

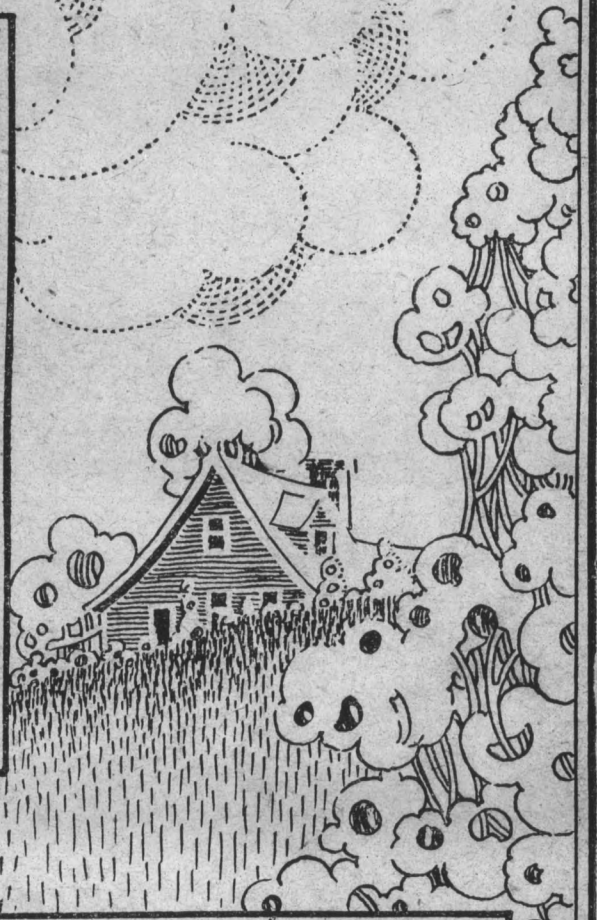
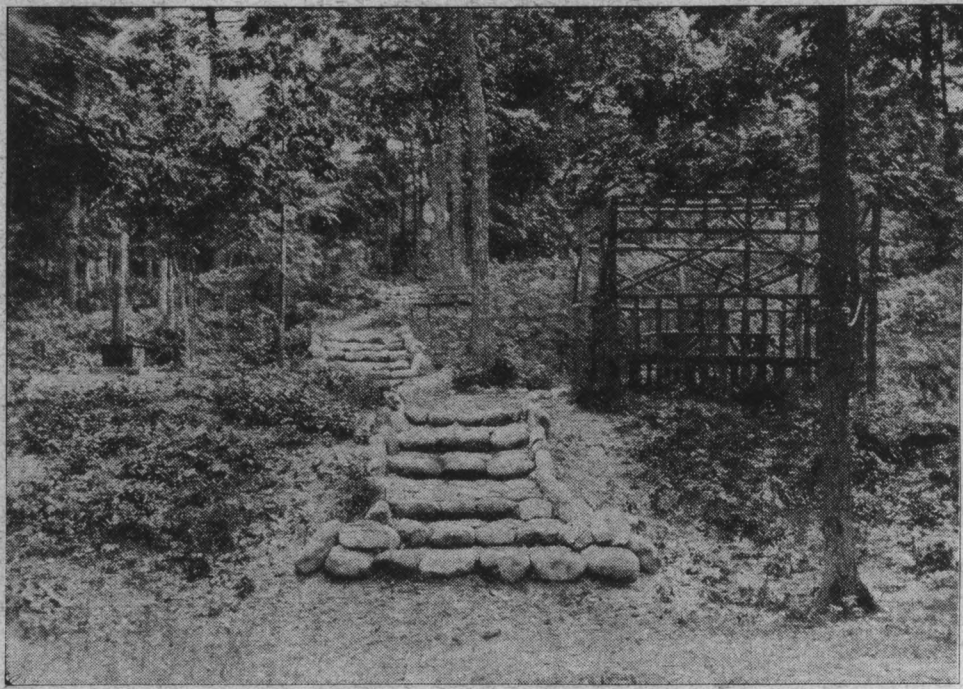
MICHIGAN FARMER

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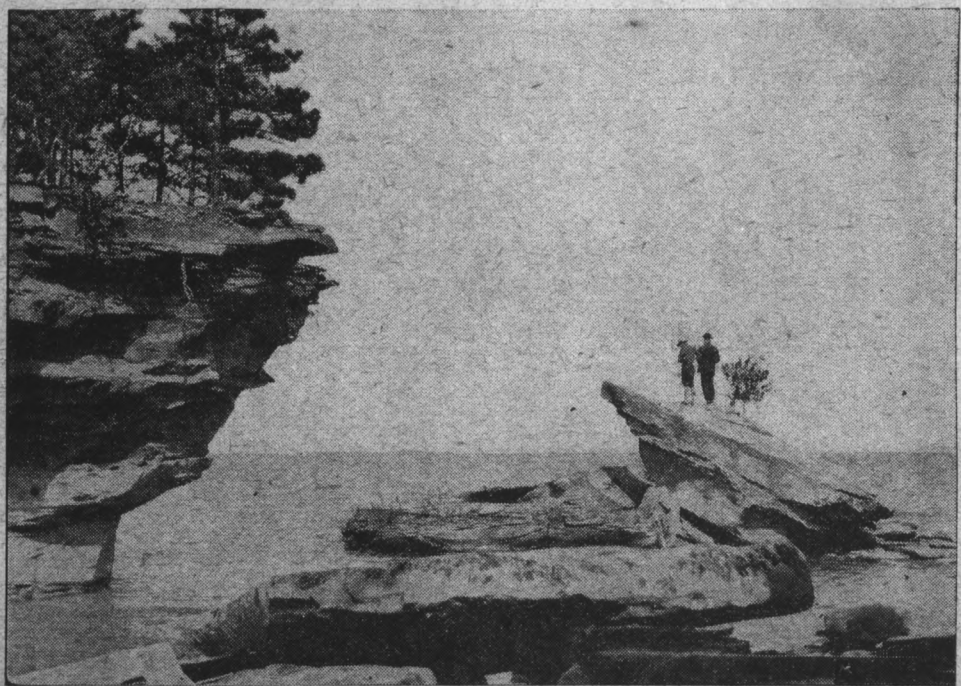
DETROIT, MICH., SATURDAY, MARCH 3, 1928

