm and comfortable, either by putting furring strips on the inside and then lathing and plastering with two coats of cement stucco, or, by fastening plaster-board or insulating board to the inside of the wall, and then plastering with two coats of stucco. Either of these methods adds considerably to the labor and material cost of the wall and is not quite so solid and sanitary as the masonry itself.

The standard stable wall construction is still of wood, usually of rough lumber, heavy tarred paper or half-ply roofing, and drop siding on the outside of the studding, and heavy paper and matched lumber on the inside. Sawdust or mill shavings between the studs adds a lot to the warmth of such a wall, but have a tendency to hold moisture and cause the wall materials to decay. For that reason commercial insulation is preferred, either in place of the layer of rough lumber, or of the quilt type between the studs. This may seem rather expensive construction and naturally is not needed for mild climates, but in cold climates it keeps down frost, makes the ventilation work properly, saves feed, and adds to the profits.

FEEDING NOTES

ROUGHAGES, such as legume hay, should constitute a considerable portion of the ration of the growing pig. But when the fattening period arrives then this roughage should be gradually reduced until, when finishing for market, the course feeds should be practically eliminated.

It is important to keep the lambs quiet when they are being heavily crowded for market. Excitement and over-eating may result in apoplexy. This may be caused by having extra feeding places, inducing the lambs to seek new quantities of feed in parts of the troughs untouched by the other lambs.

Kent Testers Report

By K. K. Vining

IN 1927 five cow testing associations finished their year's work in Kent County. Of these the West Kent finished its fifty year of continuous work and is organized for its sixth year. The North Kent, South Kent, Alto Kent, and Grand Rapids Kent have finished four years' work and have started on their fifth year's work.

Trouble with Sterility

There have been fewer herds in the association work this year than the same number of associations previously. This is not due altogether to lack of interest. In some associations a sterility problem has kept many breeders out. Here is a problem that is sorely trying the dairyman and one that the veterinary profession does not seem to be able to handle. This trouble seems to run for a period of time in some communities, disappears, and then reappears again. The other trouble is that many members after testing for a year or two become immune to any further cow testing association work, thinking they have reached the top in the dairy profession.

Here are some results in the five named associations. A total of 1,114 head were on test. The West Kent C. T. A. had the highest butter-fat average. The 239 cows in this association averaged 7,566 pounds of milk and 345.1 pounds of fat. The Alto Kent C. T. A., with its 275 cows, produced an average of 7,352 pounds of milk and 342.2 pounds of fat. The other associations follow in the order named. The Grand Rapids Kent, 276 cows, averaging 9,458 pounds of milk and 338.2 pounds of fat. The North Kent, 188 cows, averaging 7,156.3 pounds of milk and 335 pounds of fat. The South Kent, 245 cows, averaging 7,491.4 pounds of milk and 321.5 pounds of fat.

The Best Herds

The high herd in fat production was seven head of pure-bred Jerseys owned by D. J. Dinsen of the Alto Kent association. They averaged 8,961 pounds of milk and 490.6 pounds of fat. Incidentally they have had honors for high herd in the four years of completed work. Second place went to a herd of eight pure-bred Jerseys owned by Harris and Sheldon in the North Kent association. They averaged 7,646 pounds of milk and 438 pounds of fat. The other herds were as follows. Nineteen head of pure-bred Holsteins owned by John Buth and son in the West Kent association averaged 13,472 pounds of milk and 436.5 pounds of fat. Seventeen pure-bred and grade Holsteins owned by Jacob Karseboom of the Grand Rapids association averaged 12,498 pounds of milk and 418.8 pounds of fat. Seven pure-bred Guernseys owned by E. W. Ruehs of the South Kent association averaged 8,310.7 pounds of milk and 415 pounds of fat.

Honors for high cow in butter-fat production goes to a five year old pure-bred Holstein owned by Dudley Waters. This cow produced 20,938 pounds of milk and 651.2 pounds of fat. The Waters' herd of sixty pure-bred Holsteins had an average production of 11,861 pounds of milk and 398.59 pounds of fat. Second high cow was a four year old pure-bred Jersey owned by D. J. Dinsen of the Alto Kent association. This cow produced 11,553 pounds of milk and 609 pounds of fat. The rest were in the order named. A pure-bred Guernsey owned by E. W. Ruehs of the South Kent association produced 9,134 pounds of milk and 556 pounds of fat. A pure-bred Holstein owned by Lynn Bradford in the West Kent association produced 12,775 pounds of milk and 551.4 pounds of fat, and a pure-bred

Jersey owned by Wm. Kies of the North Kent association produced 8,886 pounds of milk and 510.6 pounds of fat.

The Low Producers

None of the herds were so bad when the reports of the low producing herds in each association are studied. The lowest of the average of the four poorest herds in one association was 218 pounds of fat and the highest of the four poorest herds in another association was 293 pounds.

Three hundred and sixty-one animals qualified for the R. O. P. The sad part of this feature is that no herds will take advantage of this phase of cow testing association work. The West Kent had ninety-four that qualified for this work.

Nine herds produced over 400 pounds of fat and seventy-eight over 300 pounds. Every herd on the Kent County association either owns or uses a pure-bred sire. Fifty per cent of the farms have alfalfa and many are using sweet clover for pasture.

TWO WOMEN WIN

(Continued from page 151)

slight, if anything at all had been injured. But the jury had been taken to view the premises and knew the character of disinterested witnesses who testified as to the condition of the trees before the trimming had been done. After a few minutes the jury, composed largely of farmers, and wholly of men of sound judgment who knew the value of farm shade trees, filed back into the box. The verdict covered both willful trespass and damages and amounted \$725.00.

Now, if we had listened to the cold water pourers, nothing would have been done. We are inclined to peace and order and law abiding, and have a perfect horror of being involved in litigation of any kind, but the time came when something had to be done and we did it. Be it far from me to advise running into law suits for trivial things, but forestry is occupying a front place in the welfare of our land from many standpoints, and if farm owners do not protect their own trees, who will? There come times when peaceable people must fight and fight hard. This seemed to be one of them, and the court seemed to think so by the decision. The money can not restore the trees, but it may inspire some timid citizen to find out his rights on his own premises and then to stand for them.

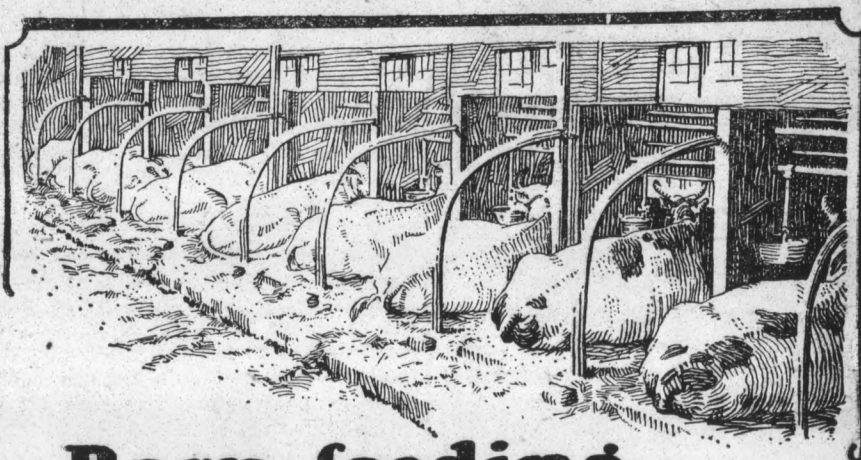
MILK FOR YOUNG RABBITS

I have a pair of Flemish Giants. The doe has had two batches of little ones but all died. We were told that cabbage or green feed was our trouble so the next time we fed clover hay, but with the same results. We have a real warm place and keep them separate, so we don't know the reason.—A. I.

Try giving the doe a ration of warm milk and bread for the first two weeks after the young are born. Boiled corn meal mush and milk is also used with good results. Bread and milk is an excellent growing feed for young rabbits and seems to help in keeping them healthy.

BELIEVES IN CERTIFIED SEED

I BOUGHT ten bushels of certified seed potatoes last spring and planted them. I hauled ten loads of manure to an acre and I dug 205 bushels from the ten bushels. I certainly believe in certified seed. The other potatoes I had only yielded eight bushels from one on the same kind of ground.—Richard Schwisow.



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When such cow ailments as Barrenness, Retained Afterbirth, Abortion, Bunches, Scours, Lost Appetite, etc., threaten your profits, use Kow-Kare, as shown on each can. For thirty years this great regulator and remedy has been saving money for cow owners—bringing ailing cows promptly back to health. No dairy barn should be without this famous home remedy for disorders of milk cows. Thousands of dairymen find it the most dependable aid to cow health and profits.



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The difference will be not so much in what you feed as in what happens after it is consumed. Few cows can assimilate and turn into milk all the dry rich feed they consume—without systematic conditioning. Kow-Kare keeps the digestion and milk-producing organs responsive. Heavy feeding is made safe—and profitable.

Feed a tablespoonful of Kow-Kare with the grain one or two weeks each month. Note the fuller milk pails, the better looking cows, the improved appetites. This conditioning costs only a few cents per month per cow. It's the biggest little investment you ever made. Try it on all your cows this winter.

When Cows Freshen

be sure to feed a tablespoonful of Kow-Kare in the feedings for two or three weeks before and after. You will call it the best health insurance you ever paid for. A better calf, a cow free from disorders so often arising at calving is worth spending many times what Kow-Kare will cost you.

Feed dealers, general stores and druggists have Kow-Kare. Large size \$1.25; 6 cans \$6.25; Small size 65c. If your dealer is not supplied we will mail, postpaid. Write for book, "More Milk from the Cows You Have."