Whole No. 4802



THE upper picture shows a stone walk through the forest in the P. H. Hoeft State Park which is on the shores of Lake Huron, three and one-half miles north of Rogers City in Presque Isle County. This 310-acre park has a beautiful dense woods and a shore line dotted with miniature sand dunes. It is handy to trunk line U. S. 23.

The lower picture shows the rock formation at Pointe Aux Barques which is right at the tip of the "Thumb." Because of its beauty, this region is rapidly developing as a place for summer recreation. To reach Pointe Aux Barques one can follow a very scenic Lake Huron shore-line drive from the south, called M-29.



FORESTRY BILL

THE McNary-Woodruff bill providing an appropriation for the purchase of lands at the head of navigable streams for reforestation has passed the Senate and is in a fair way to becoming a law. The purpose of the bill is to protect the watersheds of rivers from erosion and therefore secure better flood control.

PROVIDE FOR STANDARD CONTAINERS

THE Perkins-McNary standard container bill establishing standard sizes for baskets and hampers used in the fruit and vegetable trade has been favorably reported out by the Senate committee and is expected to be reported out soon by the House committee to which it was referred. It has the unanimous endorsement of the National Grange, American Farm Bureau Federation, and the National League of Commission Merchants.

News of the Week

Col. Lindbergh with three St. Louis men interested in aviation, made a secret trip to Selfridge Field, Mt. Clemens to discuss private aviation enterprises. Col. Lindbergh wants to retire to private life.

Frank Lockhart wrecked his Stutz Blackhawk racer at Daytona Beach, Florida, when travelling 225 miles an hour. He was attempting to break the world's speed record. His injuries were minor ones.

The farm which L. Duffey, an Indiana state senator, gave to President Coolidge for "an unrendered service to agriculture" is going through mortgage foreclosure proceedings.

Dispatches from Canton, China, say that 1,700 communists, including women, have been executed by the Canton troops after their capture east of the city.

Bert Hinkler, an Australian flyer, flew from London to Australia in fifteen days and thus made five new records as follows: the fastest flight between England and Australia, the longest light plane flight ever made, the longest solo flight ever made, the fastest journey between England and India, and the first non-stop flight between London and Rome.

Harry Brooks flew the Ford silver plane from Detroit to Titusville, Florida, in a 1,000 mile non-stop flight. His destination was Miami but shortage of fuel caused him to land.

Harry F. Sinclair, the oil magnate, was given six months in jail for his part in the Tea Pot Dome oil scandal.

Col. Lindbergh carried over 250,000 pieces of mail when he flew his old air mail route from St. Louis to Chicago.

Of the 2,980 Protestant Episcopal pastors who took part in a nation wide poll on prohibition 1,389 thought dry law a failure and are for modification.

Three hundred Chinese drowned as a Chinese steamer collided with a Japanese boat off of Chian Kiang.

The Interstate Commerce Commission approved the Grand Trunk's right for a belt line around the industrial section of Pontiac. The Pere Marquette's application was refused.

Captain Malcolm Campbell, the British racer, broke the world's speed record in an automobile by driving his racing car an average of 207 miles per hour at Daytona Beach, Florida.

The government has decided that dry raids can be made and liquor violators arrested without search warrants, if the raids are made under the old internal revenue act.

New York city collects taxes on \$16,153,945,949 worth of property, of which over fifteen billion is in real estate.

Miss Fanny Fairbanks, of Luther, Mich., has been unconscious for 46 days from the time she was injured in an automobile accident.

W. W. Potter, state Attorney General, has resigned and was appointed Justice of the Supreme Court. W. M. Brucker was made Attorney General in his place.

Circuit Judge L. H. Fead, who gained prominence as judge of the House of David trial, was recently appointed Justice of the Supreme Court by the Governor to take the vacancy caused by the death of Justice Flannigan.

EXTRA MONEY FOR WIVES



The \$22.56



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WIFE ASKS TO SEE FEED-BILL. STAMMERS HE HASN'T GOT IT YET—THINGS LOOK SUSPICIOUS TO HER



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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 IX

Cows and Spuds Mix Well

Rossman Brothers, Master Farmers, Find Success in the Combination

By I. J. Mathews

EVERY story is a struggle between some human being and his environment. If the person eventually loses out under Nature's handicaps, just another failure is recorded in the eddying sands of time. But if he wins—ah, that's the story—the yarn that inspires others who find themselves hedged in by somewhat similar circumstances.