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With Kow-Kare you can easily mix your own complete mineral at a surprisingly low cost—a mixture of recognized conditioning value. Simply mix 30 lbs. salt, 30 lbs. fine-ground lime, 30 lbs. steamed bone meal and four cans (large) Kow-Kare. For well under \$6 per hundred you will have an unbeatable mineral. Use 80 lbs. of this mixture to a ton of grain.

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HOW TO SAVE THE PIGS

WITH us the greater part of the spring, pigs are born during the first half of April, and a great many of them are lost every season that might be saved if the owner knew just what to do and when to do it. In many instances where pigs do not do well at farrowing, the cause of the trouble starts from conditions surrounding the sow during pregnancy, such as an improper food ration and too much or too little of it, or the conditions may be brought about by too little exercise, the latter has much to do with the sow at farrowing time.

Conditions are some times such that it is about impossible to give the sow just the treatment she should have for best results, and there is sometimes trouble when the management is as good as is possible to make it. If the feed and care of the sow has been what it should be and she has not been too closely confined, the chances are that she will do well and save all, or nearly all, her pigs without any meddling or fussing on the part of the caretaker.

The average brood sow, if she is in the proper condition, will do the best when she is left alone for nature to take care of the case. A good many pigs are lost at farrowing time just from fussing with them, when if they had been let alone the sow and pigs would have come out all right. However, it is never known to a certainty that all will be right, therefore, it is better to be around so as to give assistance in case it is needed.

In the first place everything should be ready at farrowing time. If the weather is cold and wet, the sow must have a dry, warm nest and out of the wind, and a small amount of short hay or straw for bedding. Should the weather be warm and dry she will do better in the open air, but some shed-like shelter should be provided then.

Large, deep beds made of long, coarse straw, where the sow can almost bury herself, is a bad thing and the main cause of the sow getting on the pigs and killing or crippling them. If there is a hole or low place in their bed, which there is most sure to be if a large amount of bedding is used, the pigs will get into it when the mother leaves the nest and when she returns she will root some of them out, but hardly ever will all of them get out of her way, and those remaining are most sure to get killed or injured. A fender placed along the side wall, about six inches up from the floor is a good thing, but it frequently happens that the pigs get between the fender and the sow's body and in this way are killed.—V. M. C.

BETTER LIVE STOCK STATISTICS DISCUSSED

IT has been proposed that new agricultural schedules be drawn up in order to insure more accurate statistics and also that Congress set a permanent date for taking the agricultural census. The bill under consideration provides that the census be taken April 1. It was also pointed out that there have been three changes in the date when the census of meat animals has been taken. For the years 1850 to 1900 the figures were as of June 1, for 1910 as of April 15, and for 1920 and 1925 as of January 1, making them valueless for purposes of comparison.

In the field of animal statistics there are in some instances radical differences between the estimates of the Bureau of Agricultural Economics and the census figures. In the case of sheep and lambs the 1925 census figures show an increase of sheep and lambs of 556,000 or 1 1/2 per cent, while Department of Agriculture figures show a decrease of 2,131,000 or 5 per cent. For hogs the census data shows a decline of 8,492,000 or 14 per cent, while the Department of Agriculture

shows a decline of only 4,245,000, or only seven per cent.

It was suggested that trained agricultural economists be secured to assist in making up the agricultural schedules and to suggest studies that should be undertaken to insure more accurate and complete statistics in the 1930 census.

MORTGAGE LIFTERS VS. MORTGAGE MAKERS

HOGS are said to be "mortgage lifters" but my experience has been that this depends on the man back of them. Sometimes they are "mortgage makers." While they really did their share toward lifting my mortgage, they also did their share sinking me heavily under mortgage, before I learned to manage them.

Pigs should be kept growing all the time, any back tendency in



Merry Maiden's Brown Lady Produced 698 Pounds Butter-fat and 14,935 Pounds Milk in 365 Days at Eighteen Years of Age.

growth is very hard to overcome. I keep them separate from all other hogs. I have found from costly experience that it is not a good policy at any time to feed different sizes of hogs together, as the weaker will come out short in their rations.

Sour Milk Feeding

I do not feed my growing pigs sour milk. It is all right for the older hogs, but not so for young pigs. Give them food calculated to form bone and muscle. When my pigs are able to care for themselves they are provided with a pasture lot for themselves. This alone, with proper feeding, pushes them rapidly. When this pasture lot is impossible, I use alfalfa hay. Where exclusive grain diets are given, as is often the case, the hogs do not thrive well. In fact, I have had actual loss in such exclusive grain feeding, and this loss is where they are "mortgage makers."

Just as well expect yourself to keep well in body and mind on one kind of diet as to hope for the hogs to do so. I always feed my liquid feeds before the solids, and these are given plentifully before putting the grain feeds before them. My object is to not over feed nor under feed. If the grain is given first, my experience is that they are apt to let most of the liquids go untouched, but feed these first and then the grain and they do not gorge themselves on the grain. Another object in feeding the liquids is to avoid constipation. Solid grain foods given to excess and alone will cause them to be constipated and my experience has been that constipation causes two-thirds of the ills the hog is subject to.

Danger Signals

On the least sign of disorder correctives should be given them. Trusting the feeding and care to hired help is not always the best thing to do. This has been my experience. Such help does not have the general interest in the welfare of the hog that the owner has, and too much dependence on the hired man may result in loss.

Cleanliness in feed counts greatly. To expect a hog to keep healthy and fatten when hunting his corn in the mud is an error. I have seen owners throw bushels of corn in the feed lot, and in less time than it took to throw it there it was swallowed out of sight in mud. Such laziness is unpardonable. A good floor of ample size will

pay its cost in one season. A good concrete floor is the best that can be built. These can be kept clean with little labor.

Another item of interest, if we want our hogs to be "mortgage lifters," is shelter. I do not mean by this a shelter under a straw stack, but a dry sleeping place at all times for the hog, young or old.

Straw stack shelters are responsible for many losses of swine by disease and smothering. I have tried them and learned better. Hogs should not be allowed to lie around them at any time. Much more than the cost of good sheltering sheds will be lost in a short time.

Breeding stock, male and female, should be the very best—I mean the best we can afford—good sound animals, not necessarily pedigree stock, but good animals, energetic and hustling in habits. The time is here when we want more and better hogs, and where losses will cease in growing them.—R. R.

IS YOUR CREAM SEPARATOR A THIEF?

ACCORDING to dairy experts, any cream separator that leaves over four one-hundredths of a per cent of butter-fat in the skim milk is stealing money from the farmer who operates it. The efficiency of the machine can be tested by thoroughly mixing the skim milk, taking a half pint sample of it, and having that sample tested by a cream station operator, a cow tester, or at the agricultural college dairy department. Before this is done, however, the following precautions should be taken on the farm. Make sure the cast iron frame that holds the bowl is absolutely level, that the machine is securely fastened to the floor so it does not vibrate to any extent, that the milk is separated while still warm, that warm water is run through the cold machine before the milk is started, that the parts are all kept clean, and that the machine is turned at the proper speed as recommended by the manufacturer.

FEEDING NOTES

Even when the shoates have attained much of their growth, it is prudent to keep enough protein-rich feeds in the ration that the appetites may be stimulated. Lagging appetites too often reduce or eliminate the profits in hog feeding.

Wormy pigs will not make the owner rich. Gains from such pigs will be small. The wise feeder will keep his animals free from these pests. With proper care at farrowing time, the pigs can be spared the annoyance of these unwelcome organisms.

Where cattle are being fattened on corn, the use of legume hay as compared to timothy hay increases the gains, improves the bloom, gives the hogs following better gains, and produces more fertility to be passed back to the fields for successful crops.

Where cattle are fed molasses there is a noticeable improvement in the appetites of the animals. It also aids in cleaning up roughage that otherwise is unpalatable.

Not many years ago, after each heavy snowstorm, we expected to get out with a team and "break the road" and shovel out the worst drifts. Last evening as I was going across the road to do the last of the chores, a big motor-driven county-owned snow plow went throbbling past. This morning while we were eating breakfast the same plow, or another like it, went by again. Thus do times change. Many and marvelous improvements are being made, but it seems as though the farmers are footing more than their proper share of the bill.

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changeable. Removable die-cast
bearings. Hot spot cylinder head.
Center fire. WICO Magneto.
Send name at once. ED. H. WITTE, Pres.

WITTE ENGINE WORKS
2192 Oakland Ave., Kansas City, Mo.
2192 Liberty Ave., Pittsburgh, Pa.

**KEROSENE GASOLINE
GAS OIL DISTILLATE
OR GAS**

CATTLE

Herd of 20 head Registered Holstein Friesian Cattle for Sale at Auction

Tuesday, Feb. 14, 1928

At 12:30 o'clock. Place 2 miles south and
2 miles west of St. Johns, Michigan. Herd
sire De Kol Posch Grant 391535, dams
record 703.20 lbs. milk, 33.54 lbs. butter in
seven days. Above sire goes to highest
bidder, and sons and daughters of the above
sire and others of equally good breeding.
There are no females over 5 years old. No
reactors since 1919. Also there will be other
stock and farm tools sold at this sale. Bank-
able notes will be taken. Bring your bank
reference. No catalog, but can mail ex-
tended pedigree of sire. Herd established
in 1905.

E. E. STURGIS

St. Johns - Michigan

SERVICEABLE AGE

REGISTERED HOLSTEIN

Bull Calves at prices the owner of a
small herd can afford to pay. The
sire of many of these calves is a son
of the highest record (30 lb.) two-
year-old daughter of Creator. His
sire is King Segis Alcarra Prilly, an
undefeated Show bull with 70 A. R.
daughters. Others sired by 5 times
1200 lb. Champion Bull, the famous
K. P. O. P. breeding.