This story of the Rossman Brothers of the 1927 class of Michigan Master Farmers is the triumph of men over Nature. On sandy untimbered soils, Nature brings to bear the wind, the rain, the frost, and the snow—all tending to still more completely sever it from its plant supporting powers. In this unequal struggle, Nature generally wins and man must move. But this simple narrative records the strategy worked out by three brothers to accomplish the maintenance of such a soil, at the same time forcing from it a livelihood and income sufficient to pay taxes, clothe the children, and keep them in school.

In Montcalm County, Michigan, a sandy soil predominates—a soil so friable that potatoes have an opportunity to expand and grow as big as the moisture and available plant food will let them. In this county, practically one-fourth of Michigan's an-

nual thirty-five million dollar potato crop is grown, hence the potato farmer, here as elsewhere, must give careful attention to the management of such sandy soils. Among those who

typical of a larger area, at the same or a higher level of fertility and production than when they started potato growing.

And they live in good homes. The

barn is across the road from the house.

The cardinal principles of their system are: Dairying and potatoes, conservation of all manure and plant food resources, liming, alfalfa, and sweet clover, and rotation as a means of disease control.

Wherever better potatoes are being shown, grown, or discussed, some one of the Rossman Brothers will be there if it is in a day's driving distance. In fact, I have never been on a potato tour, potato demonstration, nor at a potato show anywhere in reasonable proximity to this farm that one of these brothers was not present. They find this essential to keep their mental batteries charged.

They have been combining potatoes with dairying for the last fourteen years. Previous to that they did not grow potatoes, their father believing that potatoes, like rye, were hard on the soil. The Rossman Brothers recognize flatly that potatoes are hard on the soil, a 200-bushel crop requiring as it does forty-three pounds of nitrogen, seventeen pounds of phosphoric acid, and sixty pounds of potash, but raised intelligently they constitute a reliable cash crop, leave the soil in excellent tilth, and if proper

Continued on page 307



J. Manning



Roy R.



Clare F.

The Rossman Brothers

are working along these lines, none are more successful than the Rossman Brothers—Manning, Roy, and Clare. Their management is such that they have been able to maintain their fields,

houses are in a picturesque setting, all three on the south side of the state highway that runs between Lakeview and Howard City, and from fifteen to twenty rods apart. In each case, a

Beet Labor and High Production

Heavy Tonnage Would Solve the Grower's and Factory's Problem

By C. R. Oviatt

THE sugar industry of Michigan is maintained by three groups who form a production triangle. These groups are the sugar beet growers, the contract beet laborers, and the factory operators. I wish here to present the importance and the influence of contract labor in the production of beets.

"More Tons Per Acre—Greater Profits" is a slogan being pushed in this state—greater profit to the farmer and also to the manufacturer.



One of the most promising opportunities of increasing yields is presented in the matter of the hand labor. A difference in tonnage resulting

from extra good labor or very poor help will sometimes amount to as much as five tons per acre.

High yields of sugar beets during the early history of the industry in Michigan were partially due to the interest and the quality of beet workers. In many cases the farmer and his family assumed the entire care of the crop with very satisfactory results. Many growers are doing the same thing now and there are others who could profitably do so.

However, most farmers must hire the hand labor and the problem at present concerns the best method of handling that labor. Many beet growers have been adopting the idea, of

late, that it is the business of the fieldman to supply, to supervise, and to completely care for this labor. This idea developed from the desire of the fieldmen to give service to the growers, but it has worked to the detriment of everyone concerned. The fieldman could not possibly look after so much detail work and the farmer has suffered by unsupervised, careless, and unfinished work.

I am convinced that the individual farmer should personally supervise this work which will create a more satisfactory relationship between grower and laborer and will be more effective in increased production and profit. The farmer is paid for beets delivered to the company and he must therefore be responsible for the production and delivery of that crop just as any other product on his farm. Every activity of the company must be paid for out of the receipts of the company and hence all expenses in aiding the growers must be considered in setting the price which can be paid for the beets.

The matter of the payment of beet labor is of first importance. In discussing the basis of pay for this labor let us consider what is wanted by the farmer and the manufacturer. The farmer is paid for the total net tonnage of beets which he delivers, therefore, his returns and profit from the crop depends upon the number of tons produced. The manufacturer makes sugar from beets and must have enough beets on which to oper-

ate efficiently. Therefore the companies aim to secure a definite number of tons of beets. It naturally follows that since the profit of both growers and factory operators depends so largely on the tons produced that the labor is paid at a rate of so many dollars per acre. Well, what do you know about that? Paid by the acre! Who wants acres? Is it any wonder that we are changing our type of labor contract in Michigan?

I believe that we should pay our beet laborers on a basis of the tons produced. If we want tonnage we must encourage that idea by interesting the labor in the direct returns from that tonnage. However, the idea of a tonnage base or bonus contract is new to most growers as well as laborers and must be developed slowly and carefully. I favor a gradual development of this idea so as to make it fit into practical application. Production conditions of Michigan vary so much that we may never be able to make a hard and fast rule, but we certainly can try when we know that other states and many individual growers of our own state have made money through this same idea.

We may expect some or all of the following benefits when tonnage becomes the basis of pay: A better class of labor, who want to do good work, but naturally expect more than the average. Inferior and careless workers will be eliminated because of low pay. Farmers who do careful work will find it easier to get good fam-

ilies. Careless farmers will be forced to do better work (to their profit) in order to get help. Laborers will work under adverse weather conditions. Better stands of beets will be saved with the resulting heavier yields. Large, sturdy plants will be selected even if it is more difficult, which means so much to yields. Weeds will be removed in time and thoroughly. Labor will be willing to wait until the crop is mature before harvesting. Fewer beets will be left in the fields and better topping, piling and covering will result. There should be less danger of families leaving a crop in the ground for the labor check will consider the completed harvest. Growers who normally produce high yields will have even more tons to cash.

Or, summarized, labor will make their maximum contribution to production and profit.

Many of the beet growers of Michigan may be forced to make individual bonus contracts or agreements with their laborers for this present season. I hope that many producers will try out this scheme for I am satisfied that it will result to their profit.

There appears to be plenty of labor in sight for 1928 so here is an opportunity for beet growers to attack their labor problem with better chances for success.

But labor must become financially interested in heavy yields for the most profit to the sugar production triangle. "More Tons Per Acre—Greater Profits" must mean not only more profit to the grower and manufacturer, but also to the labor contributing to that larger tonnage.

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VOLUME CLXX NUMBER NINE

DETROIT, MAR. 3, 1928

CURRENT COMMENT

This May be the Time

SOME one has observed that the best time to buy is when other persons are anxious to sell, and the best time to sell is when others want to buy. In other words great success does not come to those who are following the crowd. It comes rather to those who lead. And those who lead, generally, are those who do independent thinking and acting.

Along this line a recent report of the fifty-two land grant colleges in America is interesting and ought to be suggestive to parents. One-fifth of all the resident students in the country are attending these institutions, 97,881 undergraduate men and 44,898 undergraduate women. Of the men but 12,957 or about thirteen per cent are taking agricultural courses while seventeen per cent of the women students are devoting their attention to home economics.

By reason of the fact that relatively so few are studying for agricultural careers, would not the observance of the above rule suggest the advantage that might accrue to students who now specialize in agriculture?

Michigan Seed Did it

JUST a few days ago a little banquet was held at Ohio University in honor of the four-hundred bushel potato club of that state. Five men were honored and four of them are known to have purchased their seed from northern Michigan farmers who make it a business to produce certified seed potatoes. This result is also in accord with experiences in Pennsylvania where the four-hundred bushel club has one hundred and eighty-four members, the majority of whom use Michigan seed.

The men who grow this good seed

are to be congratulated and commended. They are a direct asset to the state. Every means should be used to encourage them. Every person, organization, and institution in the state should lend every possible cooperation to quality farming of this sort. It is only here and there that a group of farmers can be induced to prepare themselves and their farms for the production of a superior product. Michigan people should zealously protect and encourage such skill and practical leadership.

The Poultry Situation

THERE is probably no line of agricultural industry that has had a more rapid development than poultry raising. In Michigan alone we have seen it grow tremendously.

It was only a few years back that our college and experiment station included its poultry activities with the live stock departmental work. It was then thought that poultry was just a side line—woman's work—perfectly alright for a little pin money, but it would never grow into a stable business. But since then, it has shot ahead of many of the so-called man's major farm activities in producing an income to help make farm life worth living.

The present poultry department at the college is personalled by men who have reputations for their practical and scientific knowledge of their subject. But they are so handicapped that the scope of their work is limited.

The rapid changes in poultry culture has brought to light many troublesome diseases which are taking toll of thousands of dollars from the poultry flocks of the state. There is no provision made by the college for the study of poultry diseases. One prominent poultry man recently said, "Each year heavy losses are being caused by bronchitis, roup, chicken pox, and other diseases, and for all such matters we have to go out of the state for advice."

This poultryman said further: "There is no hope for improved conditions until we can convince those who control the college finances that poultry is one of the leading agricultural interests of the state and that there are losses, immense losses, from diseases which proper research work should make curable or preventable."

The "we" referred to by this poultryman are the poultry raisers of the state. Everyone interested in poultry should let the college authorities know of the problems they have to meet and impress upon them the need of some real work on the part of the college to place the Michigan hen, one of our most valuable agricultural assets, on an equitable basis with other important college farm activities.

The Path is Open

FOLKS who desire a higher education and have been denied the opportunity to go to college, can find encouragement in a rather startling new departure from the usual course of study at Harvard College. Announcement of the plan has had reasonable publicity in education circles but its significance to people in general can hardly be over-emphasized. In six of the non-scientific departments of this college, a plan has been adopted which calls for a cessation of classes for two and a half weeks preceding the mid-year examinations and three and a half weeks preceding the final examinations, this time to be devoted to reading, either assigned or optional, at the discretion of the instructor.

This reading period plan emphasizes a great fact: that there is an open path to education by purposeful reading. Given all the facilities and equipment of a great college, leading

educators have recognized the fact that there can be no worthy degree of achievement in education without reading.

It is gratifying to know that we are never too old to acquire an education for there is no saturation point in the mind of man. The adoption of such a reading plan by one of our leading colleges should be of especial interest to rural people. The quiet of long winter evenings on the farm affords a splendid opportunity for rural folks to cultivate an intelligent reading habit. If the reading material you want is not available through your local library, we will be glad to help you in obtaining it.

A Little More Lime

FARMERS are becoming familiar with the need of lime on many soils. As yet but a small per cent practice what they know. There is real need, however, for every parent, in particular, to become familiar with a simple fact about this element in the human economy.

Live stock breeders for a long time have observed the advantage of limestone soils as a location for raising the best type of stock. Wherever the crops can reach down and secure an abundance of lime on which to grow, there rugged animals can be developed.

Now, some enterprising individual has advanced another reasonable thought. He has made an examination of the lives of the men listed in "Who's Who." What does he find? Over eighty per cent of these men were raised in homes located in limestone territory. These men had the proper stuff built in their bodies and minds. The food from the plants grown on these soils, the animal products used, all had the needed lime.