Bred cows and heifers served by
these sires are available for founda-
tion stock.

RED ROSE FARMS DAIRY

Northville, Michigan

Telephone: 344

Reference: Northville State Savings Bank

HOLSTEINS Registered cows and heifers due to
freshen in March, priced reason-
ably. Come and see them. B. B. REAVEY, Sis.,
Mgr., Tuscola Co., Holstein Association, Akron, Mich.

FOR SALE Ten high grade Holstein cows,
tuberculin tested for several
years. Never any reactors. GEORGE HEIDEN-
FELDT, St. Clair, Mich., R. 3.

The Stanley J. Gardner Herd, Crosswell, Michigan.

MILKING SHORTHORNS

Herd Sire, Tipperary Clyde 1331772. Grand Cham-
pion bull Tennessee State Fair 1927. Sire of 1st
prize bull calf, 1st prize pair calves. 3rd prize get-
-of-sire, and reserve Junior Champion bull at Mich.
State Fair 1927. Bull crosses up to 8 mo's. old for
sale, reds and roans out of cows with records up to
14,000 lbs. milk in one year.

FOR SALE Dual purpose Red Polled Bulls
from 10 to 12 mos. old. BAT-
TENFIELD BROS., Fife Lake, Mich.

"Claradale Milking Shorthorns"

Young bulls and bred heifers, priced for quick sale.
Duchess breeding, high milk and test records. Herd
under state and Federal supervision. Sixty days
retest allowed. Your success is our success. F. W.
JOHNSON & SONS, Box 26, Custer, Mich.

Milking Shorthorns Central Mich. Shorthorn
Breeders Assoc. offers young
bulls, heifers, and cows, fresh and coming fresh,
priced right. Oscar Skinner, Sec., Gowen, Mich.

For Sale--Polled Shorthorn Calves

Either sex, milk and beef, Federal tested. PAUL
QUACK, Sault Ste. Marie, R. 2, Mich.

Milking Shorthorns Bulls and females for
sale, all ages. Some
extra fine bred heifers. Best Clay breeding. IRVIN
DOAN & SONS, Crosswell, Mich.

Red Polled A few choice calves of both sex
for sale. ROYSTAN STOCK
FARM, Will Cottle, West Branch, Mich.

Registered Brown Swiss for sale, cows 10 and
11 yrs. old due in Feb. 2 bred
heifers. Also bulls of serviceable age. A. A.
FELDKAMP, Manchester, Mich.

BUTTER BRED JERSEY BULLS
CRYSTAL SPRING STOCK FARM
Silver Creek, Allegan County, Michigan

FIFTY CENTS CULLS THE RUNTS

RECENTLY I assisted in a county
tour where several vocational
agriculture projects were visited. We
had with us on the tour two swine
experts from our state agricultural
college. The interest and enthusiasm
was at a "blood heat."

One farmer requested the group to
stop at his farm and examine his herd
of hogs. One glance gave us a pic-
ture of some "round worm runts." The entire herd of fifty or sixty was
liberally dotted with those scraggly,
scrawny, dog-eared, pencil-necked,
stiffed-tailed, slim-legged, weary-gait-
ed, ruffled and starry coated runts. One of the swine experts immediately
asked if the pigs had been wormed? The answer was: "I usually do, but
this particular group were not, since the pigs were dropped at busy times."

The farmer, then, invited the mem-
bers of the tour to see pigs which
were wormed. There was small re-
semblance between the wormed and
un-wormed. The pigs that were given
worm capsules had the characteristic
"right curl" and were thrifty, con-
tented, and three times as large as
the first herd examined. According
to the owner, his pigs were all man-
aged the same with the exception that
the last group were treated for worms. The self-feeders filled with ground
oats, corn, and middlings were well-
filled and the pasture was equally
good in each case. The only differ-
ence was worming. It cost fifty cents
per pig and it made a big difference.
—H. Q. H.

HOLSTEINERS TAKE THEIR FODDER

WHO knows her? This was the
question asked at the annual
banquet of the Shiawassee County
Holstein Association held at Owosso
on the evening of January 18. All you
had to do was to look at her picture
printed on your paper napkin. Two
men identified her, Jay Bowlby of
Ovid and Jim Hays, the State Secre-
tary. Jay got first prize because he
knew her whole name, whereas Jim
tried to get by with just "Maggie." She is the dam of the All-American
yearling bull, owned, together with
this illustrious son, by the Detroit
Creamery Company.

A. C. Anderson of the Michigan Milk
Producers talked on the milk market
situation. He showed that Detroit had
increased in population thirty-three
per cent in a five-year period, that
folks were using about thirty per cent
more milk products and that on the
producer's side, there were less cows
being milked. So milk markets of the
immediate future should hold good.
"Prof." Anderson closed with a plea
for pure-bred men to grow better stuff
and for any with grade Holsteins to
raise the heifer calves.

Local talent put on musical and
practical numbers.

In the business session S. C. Bald-
win of Bennington was re-elected
president. Mrs. Burt Nowlin of
Owosso, the only woman secretary of
a Michigan county Holstein associa-
tion, was returned to office. Directors
elected included Charles Paine of
Durand, Jay Bowlby of Ovid, Elmer
Shadbolt of Bennington, and H. A.
Knapp of Owosso.

Washtenaw County Holsteiners
turned out on the eve of January 20
at Saline for the annual mid-winter
meeting. The hit of a program packed
with instrumental numbers, offerings
of a double quartette, and sundry
speeches, was the talk by Kenneth
Proctor. Ken. related the varied ex-
periences connected with the journey
he took to the National Dairy Show at
Memphis, Tennessee. He won the trip
for being the best all around Holstein
calf club boy in Washtenaw County,
the County Holstein Association fin-
ancing the venture.

A close competitor to young Proctor
in the speaking line was Erny Janisse,
chief of testers for the Dairy Depart-
ment of the State College. Erny re-
sponded nobly to an unexpected re-
quest to relate his experiences when
he took seventy bulls to France. The
bull excursion took place seven years
ago, but details are still fresh in
Erny's mind. He recalled how one
bull broke loose in New York City and
it took most of Gotham's police force
to get him back and on board the ship.
Over across the same beast ran amuck
and had to be brought down by a
French sharpshooter. When the ship
was about to sail from New York it
appeared that the law governing such
matters prescribed that there must be
not more than fifteen animals to a
caretaker. So Erny had to hire four
men and here is what he got. One
Belgian tailor, who could speak no
English, anxious to get back home;
one French soldier who had TB, there-
by sympathetically securing Erny's
stateroom so that Erny slept with the
bulls below deck, one Englishman re-
turning home full of his importance;
one magazine writer taking the trip
for the experience, that he might
write of it. With such "high class"
assistants Erny found that he had not
seventy but seventy-four animals, on
his hands.

To get back to Washtenaw County,
Frank Geiger of Rushton was re-
elected president; Mark Lathers of
Milan was returned as secretary;
William Austin of Saline was elected
vice-president and R. B. Watrous of
Chelsea, a director.

J. G. Hays, Secretary of the Mich-
igan Holstein Association talked at
both the Shiawassee and the Wash-
tenaw meetings on the "Herd Im-
provement Registry," the new Hol-
stein herd test.

INGHAM ASSOCIATION LEADS

DURING December, Michigan dairy
herd improvement associations
reported by the testers show that the
highest producing association is the
Ingham-Lansing D. H. I. A., Leslie Wil-
cox, tester. This organization testing
298 cows owned in twenty-six dairy
herds in Ingham County averaged
29.19 pounds butter-fat production dur-
ing March.

The outstanding herd production for
the month is found in the Detroit
Creamery herd, Farm No. 2, where
eighteen pure-bred Holstein cows
under retest conditions milked four
times daily averaged 63.46 pounds but-
ter-fat.

The highest producing cow in the
state for the month among the twenty-
six thousand cows tested is owned by
Herbert Wilder of Bay City, Michigan.
Mr. Wilder is a member of the Bay
County, No. 2, D. H. I. A. His mature
pure-bred Holstein cow on official test
and retested in the testing association
milked four times daily produced 102.5
pounds butter-fat and 2,847 pounds milk.

WANT HIGHER TARIFFS ON DAIRY PRODUCTS

HEARINGS will be held by the
United States Tariff Commission
February 23 on the application of the
dairy organizations for an investiga-
tion of production costs of milk and
cream in this country and in foreign
countries. The milk producers are
asking for a fifty per cent increase in
rates under the flexible provisions of
the tariff act of 1922. The increase is
aimed at the Canadian milk and cream
which are coming into our eastern
consuming markets in considerable
quantities.

Before the Civil War, cotton seed
was not regarded as being of any
value and was burnt by the ton.



For
Greater
Profits

ARCADY

and

**Wonder
Feeds**

The final test, in the kind of feeds you use,
is the balance on your bank book. Arcady and
Wonder feeds have given greater profits to
feeders for years. Ask your dealer—if he can-
not supply you write us today for FREE
illustrated Dairy and Poultry Books, dealer's
name, etc. No obligation.

Arcady Farms Milling Co.
Dept. 59 Brooks Bldg.
Chicago, Illinois

FREE WRITE TODAY for
FREE POULTRY
and **DAIRY BOOKS**

88 Hereford Cows

Big wide back kind, dark reds, dehorned. Bred to
extra good Hereford bulls to calve about April 1st.
Will sell you choice car load. Also 22 Hereford
cows and calves and 24 heavy springers. Also other
bunches. All T. B. tested. Also yearling and 2
yr. old stockers and feeding steers sorted even in
size and quality.