There are so many people around that all cannot occupy limestone land. But, the crops and the live stock on the farms of this state can be supplied with an adequate supply of this material. Not for better crops, or more efficient feeding do we make the final appeal for lime; but for the making of better and more able men. That is the supreme need.

Farms Begin to Move

THE reports of the presidents of the twelve federal land banks covering the United States show a tendency upward in the demand for farm loans. Prices also tend to advance. There is also further evidence of renewed interest in farming in the official data supplied by the Department of Farms and Markets of New York State which shows that during the twelve months ending February 1, 1928, the farm population of that commonwealth increased 12,000 in round numbers. Many young men who during recent years were tempted to leave the farm are now going back with renewed determination to make it pay. The land banks are finding it increasingly easy to sell farms which came to them in recent years through default of payment on loans. We hope these reports are all true and that improved returns from farms justify this change in sentiment.

Dairy Cow Held Highly

AN inspection of old records show the regard of the ancient Hollanders for the dairy cow. On the ground rescued from the sea by those sturdy men were to be found the finest pastures in the world. On these pastures grazed oxen that weighed more than a ton each and cows that produced two and three calves, says these early chronologists. The hides of the Dutch oxen were used to pay tribute to the Caesars. The Hollanders also early under-

stood the value of milk in sustaining life. Their government did not permit the Friesians to kill a cow, even for food. The penalty for doing so was made to fit the crime, "the killer of the cow must stay in penitence—sleeping in the stable following the cows."

Milk has a larger place in American economy. Its extended use would insure added health and energy to the people of the states. Folks using an abundance of milk from cows properly fed are bound to be more efficient. Our liking for milk products should become as deep-seated as the centuries have established it in Holland.

Memorandum

MR. WEBSTER says a memorandum is a note to help the memory. Well, that is what Sofie gives to me when I go to town and then she ties a string on my finger so I don't forget the memorandum I got in my pocket.

You know, memorandum kin have most everything on it. Fer, inst., ours is often got groceries, needles, sausage, bacon, bones fer the dog, feed fer the chickens, stockings fer Sarie, pants fer Sammie, and panties fer Sofie, and etc. and etc. Well, fer me there ain't nothin' I like to do more embarrassingly than buyin' panties fer Sofie. I just kinda hate to talk about bloomers to them nice lookin' girl clerks, and etc. and etc. But they don't seem to think nothin' about it 'cause they hold them right up in front



of me, and once one of them says "that's the kind I wear." So I guess they must of been O. K. 'cause she looked like a respectable girl.

Now when the memorandum is got that subject on it, I don't forget it, but when its got just groceries and etc., why I just get talkin' to Sam Smith about the war in the Peace Conference and I just plumb ferget all about the memorandum.

You ever notice that word memorandum? Well, its taken from memory and dumb. It means that people what's got dumb memories is got to have something to perk them up. Some folks like me is so forgetful they need more than one memorandum and Mr. Webster says more'n one is memoranda. Well, I took some of them memoranda along oncet when no bloomers was on and when I got to town I went to the store and says "I need some soap," and that's as far as I could get. So I was tryin' the hardest to think and all I was sayin' "soap anda, soap anda," and a etc. Well, when I was drivin' home I stuck my hands in my pockets and found them memoranda. You kin see where the anda comes in memoranda, don't you?

But, there's somethings a fellow don't need no andas or andums fer. Fer inst., I kin never ferget the first kiss I ever got from Sofie. And I kin never ferget the short course in honor and responsibility my father gave me in the barn after he caught me stealin' sugar from the pantry. Sugar was sugar them days. We had it only on Sundays and when we had company, and Sundays and company didn't come often enough fer me.

Well—anda, anda, I guess this is a good place to stop so that's just what I'm goin' to do.

HY SYCKLE, Memorandist.

The U. S. Department of Agriculture advocates the iris for home flower gardens, as it is resistant to disease and insects, and because some kind of iris can be found to suit almost any soil and climate in this country.

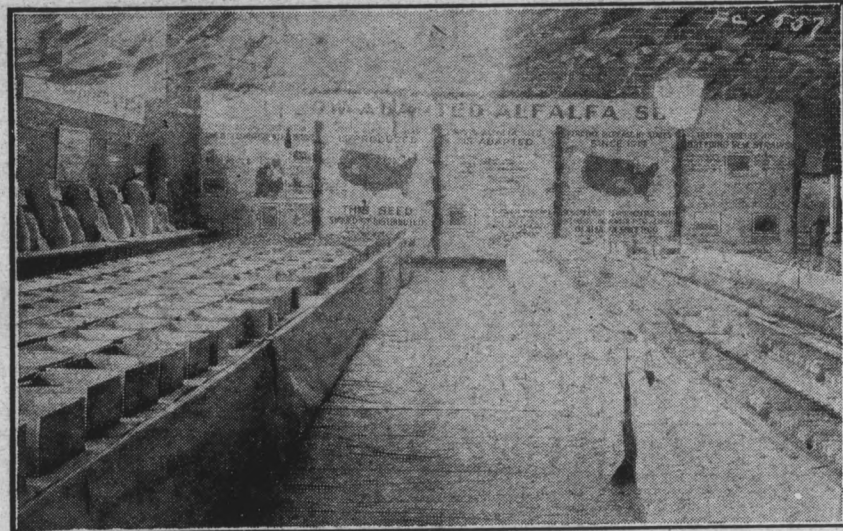
Clement Wins Corn Contest

Master Farmer Takes State Honors for Second Time

By R. H. Morrish

PAUL C. CLEMENT of Monroe County, a member of the 1926 class of Master Farmers, is the 1927 champion corn grower of Michigan. This is the second consecutive year that Mr. Clement has been awarded this honor, as he was also high man in 1926. This announcement is made as the result of Mr. Clement's winning the 1927 Five-Acre Corn Growing Contest, a project which is sponsored by the Farm Crops Department of the Michigan State College and the Michigan Crop Improvement Association. Mr. Clement is one of the state's out-

standing producers of corn and has made a specialty in the growing of Clement's White Cap Corn as a seed crop on an extensive scale.



A Good View of the Corn Contest Section of the Grain Show at the M. S. C. Armory during Farmers' Week

standing producers of corn and has made a specialty in the growing of Clement's White Cap Corn as a seed crop on an extensive scale.

The large yield of one hundred seven bushels of shelled corn per acre, obtained by Mr. Clement, is a great achievement for a Michigan farmer. In the past five years, the one hundred bushel mark has been reached only four times by growers in the corn contest. The yield obtained represents the number of bushels of shelled corn at fifty-six pounds per bushel, on a basis of fourteen per cent moisture content. This yield should not be confused with the measurement in baskets or bushels of ears, from which the majority of farmers reckon their corn yields.

In 1927, there were twenty-nine growers who completed the work in the Corn Growing Contest, as compared to eighteen in 1926. The average field of corn obtained by these men was approximately sixty-six bushels per acre, as compared to the average yield of twenty-nine bushels for the entire state in 1927.

On December 1st, 1927, the price of corn was ninety-eight cents per bushel, which was an appreciative increase over seventy-three cents, the price in 1926.

At ninety-eight cents per bushel, Mr. Clement's corn crop was worth \$105.17 per acre. From this figure was subtracted \$15.18, representing the actual cost per acre of producing the crop, with the exception of the taxes, harvesting operations, overhead expense, and marketing. These costs, although they are a part of the actual cost of production, are not taken into consideration in calculating the results in this state.

Each farmer in the contest is required to keep accurate records of all labor, seed, fertilizer, material, and time employed in the growing of the crop.

Mr. Clement, having the greatest margin above cultural costs, \$89.99, was awarded the sweepstakes prize of eighty steel fence posts, donated by the Red Top Steel Post Company of Chicago and eighty rods of steel fence

donated by the Keystone Steel and Wire Company.

In 1927, the state was divided into three regions or sections in order to encourage more interest and to give the farmers up state a better chance to win some of the awards. The winners in each region are as follows, the prizes for each region being the same.

Region I—Southern Three Tiers of Counties

1st—Paul C. Clement, Britton: One ton of twenty per cent acid phosphate, donated by State Farm Bureau.

2nd—Roscoe Masters, Britton: One-half bushel of Hardigan Alfalfa Seed,

donated by State Farm Bureau.
3rd—Otto Wegner, Riga: Fifty pounds of binder twine, donated by Michigan Industries, Inc.

Region II—Next Two Tiers of Counties

1st—Fritz Mantey, Fairgrove: One ton twenty per cent acid phosphate.
2nd—P. P. Ferden and Son, Chesaning: One-half bushel of Hardigan Alfalfa Seed.

3rd—Max Dresbach, St. Louis: Fifty pounds of binder twine.

Region III—Remainder of the State
1st—George Rae, Bay City: One ton twenty per cent acid phosphate.
2nd—Burdette Crandall, Bellaire: Fifty pounds of binder twine.

Mr. Roscoe Masters, the winner of second award in Region One, is a new contestant. He obtained a yield of ninety-nine bushels per acre from the Clarage variety of corn. This variety was developed in Ohio and is the one grown by the champion corn grower of that state. George Brablec of Britton also grew this variety, obtaining a yield of seventy-eight bushels per acre.

Mr. Otto Wegner, the winner of third award in Region One, has been a consistent winner in the contest. In 1924, he won first prize and has been awarded a prize four of the five years that he has been a contestant.

The Michigan Improvement Association awards a gold medal to each grower having a yield of one hundred bushels or over per acre, a silver one to those having eighty-five bushels or over and a bronze one to those obtaining seventy-five or over. The medal winners and their yields are as follows:

Gold
Paul C. Clement Britton, 107 bu.

Silver
Roscoe Masters, Waldron, 99 bu.

Otto Wegner, Riga, 93 bu.

George Bruce, Britton, 86 bu.

Ford Lownsbury, Britton, 86 bu.

Arthur Lutz, Saline, 86 bu.

Ernest Gilbert, Waldron, 85 bu.

Bronze
D. E. Harvey and Sons, Jones, 80 bu.

Earle King, Palmyra, 78 bu.

George Brablec, Britton, 78 bu.

Harold Spink, Mason, 75 bu.

Fritz Mantey, Fairgrove, 75 bu.

This year, as in the past, with slight variations, the growers finished in the same order on basis of profit per acre as they did on the basis of yield per acre.

(Continued on page 298)



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

If you lived in Akron

Even if you lived in Akron, the world's rubber center, you could buy no better tires than you can right in your home town.

For the Goodyear dealer in your town sells the world's finest tires—and sells them at prices that you can afford.

When you buy from him, he recommends the right size and type of tire for your car, mounts it on the rim for you, and fills it with air.

All during the long lifetime of that tire he helps you give it the care and attention it should have to deliver you maximum results.