VAN S. BALDWIN, Eldon, Iowa

FINANCIAL KING JERSEYS

We have for sale a most excellent selection of bull
calves ranging in ages from 4 mos. to one year old.
These calves are sired by Financial King Sensation
and Financial Ford and out of Register of Merit
Stock. Prices reasonable. COLDWATER JERSEY
FARM, Coldwater, Mich.

For Sale Choice Jersey Bulls, grandsons of
Sylvia's Gamboe of Whitehall.
SMITH & PARKER, Howell, Mich. R. No. 4.

SPECIAL prices on Shorthorn bulls, cows and
heifers. These will please the most careful buyers.
GOTTFREDSON FARMS, Ypsilanti, Mich.

HOGS

DUROC

sows and gilts, bred to Junior Champion boar at
State Fair. Service boars and open gilts. Premier
breeder at State Fair.

Lakefield Farms Clarkston, Michigan

FOR SALE—Duroc Gilts of type and quality, bred
to High Orion No. 255227. Also a few spring
boars at right prices. Shipped C. O. D. on ap-
proval. W. E. BARTLEY, Alma, Mich.

O. I. C. HOGS on time Write for
Originators and most extensive breeders.
THE L. B. SILVER CO., Box 196, Salem, Ohio

For Sale--Reg. O. I. C. April & May Pigs
best of breeding. Shipped on approval. FRED W.
KENNEDY & SONS, R. 1, Chelsea, Mich.

O. I. C's. Good last spring pigs, not akin
also fall pigs, recorded free.
OTTO SCHULZE & SONS, Nashville, Mich.

Chester White Gilts with quality. Have a
few March gilts bred for
March farrow. Also fall pigs. Will sell cheap.
NEWMAN'S STOCK FARM, Marietta, Mich.

CHESTER WHITES fall pigs, service boars
and bred sows of first
quality. F. W. ALEXANDER, Vassar, Mich.

Registered O. I. C. Gilts bred for April and
May farrow. H. W.
MANN, Dansville, Mich.

FOR SALE Poland China boars of March
and April farrow. Also some
choice bred gilts, due to farrow in March and April.
Every one immuned for cholera. WESLEY HILE,
Ionia, Mich.

L. T. P. C. GILTS bred for March and
April. Weighing up
to 265 pounds, 35 and 40 dollars each, price up to
to Feb. 15. Satisfaction guaranteed. JAMES G.
TAYLOR, Belding, Mich.

BIG Type Poland China Gilts bred to son of Aller-
ton's New Hope, 14th yr. Prices reasonable. F.
L. Miers, Berrien Center, Mich., R. 1.

FOR SALE Poland China Bred Gilts and
Milking Shorthorn bull calves.
CLAIR I. BROWN, Kalamazoo, Mich., R. 10.

A FEW good Hampshire spring boars at a
bargain. Place your order for bred
gilts. JOHN W. SNYDER, St. Johns, Mich., R. 4.

SHEEP

BRED EWES

263 Choice extra large Delaine ewes. 91 yearlings,
balance 2 and 3 yr. olds. Bred to registered Shrop.
rams. Must sell as we are overstocked. D. L.
CHAPMAN & SON, S. Rockwood, Mich.

SHROPSHIRE Flock of 14 choice young
Reg. ewes bred to an im-
ported Butter Ram. Priced right. D. L. CHAP-
MAN & SON, S. Rockwood, Mich.

A FEW bred Karabul ewes for sale, the
right fur bearing kind. ANGUS
HOME STOCK FARM, Davison, Mich.

DELAINE EWES Registered. Bred.
Big smooth ones.
F. H. RUSSELL, R. 3, Wakeman, Ohio.

WILL SELL a few bred Registered Hampshire
ewes of all ages. JOHN B.
WELCH, Ionia, Mich., R. 1.

HORSES

FOR SALE A coming three-year-old
Belgian stallion, a splendid
individual. HILLCREST FARMS, Kalamazoo, Mich.

FOR SALE Belgians, Stallion Roan Bay
and six. ERIAS SNYDER, Goshen, Ind.



THE LATEST MARKET REPORT



GRAIN QUOTATIONS.

Monday, January 30
Wheat.

Detroit—No. 2 red at \$1.44½; No. 2 white \$1.42; No. 2 mixed at \$1.42.
Chicago—March \$1.30½; May \$1.30½; July \$1.27½.
Toledo—Wheat, No. 2 red at \$1.44½ @ \$1.45½.

Corn.

Detroit—No. 2 yellow 97c; No. 3 yellow 95c; No. 4 yellow 93c.
Chicago—March 88½c; May 91½c; July 92½c.

Oats.

Detroit—No. 2 Michigan 61c; No. 3 white 59½c.
Chicago—March 54½c; May 55½c; July 51½c.

Rye.

Detroit—No. 2 \$1.17.
Chicago—March \$1.09½; May \$1.09½; July \$1.03½.
Toledo—\$1.17.

Beans.

Detroit—Immediate and prompt shipment \$6.70 f. o. b. shipping points.
New York—Pea domestic at \$6.50 @ \$7.00; red kidneys \$7.75 @ \$8.25 to the wholesalers.
Chicago—Spot navy beans, Michigan choice, hand-picked, in sacks at \$6.45 @ \$6.50; dark red kidneys \$7.75.

Barley.

Detroit—Malting 97c; feeding 94c.

Seeds.

Detroit domestic seeds:—Cash clover \$18.05; February \$18.05; March \$18.00; cash alsike \$16.25; February \$16.30; March \$16.45; timothy at \$2.05; March \$2.15.

Hay.

Detroit—No. 1 timothy at \$13.00 @ \$14.00; standard \$12.50 @ \$13.50; No. 2 timothy \$10.00 @ \$11.00; No. 1 light clover, mixed \$13 @ \$14; No. 1 clover \$11.50 @ \$12.50; wheat and oat straw \$10.00 @ \$11.00; rye straw \$11.00 @ \$12.00 alfalfa hay, No. 1 to choice at Chicago, \$24.00 @ \$26.00.

Feeds.

Detroit—Winter wheat bran at \$40; spring wheat bran at \$39; standard middling at \$39; fancy middling at \$43; cracked corn at \$43; coarse corn meal \$41; chop \$40 per ton in carlots. Poultry feeds with grit \$49.00; without grit \$53.00 per ton.

WHEAT.

Demand for wheat has not been equal to the large supplies available in domestic and world markets and prices have shown a soft undertone recently. The Liverpool market has lost a little of the stability displayed during the last two months. Buyers appear confident that supplies will be adequate right along and are purchasing only from hand to mouth. The domestic situation is featured by big premiums for high protein wheat and for soft red winter, but the demand for ordinary grades is slow and stocks are not diminishing rapidly enough to indicate a cleanup by the end of the crop year.

If conditions turn unfavorable for the new crop, the liberal remaining stock will not be burdensome but prices are likely to work lower toward the end of the crop year if there is a prospect of a generous new crop. The southwest still is short of rain and the lack of snow cover probably is doing damage through the middle west. Recent reports indicate some injury to wheat in northern Europe.

RYE.

Export demand for rye has been much less active than earlier in the season, but the small visible supply creates the possibility of extreme scarcity before the end of the crop year.

CORN

Corn prices weakened in the last ten days under larger receipts and less active demand, but export sales increased on the break and the decline promises to be brief. The advance of 10 to 15 cents in the world price level since the latter part of 1927 tends to slow down export demand and large stock of Argentine corn still on ocean passage enable foreigners to buy sparingly for the time being, but they probably will need to buy a substantial quantity in the next three months.

Domestic demand from industries, feeders, and dairymen continues rather active and in spite of liberal primary receipts, stocks at terminals have not increased since November 1 nearly as rapidly as last year. About half of the season for the winter movement is

already gone and it is probable that further increases in the visible supply will be moderate.

OATS.

Primary receipts of oats are considerably below seasonal volume, reflecting the small farm reserves. Demand has not been much in excess of primary receipts, so that the visible supply has been reduced only a little over 1,000,000 bushels in the last five weeks. However, it totals only 20,522,000 bushels, or approximately two-thirds the quantity distributed from the visible supply from late January until early August in each of the last three seasons.

SEEDS.

Price changes in seed markets have been mostly of small dimensions. Spring demand from actual consumers has not appeared in volume as yet. Imports of red clover seed since the first of the year have been larger than earlier in the season. The foreign surplus is small, however, and no large quantity is expected from abroad. Imports of alsike clover, on the other hand, for the season to date have been substantially larger than a year previous. Alfalfa seed prices have been firm recently. Dry weather in the southwest has been unfavorable for the alfalfa acreage in that territory. Imports of alfalfa seed thus far have been smaller than last year or two years ago.

FEEDS.

Prices for by-product feed continue firm on a substantially higher level than a year ago. Demand for these feeds direct from consumers and from manufacturers who are doing a good mixed feed business is active. Flour mills are operating at about the usual rate at this season but there has been no accumulation of bran or middlings. Corn industries are sold well ahead on gluten feed. Cottonseed meal and oil meal supplies are moderate, owing to the shrinkage in the cottonseed crop. Only slightly over half as much cottonseed cake and meal is expected to become available for domestic

needs and for export during the rest of the season as was produced during the corresponding time last year.

Chicago—Bran, \$33.00; standard middlings, \$33.00; hominy feed, \$37.00; gluten feed, \$40.20; old process oil meal, 34%, \$51.00; tankage, 60%, \$65.00; cottonseed meal, 43%, \$52.00.

BUTTER.

Butter prices have lost ground in the last ten days as the result of liberal receipts and expectations of increasing production, together with substantial arrivals of foreign butter. Since January 1, receipts of butter at the four leading cities have been the largest on record for the corresponding period. Less butter has been moved out of storage in this interval than last year when stocks were already smaller than this year. About 20,000 boxes of New Zealand butter arrived at New York a week ago and added to the pressure caused by liberal domestic supplies. While the statistical position of butter is weaker than a year ago, the situation is partly discounted by the fact that prices are 2 to 3 cents lower than last year. Also, the decline in recent weeks has made foreign butter less attractive, so that imports may be smaller from this time on.

Prices on 92 score creamery were: Chicago 45½c; New York, 47½c; Detroit, 42 @ 45c per lb.

EGGS.

Egg prices declined sharply in the last few days as a result of increasing receipts and reports of heavier country collections. Arrivals at the leading markets have increased about 60 per cent from the low point of the season early in December. They have been much smaller than at the corresponding time a year ago, however, and prices have held up unusually well until the current week.

Receipts of dressed poultry since the first of the year have been about the same as they were a year ago but the additions to storage holdings of frozen poultry have been smaller than

at that time. Usually, storage stocks reach their peak about this season of the year and the market should strengthen somewhat when these holdings begin to diminish instead of increasing.

Chicago—Eggs: fresh firsts, 38c; extras, 45 @ 46c; ordinary firsts, 35 @ 36c; dirties, 32 @ 34c; checks, 30 @ 32c. Live poultry: Hens, 24c; capons, 28 @ 30c; springers, 27c; roosters, 20c; ducks, 25c; geese, 20c; turkeys, 28c.

Detroit—Eggs: Fresh receipts, best quality, 41 @ 41½c; dirties and checks, 28 @ 32c. Live poultry: Heavy springers, 24 @ 25c; light springers, 30 @ 32c; heavy hens, 28c; light hens, 23c; roosters, 16c; geese, 7 lbs. up, 20 @ 21c; ducks, large, white, 30c; turkeys, No. 1, 8 lbs. up, 35 @ 38c.

HAY.

Country offerings of hay have declined in the last few days. Demand has been moderate, but offerings, especially of choice grades, have been well taken and prices have held steady. Alfalfa hay is selling to better advantage than timothy or prairie, owing to an active demand from dairymen and from feeders in the middle west and in the southeast.

GRAND RAPIDS

Potatoes 90c @ \$1 bu; onions \$1 bu; cabbage 50 @ 60c bu; carrots 60 @ 75c bu; parsnips \$1 bu; leaf lettuce 14 @ 15c lb; radishes 50 @ 65c doz. bunches; wheat \$1.25 bu; rye 80c bu; buckwheat \$1.50 cwt; beans \$6.15 cwt; pork, 9 @ 11c lb; beef 6 @ 18c lb; veal 15 @ 17c lb; lamb 19 @ 22c lb; chickens 16 @ 25c lb; hens 15 @ 24c lb; eggs 40 @ 43c doz; butter-fat, 47c lb.

DETROIT CITY MARKET

Apples 80c @ \$5.00 bu; bagas 50c @ \$1.00 bu; beets 50 @ 90c bu; cabbage 50 @ 65c bu; curly cabbage 50c @ \$1.00 bu; red cabbage 75c bu; carrots 50 @ 75c bu; celery local 50c @ \$1.00 doz.; celery hearts 10 @ 15c ½-do. bchs.; eggs, wholesale, white, 50c doz; brown 45 @ 50c doz; retail 50 @ 55c doz; dry onions 75c @ \$1.25 bu; root parsley 75c @ \$1.25 bu; curly 35 @ 40c doz. bchs.; parsnips 50c @ \$1.25 bu; pears 75c @ \$1.25 bu; potatoes 60c @ \$1.10 bu; poultry, hens, wholesale, 25 @ 30c lb; retail 30 @ 32c lb; broilers, wholesale leg-horns 22 @ 24c lb; rocks 26 @ 30c lb; retail 30 @ 32c lb; ducks 26 @ 30c lb; geese 25 @ 28c lb; dressed poultry, retail 30 @ 35c lb; ducks 35 @ 40c lb; horse radish \$4.00 @ \$5.50 bu; Hubbard squash \$1.50 @ 2.00 bu; turnips \$1.25 @ \$2.00 bu; vegetable oysters 75c @ \$1.00 doz bchs; butter 60c lb; dressed hogs 14 @ 16c lb.

POTATOES.

Potato markets have been rather dull and price changes have been small. Occasional cold waves check shipments and prices strengthen temporarily, but the gains are hard to sustain when the weather moderates again. Northern round whites, U. S. No. 1 are quoted at \$1.45 to \$1.55 in the Chicago carlot market.

APPLES.

Apple prices have been steady with midwestern Jonathans quoted at \$8 to \$9 a barrel at Chicago and Washington extra fancy medium to large Winesaps at \$3.35 to \$3.50 per box. High grade apples in the Pacific Northwest have shown strength recently and it is expected that remaining supplies will move at high prices.

BEANS.

Producers who have held their bean stocks have benefitted considerably by the recent sharp advance in the price of that commodity. On December 23, 1927, jobbers were bidding country shippers \$5.30 per cwt. for choice hand picked Michigan beans for prompt shipment. The present market is \$6.70 as compared to \$4.80 one year ago. The advance is generally attributed to the excellent quality of the last crop. Moisture has been exceedingly light thereby lessening the possible damage in storage. This factor has enabled farmers to retain their stocks and there are indications that good quantities are being held for a better market.

CHEESE

Production of cheese as indicated by receipts at Wisconsin primary markets has been larger since the turn of the year than in the same period of 1927. It is reported that the surplus of fluid milk in New York is larger than a year ago and a substantial fraction of this may be turned into cheese.

Live Stock Market Service

Monday, January 30

CHICAGO.

Hogs

Receipts 60,000. Market generally 10 @ 15c higher; tops \$8.50, numerous sales, 170-210-lb. average, at that price; bulk good and choice offerings, 170-200-lb. \$8.35 @ \$8.50; 210-300-lb. \$8.20 @ \$8.45; 130-150-lb. \$7.75 @ \$8.30; most pigs \$7.25 @ \$7.50; strong weights up to \$8.00 and better; bulk packing sows \$7.25 @ \$7.50; numerous sales on light, \$7.00 @ \$7.50.

Cattle

Receipts 19,000. Market early sales best weighty steers and fat she stock 25c lower; little done; bid off more; killing quality mostly medium to good early top fed steers \$16.00; bulk on quality and condition to vealers \$13.00 @ \$14.50; meaty feeders sharing fat steer decline; light stockers scarce; cutter cows and bulls slow, steady to weak, vealers less; desirable quality considered about steady, \$7.25 @ \$7.50 to big packers; sprinklings \$14.00 @ \$14.50, few \$15.00 to outsiders.

Sheep and Lambs

Receipts 17,000. Market fat lambs strong to 15c higher, active to traders and shippers; early bulk good to choice 78-87-lb. wool lambs \$13.85 @ \$14.25, some held higher; nothing done on light run; heavy sheep strong; top ewes \$8.25; feeding and shearing lambs 25c higher; 74-lb. lambs with strong end, \$14.00.

DETROIT

Cattle.

Receipts 689. Market steady. Good to choice yearlings dry-fed \$11.00 @ \$13.75. Best heavy steers, dry-fed 10.25 @ 12.00. Handy weight butchers.. 9.00 @ 11.00. Mixed steers and heifers. 9.00 @ 10.00. Handy light butchers.... 7.50 @ 9.50. Light butchers..... 6.00 @ 8.50. Best cows..... 7.00 @ 9.00. Butchers cows..... 6.00 @ 7.00. Cutters..... 5.50 @ 5.75. Canners..... 4.75 @ 5.25. Choice light bulls..... 6.00 @ 9.00. Bologna bulls..... 7.00 @ 8.50. Stock bulls..... 6.00 @ 7.75.

Feeders..... 7.00 @ 9.50. Stockers..... 7.00 @ 8.50. Milkers and springers... \$75.00 @ 115.00.

Calves.

Receipts 788. Market steady. Best..... \$16.50 @ 17.00. Others..... 7.00 @ 15.50.

Sheep and Lambs.

Receipts 1,607. Market 25c higher. Bulk good lambs..... \$ 13.00. Best lambs..... 14.25. Fair lambs..... 11.00 @ 13.00. Light lambs..... 8.00 @ 10.50. Fair to good sheep..... 6.00 @ 7.50. Buck lambs..... 7.50 @ 12.25. Culls and common..... 2.50 @ 4.00.

Hogs.

Receipts 2,137. Market 25 @ 40c higher. Pigs..... \$ 8.00. Mixed hogs..... 8.75. Lights..... 8.25. Roughs..... 6.75 @ 6.90. Good Yorkers..... 8.00 @ 8.25. Stags..... 5.50 @ 5.75. Extreme heavies..... 7.00 @ 8.00.

BUFFALO.

Hogs

Receipts 11,000. Hold over, \$1,074; market 10 @ 25c higher; pigs up more; bulk 150-220-lb. \$9.15 @ 9.25; 240-300-lb. \$8.60 @ 9.00; pigs \$9.00 @ 9.25; packing sows \$7.00 @ 7.75.

Cattle

Receipts 1,800. Market on vealers and heifers steady to 25c lower; better kind at decline; cows \$7.00; bulls steady to 25c up; good 1,050-1,225-lb. steers \$14.00 @ 15.00; medium kind, all weights, \$10.50 @ 13.00; heifers scarce; vealers \$9.75; cutter to medium cows \$6.00 @ 8.00; bulls \$7.00 @ 9.00.