Thousands of motorists like you have proved by experience that the combination of Goodyear quality and Goodyear Dealer Service is the cheapest in the end.

You enjoy the benefits of dependable and trouble-free performance and of helpful local service, and you save money while you are doing it.

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 thoroughly dependable but lower-priced Goodyear Pathfinder

The Greatest Name in Rubber



Saving a Million-a-Day--and More

WE are saving one million dollars a day, 365 millions of dollars a year, in interest payments on the national debt by reducing the debt. And this annual saving, once made, goes on reducing taxes forever at this rate for as long as there shall be a national debt!

No ordinary exclamation point is big enough to emphasize so momentous a fact.

The President of the United States recently observed the seventh anniversary of the budget by delivering a speech commending it to twenty-two millions of radio listeners. And the budget's achievements for the seven years are entirely worthy of this attention, for this wonderful instrument in time to come may accomplish more for the people and the country than any other national policy.

If there is any more effective way of making a tax-dollar do 100 cents worth of work I do not know it. The budget system which has made this tremendous and perpetual reduction of taxes possible, is also a tax-reducing and tax-controlling system fully as effective in restraining expenditures—in keeping the expenses of government

well within income—thereby preventing incurring more debt or the wasting of revenue.

In this way a good deal more than that million dollars a day is being saved to American taxpayers by the national budget system.

Not even little things are overlooked by the Federal budget and its director, General Lord. A cent a yard on three million yards of canvas was saved last year by eliminating the unnecessary blue stripe from mail sacks. A saving of \$3,280 was made through buying paper clips at wholesale. The total saving for the year in small items like these was nineteen million dollars.

This is running government like a business, and this is and has been one of the great objectives of such executives as President Coolidge and Secretary Hoover.

More than seventeen billions of dollars in interest and principal has been paid by the national government since 1917. Virtually every cent of it has come out of the pockets of the American people with much more besides for local taxes, which absorb an even greater sum than Federal taxes.

This is what makes the budget idea such a big thing. Through its constant application we can foresee the time when from top to bottom, from school district and state house to national capital, the government of this country will be operated as a big business is operated, for that is what it is—it is our biggest business. The national budget has set the example and cut the pattern for operating it efficiently, an example which states and cities are following and counties and school districts soon will follow.

The budget system affords a constant and a national example of "constructive economy" and thrift, to use the President's words. For it is only through the wise expenditure of income that states and families can make material progress, and it is only by such non-wasteful expenditure, and the constructive economy of money well spent, that we shall finally cut out all duplication in public business and shall at last control the ever-rising flood of taxes and give the taxpayer the full 100 cents worth of benefit and service to which he is entitled.

For this purpose nothing better than

the budget system under an earnest, faithful and capable budget director, has yet been devised. Every year, too, it is going to bring to the attention of this progressive people that more than eighty-two per cent of all national revenues are absorbed by wars of the past, by obligations to the fighting men who survived them, by further obligations to their families, and by military preparedness for wars to come, if world peace fails.

That huge annual war tax of eighty-two per cent a year on a peaceful nation is, I believe, going to prove a potent and a persuasive argument for peace to a people like ours whose deep vein of idealism is balanced by as large an amount of practical and intelligent common sense.

What this nation has done in the last few years to establish itself in a prosperous condition and on an enviable financial basis would have been impossible without the budget, its able director, General Lord, and Pres. Coolidge's insistence on economy.

Arthur Capper
Washington, D. C.

A Blow to Thieves and Trespassers

Attorney General Supports Protective Service

By Earl A. Shearer

Manager Protective Service

THE Michigan Farmer Protective Service has the backing of the highest law enforcement authority in the state, for the Attorney General has enlisted with the sheriffs, prosecuting attorneys, and Michigan Farmer Protective Service in helping the farm folk with their war against thieves and trespassers.

In extending his cooperation Hon. William W. Potter, until recently Attorney General, but now a member of the State Supreme Court, not only gives his whole-hearted support, but assures us that the Michigan State Police will gladly lend a hand to suppress these raids on farm property. What finer support could one have than the full cooperation of every law enforcement agency—Sheriff, Prosecuting Attorney, Attorney General, and, last but not least, the State Police. We are certain that it will only be necessary to call on the law enforcement agency of borough and cities for their support, as that has been the experience of the Protective Service enterprises in other states.

Those who have been making their living stealing from the property of hard working farm folks are going to learn soon that they are up against a tough combination. Trespassers who have seen fit to enter the premises without the consent of owner are going to learn that the property rights of a farmer are as much to be considered as the property right of urban or city land owners.

Every member of the Michigan Farmer Protective Service who has a farm property protective sign posted can know they have unlimited backing in our law enforcement machinery in fighting crooks and thieves. Here is what the Attorney General says in a letter he wrote us on January 28th. "I think the work being done by farm organizations in organizing the Michigan Farmer Protective Service will undoubtedly bring good results. With good roads and high powered automobiles there are a large number of people in the cities who make it a business to go out and pick up whatever fruit, poultry, and live stock they may desire among the farmers. As a matter of fact, they are able to do this, travel long distances, and get away with it without being detected. An active farm organization, such as

yours, would do much toward stopping thieves.

I am sure this department as well as the State Police Department would be very glad to cooperate in suppressing these raids on farm property." (Signed) William W. Potter, Attorney General.

This show of cooperation should be appreciated by every citizen of Michigan whether they are members of Michigan Farmer Protective Service

or not, and we assure the Attorney General that we as sponsors of this movement are extremely grateful to him.