Calves

Receipts 13. Market steady; good to choice vealers \$17.50; culls and common \$10.00 @ 13.00.

Sheep and Lambs

Receipts 10,000. Market 25c higher; bulk good to choice lambs, 92-lb. average down, \$14.50; 100-lb. up \$12.00 @ \$13.00; culls and common \$11.50 @ \$13.00; yearling wethers \$11.50 @ \$12.25; fat ewes \$6.50 @ 8.00.

COUNTY CROP REPORTS

Clare County—Plenty of hay here but not much grain. Stock is just in fair condition. Wheat brings \$1.21, rye \$1.00, oats 55c, beans \$5.50 cwt, hay \$6.00@8.00; butter 35c, eggs 33c, fowls 18c. These are prices paid farmers.—J. M. W.

Newaygo County—Farmers are working for wages if they can to get cash to pay taxes. Bare ground and warm weather is helping feed question. Dairying and poultry at standstill. Red beans bring \$5.75 per cwt., cream 48c, eggs 35c, rye 85c, potatoes 80c.—S. A.

Sanilac County—Farmers busy with winter work. Dairy and poultry business going fine. Lots of roughage and fair amount of grain on hand. Live stock is in good condition. Not much being sold. Hay brings \$5.00@6.00, oats 50c, beans \$5.50, milk \$2.50, eggs 35c, potatoes \$1.00.—B. R.

Ottawa County—Few good cows for sale. Both dairy and poultry show signs of further developments. Sup-

ply of roughage and grain rather light except timothy. Silos need supplementing with hay because of shortage of corn crop. Timothy brings ten dollars in the barn, clover \$14.00@15.00, wheat \$1.20, milk \$2.65, eggs 38c, potatoes \$1.00.—F. C. H.

Oceana County—Farmers busy with pruning and odd jobs. Great improvement to look for in dairy and poultry business. Plenty of roughage on hand. Many farmers buying grain. Stock is in fine condition. Rye brings 95c, wheat \$1.15, white beans \$4.00, potatoes 60c, apples \$1.50, hay \$12@15, butter-fat 52c, poultry 18c, eggs 38c.—J. E. S.

Reduce Your Feeding Costs

By Using
Kane Syro Brand Feeding Molasses
with your home-grown feeds and roughage. Shipments in barrels from our large tank station.
Write us for our present low prices on carloads and less.
Imported and distributed by
NATIONAL MOLASSES CORPORATION
207 Walnut Place Philadelphia, Pa.

CLASSIFIED ADVERTISING

This classified advertising department is established for the convenience of Michigan farmers. Small advertisements bring best results under classified headings. Try it for want ads and for advertising miscellaneous articles for sale or exchange. Poultry advertising will be run in this department at classified rates, or in display columns at commercial rates.
Rate 9 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 7 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order.
Live stock advertising has a separate department and is not accepted as classified. Minimum charge 10 words.

Words	One time	Four times	One time	Four times
10	90	\$2.80	26	\$2.34
11	99	3.08	27	2.43
12	1.08	3.36	28	2.52
13	1.17	3.64	29	2.61
14	1.26	3.92	30	2.70
15	1.35	4.20	31	2.79
16	1.44	4.48	32	2.88
17	1.53	4.76	33	2.97
18	1.62	5.04	34	3.06
19	1.71	5.32	35	3.15
20	1.80	5.60	36	3.24
21	1.89	5.88	37	3.33
22	1.98	6.16	38	3.42
23	2.07	6.44	39	3.51
24	2.16	6.72	40	3.60
25	2.25	7.00	41	3.69

Special Notice

All advertising copy, discontinuance orders, or change of copy sent to the Classified Department must reach this office ten days in advance of publication date.

REAL ESTATE

BUY UPPER WISCONSIN FARM LAND THIS YEAR. This Cloverland district offers you fine soil—the best for dairying—barley, oats, rye, hay, potatoes, root crops. Never had a crop failure. Clover grows well. Plenty sunshine and rain. Numerous lakes and rivers. Excellent drainage. Plenty hunting, fishing, and trapping. Good roads. High schools, rural schools, churches, cream routes, telephones. Only a few hours to largest markets in United States. 40 or 80 acre tracts from \$12 to \$30 per acre. Lakelands priced a little higher. Small down payment—10 years on balance. Over 600 families here now. We show you how to start. Write for booklet "Happy Homes and Farms that Pay in Happy Land"—it shows pictures—settlers' letters—and tells you everything. Edward Hines Farm Land Co., Room 2152, 100 W. Monroe St., Chicago, Ill.

FRUIT GROWING in the Ozark region of Southern Missouri and Northern Arkansas has a big advantage in having soil and climate ideally adapted to fruit and berry culture. The gentle slopes of the Ozarks with its fine grained clay soil, abundant rainfall, mild winters, early Springs, make the Ozarks ideal for fruit growing. The nearby cities of St. Louis, Kansas City, and Memphis provide great markets. The healthful climate, pure mountain spring water, the fine spirit of co-operation, prosperous and growing communities, good schools, and hard surfaced roads make a delightful home-land. Land can still be bought at reasonable prices that will insure good profits on grapes, strawberries, apples, small fruits, and vegetables. Write for more facts. Frisco Railway, 833, Frisco Building, St. Louis, Missouri.

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs, and poultry, yields a good income. A small one-family farm, with a little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get our farm paper—"The Earth"—free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 912 Railway Exchange, Chicago.

RIVERSIDE FARM—Good Bldgs., 3 Horses, 18 Cattle, Crops, 100 hens, hogs, implements, vehicles, hay, grain, vegetables included; 98 acres along beautiful river; easily worked soil, 50 acres tillable, estimated 1,000 cords wood, apple orchard, other fruit; 2½ miles RR town, cream collected, good 8-room house, water piped to kitchen, pretty river view; main barn, horse barn, other bldgs.; everything sacrificed at \$4,800, only part cash. Details pg. 117 big illus. catalog. Free. Strout Agency, 1105-BC Kresge Bldg., Detroit, Mich.

AN OPPORTUNITY RARELY OFFERED—to secure improved farm homes, 80 acres up, direct from owner, no profits, no commission; in famed dairy section Wisconsin; Bread and butter State Minnesota; Rich prairie soil North Dakota; fertile lands near best markets in Michigan. \$200 to \$1,000 cash. Balance 3½ years at 5%. Write today. Federal Land Bank, St. Paul, Minn., Dept. 33.

STANISLAUS COUNTY, California—where farmers are prosperous. Crops growing all year round. Land priced low. Write free booklet. Dept. 6, Stanislaus County Development Board (County Chamber of Commerce), Modesto, California.

110-ACRE dairy and potato farm for sale on M-44, good buildings. Silo. Glenn Gould, Admstr., Ionia, Mich.

120-ACRE FARM FOR SALE in good shape. Owner, Box 197, Almont, Mich.

WANTED FARMS

WANTED—To hear from owner of farm or unimproved land for sale. O. Hawley, Baldwin, Wis.

FARMS FOR RENT

FOR RENT—Farm large or small. Amos Kimmel, Lake Odessa, Mich.

FARM TO RENT to a reliable party with own help. 127 acre dairy farm near Ann Arbor, 14 cows, 1 bull furnished. Milk goes to Ann Arbor. Rent farm on 50-50 basis. Apply to Chas. McCallan, R. 6, Ann Arbor, Mich. References exchanged.

FOR RENT—Ninety-five acre farm in Jackson Co. Large dairy barn, silo, water system, etc. Will rent for cash or will share receipts. Address F. J. Fuller, 4833 Spokane Ave., Detroit, Mich.

MISCELLANEOUS

FREE DOG BOOK. Polk Miller's famous dog book on diseases of dogs. Instructions on feeding, and breeding with symptom chart. 48 pages. Illustrated. Write for free copy. Polk Miller Products Corp., 1022 W. Broad St., Richmond, Va.

ATTENTION LODGES, CHURCHES—I have 150 double folding chairs, a full line of dishes and 7 10-foot tables. Also lighting fixtures for sale at an attractive price. Call at my expense. Harry C. Robinson, Phone 7, Plymouth, Mich.

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow, \$2.90 for five cows, postpaid. Woodstock Farm, Renton, Route 2, Box 49C, Washington.

125 GOOD WHITE ENVELOPES and 125 full size unruled Letter Heads all neatly printed and prepaid, one dollar. Money back if wanted. Other good printing at low prices. Address: The Braytons, Freeport, Michigan.

A FEW "SUCCESSFUL" DEMONSTRATOR INCUBATORS for quick sale at great reduction. 60 to 300 eggs capacity. Good as new. Des Moines Incubator Co., Box 784, Des Moines, Iowa.

WINDOW CURTAINS—Genuine linen net. Very new, durable, artistic. Will harmonize with any color scheme. \$2.95 per pair. Postage prepaid. L. M. Adix, 2879 Buckingham, Berkeley, Mich.

OUR 1928 CATALOG just from press. 84 pages showing Largest Line of Poultry Supplies in the World. (Over 300 items). Write today for your copy Free. Brower Mfg. Co., C-27, Quincy, Ill.

BIG BARGAIN—Send \$2. receive postpaid 100 double sheets and 100 envelopes. Hammermill Bond, each printed with name, route, post office address. J. W. Barr Printing Co., Charlotte, Mich.

VIRGIN WOOL YARN for sale by manufacturer at bargain. Samples free. H. A. Bartlett, Harmony, Maine.

STEWART-WARNER ALL-ELECTRIC RADIOS. Write for free demonstration in your own home. R. J. McMullen, 8611 Colfax, Detroit.

PURE HONEY—Five lb. pail \$1 postpaid. Homer Buzzard, Fenton, Mich.

QUILT PIECES. Lovely percales, gingham, 3 lbs. \$1.00. Mrs. George Morgan, Vicksburg, Mich.

WANTED

WANTED—Comb Honey in large quantities. Joseph Milnarich, 34 East Charlotte, Ecorse, Mich.

EXCHANGE

SUMMER RESORT TOWN, property, will exchange for farm property in Southern Michigan. Address Owner, Box 134, Michigan Farmer, Detroit.

EDUCATIONAL

BIG PAY JOBS open in auto and tractor work. I'll train you in a few weeks so you can earn \$35.00 to \$75.00 a week to start. Qualify as an expert and make \$100 to \$200 a week or operate your own garage or service station. No books—no printed lessons. Work with real tools and real equipment. Age no barrier. Little schooling needed. Write today for free auto book and remarkable tuition offer, which includes board and railroad fare to Cincinnati or Cleveland. Investigate: this is the opportunity of a lifetime. Write today—a postal will do. McSweeney Auto Schools, 81-BB, McSweeney Building, Cincinnati, Ohio or Cleveland, Ohio.

FARM MACHINERY

HUMMER-SATLEY IMPLEMENTS: Plows, Disc, lever, tandem and tractor harrows. Spreaders, cream separator, cultivator, rotary hoe, etc. Ask for catalogue. Seth S. Bean, Jackson, Mich.

FORDSON CLUTCH THROW-OUT LEVER. \$1.50 prepaid. J. A. Weaver, Sec., Kutler Mfg. Co., Bryan, Ohio.

FOR SALE—Perfection Double unit milking machine; latest type, test cups, all new tubing. Geo. H. Summer, Ashley, Mich.

PET AND LIVE STOCK

REGISTERED FOXES—Write for ranching offer, 100% increase guaranteed. Booklet; terms. Breeder-Agents wanted. Cleary Bros., Empire Bldg., Seattle Washington.

BOYS, start your own business. Chinchilla Rabbits are very profitable, unequalled for fur and table. Pedigreed Chinchillas either sex, twenty dollars delivered, trios, two does one buck, fifty dollars delivered cash with order. Money refunded, less express charges, immediately if rabbits not satisfactory when received. Wm. Reed, Lapeer, Mich.

COLLIE PUPPIES. Exceptionally well-bred, carrying the blood line of America's finest collies. Specially priced. C. M. Bedinger, Berrien Springs, Mich.

RABBITS—Make Big Profits with Chinchilla Rabbits. Real money makers. Write for facts. 892 Conrad's Ranch, Denver, Colorado.

MATTRESSES

MATTRESSES made any size, low factory prices. Catalog free. Peoria Bedding Company, Peoria, Ill.

FRUIT TREES AND NURSERY STOCK

LYMAN'S GRIMM ALFALFA SEED. Buy direct from the introducer. All seed Scarified, necessitating less per acre. Lyman's Best 42c per lb. No. 2 Grimm, a lighter and finer seed, but which gives excellent results, 23c per lb. while it lasts. A. B. Lyman, Introducer, Excelsior, Minnesota.

PEACH TREES, \$5 per 100 and up. Apple Trees, \$7.50 per 100 and up. In large or small lots direct to planters, by freight, parcel post, express. Plums, pears, cherries, grapes, nuts, berries, pecans, vines; ornamental trees, vines and shrubs. Free catalog in colors. Tennessee Nursery Co., Box 125, Cleveland, Tenn.

SEEDS

WOLVERINE OATS absolutely pure, color and germination perfect. Very heavy. One dollar bushel, bags free. Freight prepaid, Michigan, on over twenty bushel orders received before March. Checks cashed early March when seed shipped. Satisfaction guaranteed. A. B. Cook, Owosso, Mich.

REGISTERED AND CERTIFIED SEED CORN—Clement's white cap yellow dent, Picketts yellow dent and Michigan yellow dent (a very early dent). Certified worthy oats, 2-row barley and sweet clover seed. Dept. A, Paul C. Clement, Britton, Michigan.

SCIENCE AND PRACTICE demonstrate Improved American Banner wheat, Wolverine oats, Improved Robust Rye best for Michigan. A. B. Cook, Owosso, Mich.

SWEET CLOVER SEED, white blossom, grown northern Michigan. Re-cleaned, scarified. Sealed bags. Delivered your station \$6.00 bushel. Thos. Buell, Elmira, Mich.

SWEET CLOVER, bushel \$5.40, alfalfa \$15.00, seed corn \$3.50. Write for price list. Felton Seed Co., Sioux City, Iowa.

SEED CORN—Pride of the North, 90 day Yellow corn disease free, seed tests nearly 100%. Marion Day, Georgetown, Ohio.

TOBACCO

HOMESPUN TOBACCO—Ripe, guaranteed. Chewing 5 lbs. \$1.50; 10, \$2.50; 20, \$4.50. Smoking 5 lbs., \$1.25; 10, \$2.00; 20, \$3.50. Farmers Union, Mayfield, Ky.

GUARANTEED HOMESPUN TOBACCO—Chewing, 5 pounds, \$1.25; 10, \$2. Smoking, 10, \$1.50. Pipe Free! Pay postman. United Farmers, Bardwell, Kentucky.

LEAF TOBACCO, good sweet chewing, 5 lbs., \$1.25; 10, \$2.00; smoking, 5 lbs., 90c; 10, \$1.50. United Farmers, Mayfield, Ky.

HOMESPUN TOBACCO: Chewing 5 lbs. \$1. Smoking 5 lbs. 75c. Pay when received. Pipe free. Farmers Union, A5, Paducah, Ky.

POULTRY

PURE-BRED Mammoth White Pekin Ducklings from carefully selected matings. Expertly hatched in our own hatchery from all white eggs. 100% delivery guaranteed. \$30.00 per hundred delivered. 20% with order. Place now. Midwest Duckery, Springfield, Ohio. Box 477F.

WHITTAKER'S MICHIGAN CERTIFIED REDS Both Combs. R. O. P. Trapped. Michigan's greatest color and egg strain. Cockerels, chicks, eggs. Catalog free. Interlakes Farm, Box 9, Lawrence, Mich.

BARRED ROCK COCKERELS. Start the new season right with one of our well-developed exhibition quality cockerels with dark, even, narrow barring. \$5 each, 2 for \$9, 3 for \$12. Ingleside Farm, H. E. Powell & Son, Ionia, Mich.

ROSE COMB RHODE ISLAND REDS—Hogan tested 8 years for high egg production, Tompkins strain. Cockerels \$3 to \$5. Satisfaction guaranteed. Don Bevan, Kankakee, Ill.

8 VARIETIES Record of Performance Male Matings. Breeding cockerels, pullets, and chicks. Free catalog given by early order discounts. Beckman Hatchery, Box 57, Grand Rapids, Mich.

S. C. BROWN AND WHITE LEGHORNS. 332 egg catalog. Harlan Fulton, Gallipolis, Ohio.

STOCK, EGGS, CHIX. All varieties chickens, ducks, geese, turkeys, guineas, bantams. Arthur Jarvis, Waveland, Indiana.

COCKERELS, Holterman strain of Barred Plymouth Rocks, strong, healthy birds. \$4. two for \$7. Mrs. Glenn Arnold, Saranac, Mich.

LARGE TOULOUSE GESE from 30 pound stock, ganders \$8, hens \$5. Satisfaction guaranteed. Don Bevan, Kankakee, Ill.

MALLARD DUCKS, trio \$5, singles \$2. M. R. Hodgdon, Birmingham, Mich.

BABY CHICKS

INSURE YOUR SUCCESS, buy Aseltine Barred Rocks or White Leghorns. Pedigreed males from Dam's laying over 200 eggs head our flocks. Blood tested five consecutive years. Trapping 400 pullets under Record of Performance supervision. Reasonable prices for this quality. Write for circular or visit our fam. Aseltine Poultry Farm, Comstock Park, Mich.

WHITE LEGHORN CHICKS from big white eggs. Shipped anywhere C. O. J. Guaranteed to live. Low prepaid prices. Trapped, pedigreed foundation stock. Egg contest records to 314 eggs. Hundreds of cockerels, pullets, hens. Bargain prices. Big 28th annual catalog free. George B. Ferris, 934 Union, Grand Rapids, Michigan.

BABY CHICKS—Rocks, Reds, and Leghorns. Each week beginning Feb. 13. All stock blood-tested and Michigan Accredited. Pierce Hatchery, Jerome, Mich.

TOWNLINE CHICKS, eggs, breeding stock in four leading varieties have made a record of profit performance for thousands of poultrymen that points the way successward for you. Don't fail to get our New 1928 Catalog. Tells how to raise chicks and why our egg blood lines make profits easy. Copy free. Townline Poultry Farm, Route 1, Box 107, Zeeland, Michigan.

NOW IS THE TIME to find out about quality—plus baby chicks. They are Cert-O-Cult Pure-bred Chicks. Read what prominent poultry men and satisfied customers say about our quality and prices. Illustrated catalog free. Write at once. Windmill Pointe Hatchery, 1318 Alter Road, Detroit.

BABY CHICKS—You can buy your early hatched Michigan Accredited chicks right here at home. First hatch January 15. Also booking orders now for spring delivery at special discount. Send for catalog and prices. Brummer-Fredrickson Poultry Farm, Box 28, Holland, Michigan.

BARRED ROCK CHICKS and Hatching Eggs. Record at Michigan International Egg Laying Contest; winners heavy breeds 1927. Highest Barred Rock pen from Michigan past three years and to date in present contest. F. E. Fogle, Okemos, Michigan.

ACCREDITED WHITE LEGHORN CHICKS. Holly-wood strain. Contest pullets now average 25 ounce eggs per dozen. 1926 contest pen averaged 239 eggs each. Customer's profit \$3.00 per bird. Also Anconas, Rocks, Catalogue. Wyngarden Hatchery, Box 14, Zeeland, Mich.

HELM'S STATE ACCREDITED CHICKS—Culled for heavy winter laying. Barred Rocks, Reds, 13; Leghorns, Anconas, Heavy Assorted, 11; Assorted \$8.75. Free "Poultry Lessons." Illinois Hatchery, Metropolis, Ill.

MICH. CERTIFIED S. C. W. Leghorn Chicks. Why not make an additional income this year with Gibbs' Winter-Lay Strain Leghorns. All Approved R. O. P. males. Our new catalog will tell you all about them. Gibbs Winter-Lay Hatchery, Bronson, Mich., Box B.

BARRED ROCK CHICKS—Incubators now running. Order chicks early. Card's chicks are better chicks. Chicks, eggs, and breeding stock. Flock under State and Federal supervision. Leo. V. Card, Hillsdale, Mich., Phone Cambria 4109.

BARRED ROCK CHICKS soon grow into high price Broilers. Our new booklet on chick brooding will tell you how to raise them. Free for the asking. Chapman Poultry Farm, Box 205, Plainwell, Michigan.

BABY CHICKS—From our extra large type Eng. W. Leg. Heavy producers. Get our circular before ordering elsewhere. Prices low, only \$107.50 per 1,000. A-1 chicks. Model Poultry Farm, Zeeland, R. 4, Michigan.

BROILER CHICKS—Why have empty brooder houses? Make a profit on Pinneroff broilers. Accredited and blood-tested. Incubator now running. Pinneroff Poultry Farm, R. 6, Owosso, Mich. Write for circular.

BETTER BABY CHICKS from State Fair winners. production class. Eighty per cent of our chicks go to old customers. Eleven breeds. Booking orders. Living prices. Write. Litchfield Hatchery, Litchfield, Mich.

MICHIGAN ACCREDITED CHICKS. Barred Rocks, R. I. Reds, Strong, husky chicks. Bred-to-day strains. Special February-March prices \$14.00 per 100. Order now. Howe's Accredited Hatchery, Essexville, Mich.

BABY CHICKS AND EGGS Superior Ringlet Barred Rocks, Rose Comb Reds, Tanager and English White Leghorns. Catalogue. Wyndham's Ideal Poultry Yards, Tiffin, Ohio.

LOOK! 100,000 chicks 9c up, 20 varieties. Using many 200 to 312 egg record bred ROP cockerels. Send for free catalog giving big early order discounts. Lawrence Hatchery, Grand Rapids, Mich.

BABY CHICKS and eggs for hatching from bred to lay Buff Leghorns. Hillcrest Poultry Farm, Bath, Mich.

TURKEYS

WHITE HOLLAND TURKEYS and White Pekin Ducks, pure-bred healthy stock. Addressed stamped envelope for reply. Alden Whitcomb, Byron Center, Mich.

EDGEWOOD GIANT BRONZE—Large hardy Northern turkeys. Sire winner at International, son of 1927 All-American grand champion. Mrs. Edgar Case, Benzonia, Mich.

TURKEYS, all breeds. Strictly pure-bred. Unrelated pairs and trios, reasonable prices. Eastern Ohio Poultry Farm, Beallsville, Ohio.

MAMMOTH Bronze Turkeys. May hatched. Very good ones. Mrs. Eugene Ramsdell, Hanover, Mich.

PURE-BRED BOURBON RED TURKEYS. Maurice A. Rector, Rockford, Mich.

PURE-BRED NARRAGANSETT TURKEYS, not many left. Ernest Clement, Ionia, Mich.

PURE-BRED BOURBON RED TURKEYS, large and vigorous. Archie Ives, Rockford, Mich.

BOURBON RED TURKEYS, Axtell strain. Chas. Beatty, Milford, Mich.

BRONZE TURKEYS and White Guineas. Mrs. M. B. Noble, Saline, Mich.

PURE-BRED BRONZE TURKEYS, \$10 and \$12. M. Love, Bloomington, Mich.

AGENTS WANTED

NEW HOUSEHOLD DEVICE washes—dries windows, sweeps, cleans walls, scrubs, mops. Costs less than brooms. Over half profit. Harpers, 173 Third St., Fairfield, Iowa.

WE START YOU WITHOUT A DOLLAR. Soaps, extracts, perfumes, toilet goods. Experience unnecessary. Carnation Co., 530, St. Louis, Mo.

WE PAY \$100 MONTHLY salary and expenses to introduce guaranteed poultry and stock powders. Bigler Co., J-123, Springfield, Ill.

FARMER REPRESENTATIVES WANTED to sell manure spreaders, pulverizers and wheat drills. Write for particulars to Box 287, Liberty, Indiana.

HELP WANTED

MILK ROUTE SALESMAN WANTED—\$200.00 cash bond required. Steady employment, good wages and chance for advancement. Write for further particulars. Freeman Dairy Company, Flint, Mich.

DRIVER SALESMAN—23 to 35 years age. Permanent employment; good future. Write us if interested. Belle Isle Creamery, 3600 Forest E., Detroit, Mich.

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MARRIED MAN, 36 years old, small family, seeks position on farm, dairy, or general farming. Good references. Address Box 135, Michigan Farmer, Detroit.

A Kalamazoo Direct to YOU Saves You 1/3 to 1/2

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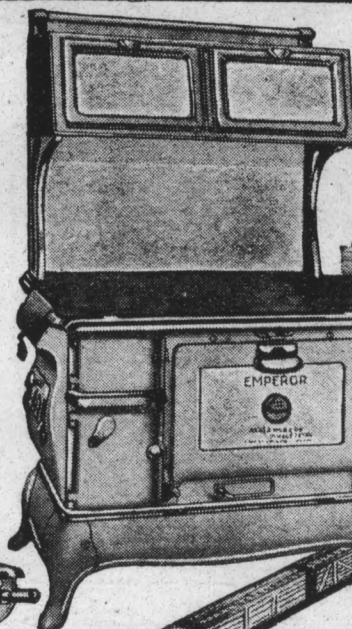
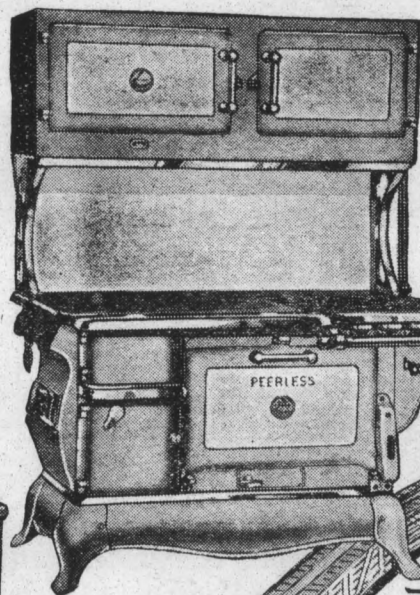
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New Reduced Prices

Yours.....this Free Kalamazoo book of lower prices! New and interesting! Better than ever! Full of surprises! Bigger bargains than in 20 big stores! Savings of 1/3 to 1/2! Don't miss it—mail the coupon **now**.

New Stoves and Furnaces

See page 27—something entirely different—beautiful lustrous, ebony black Porcelain Enamel Ranges at amazingly low prices. Look on page 34—lovely new Combination Gas and Coal Ranges—the latest Bungalow type—smaller in size. And on the furnace pages—a complete new line of furnaces, pipe and pipeless, with sensational improvements. On page 44—the new Kalamazoo Brooder Stoves with 15 great improvements.



Over 200

Styles and Sizes—
the Greatest Display of
Quality Stoves, Ranges
and Furnaces ever made



Prices

Gas Stoves	\$25.80 up
Combination Gas and Coal Ranges	\$59.85 up
Coal and Wood Ranges	\$37.75 up
Heating Stoves	\$24.15 up
Parlor Heaters	\$51.50 up
Oil Stoves	\$17.95 up
Pipeless Furnaces	\$54.95 up

Many new features, new ideas! Porcelain Enamel Coal and Wood Ranges in glistening delft blue and pearl gray! Handsome, rich mahogany Cabinet heaters! New Electric Ranges! Snowy white gas stoves! Oil stoves! Stoves of every style and size—200 of them.

30 Days Free Trial—Cash or Easy Terms
Send for this book now! Everybody is talking about it. Your friends will be telling you about it. Over 1,000,000 people will be reading it. It saves you 1/3 to 1/2. It quotes you lowest factory prices. It explains the famous Kalamazoo 5-year Guarantee. It tells all about Kalamazoo's 30 days FREE trial, 360-day approval test, 24-hour shipments. It quotes you Cash or Easy Terms—many as low as \$3 down, \$3 monthly. It pictures the new Kalamazoo Hot Blast improved firebox—more heat with less fuel, a clean fire without smoke or soot. It illustrates Kalamazoo's FREE furnace plans and FREE service, showing how easy it is to install your own furnace as thousands of Kalamazoo owners have.

Above All Else—Quality

This book proves to you how Kalamazoo gives you better quality at much lower prices by selling direct from our big 13-acre factory to you. There is nothing between you and our factory—nothing but the railroad tracks. Kalamazoo is

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