Needs Cooperation of Citizens

Here is a letter from a judge of the circuit court of a western Michigan county. He says in part, "My experience in the enforcement of the law has taught me that the most efficient method is swift and sure punishment resulting in committal to penal insti-

tutions for the full time limit. It might appear to the average person that this could be brought about very easily, but it is not often so. I have become convinced there is a great need for a law enforcement agency not now provided by our status. In my opinion an agency such as the Michigan Farmer Protective Service fills that need.


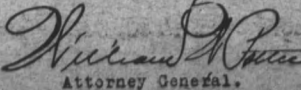
"Even after one who commits a crime has been apprehended, it is oftentimes a stupendous task to prove the person guilty no matter how strong the evidence might be. It is necessary to have those who are interested, and when I say those I mean the people who are subjected to these crooks and rascals, aid in developing facts and producing evidence that can be supported by sworn oath on the witness stand.

"Many cases have been thrown out of courts and the culprits gone free to continue their nocturnal raids because those who should have been interested in their prosecution and conviction refused to press the cases because of fear of future consequences or because of their desire to shield the family name of the accused.

"These fine feelings should be laid aside and the law be given full support in furnishing all evidence possible. No one should feel it their duty to withhold evidence that would put a parasite of society where he belongs. I trust that your new service will be instrumental in bringing about the full support of the farm folks to their duty to the court along the lines just mentioned."

We know that there is truth in this statement and that is one reason why we have posted three thousand dollars to be paid in rewards of fifty dollars each to persons furnishing information to peace officers leading to the arrest and penal sentence in cases of theft and trespassing.

This judge has said in his letter, "My experience has taught me that the most efficient method of law enforcement is swift and sure punishment." "Swift and sure," that is the kind of medicine that is going to take care of this thieving and trespassing situation. The Michigan Farmer Protective Service is going to pay fifty dollars for each dose given to thieves (Continued to page 315)

 WILLIAM W. POTTER ATTORNEY GENERAL EMERSON S. BOYLES DEPUTY	STATE OF MICHIGAN ATTORNEY GENERAL'S DEPARTMENT LANSING January 28th 1928	ASSISTANT ATTORNEYS GENERAL LINCOLN E. BRADY WILHELM M. BRUCKER RIT F. CLARKE HARRY H. DEVO PAUL S. EBER WILLIAM J. GALBRAITH HAROLD GOODMAN HENRY J. HOBBS RALPH E. HUGHES ARTHUR E. KROGER E. M. LAMBETH HARRY A. METCALF HAROLD J. WAPLES
Michigan Farmer, 1632 Lafayette Blvd., Detroit, Michigan. Att'n. E. A. Shearer		
My dear sir: This will acknowledge the receipt of your letter of January 27th. I think the work being done by the farm organizations in organizing the Michigan Farmer Protective Service will undoubtedly bring good results. With good roads and high-powered automobiles there are a large number of people in the cities who make it a business to go out and pick up whatever fruit, poultry and livestock they may desire among the farmers and as a matter of fact they are able to do this, travel long distances and get away with it without being detected. An active farmers organization would do very much toward stopping thieves. I am sure that this department as well as the state police department would be very glad to cooperate in suppressing these raids on farm property.		
Very truly yours,  Attorney General.		
WWP:LK		



Wise buying is the best saving

THE successful people of the world are those who buy shrewdly, who make their dollars go farther, and who have money left after wise buying has satisfied their needs.

Among our thousands of customers we are proud to number many of the nation's most careful buyers. These experienced men and women have compared prices. They have studied quality. They know values. They continue to send their orders to Montgomery Ward & Co. because there they find the values they demand.

That such buyers are satisfied is no accident. It is a rule of Montgomery Ward that every customer is to be satisfied. All merchandise is guaranteed. You buy in confidence. We respect your confidence. This has been our method for 56 years. Use this book of bargains for all your needs.

ESTABLISHED 1872
Montgomery Ward & Co.

Chicago Kansas City St. Paul Baltimore Portland, Ore. Oakland, Calif. Fort Worth

Some suggestions from the thousands of bargains in Montgomery Ward's New Spring Catalogue



Cord and Balloon Tires
\$4.45 to \$24.45

All Riverside tires are full size, made of new live rubber and guaranteed for 12,000 miles. You save \$5 to \$15 on every one of our Riverside tires.

Cream Separators
\$19.95 to \$81.55

Our separators are made in our own factory. They are mechanically perfect. Separators are sold for cash or on easy terms.



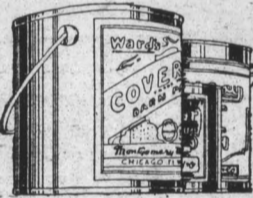
Team Harness
\$39.95 to \$75.95

We use only select bark tanned steer hide in our harness. We specialize in metal to metal harness. Sold on easy terms.

Reed and Fibre Sets
\$28.95 to \$68.95



Our reed and fibre sets are of newest designs and are finely upholstered.



House and Barn Paint

All of our housepaint is sold under a positive guarantee. If it should fail to stand up we will supply new paint free and pay for putting it on.

Radio Broadcast

Listen to the RIVERSIDE Trail Blazers
Every Monday night from stations

WJZ	WHAM	WLW	WHAS
WBAL	KDKA	WBT	WMC
WBZA	KYW	WSB	KVOO
WBZ	WRHN	WREN	WBAP
	WJR	KWK	

at 8 P.M. Central Standard Time—at 9 P.M. Eastern Standard Time

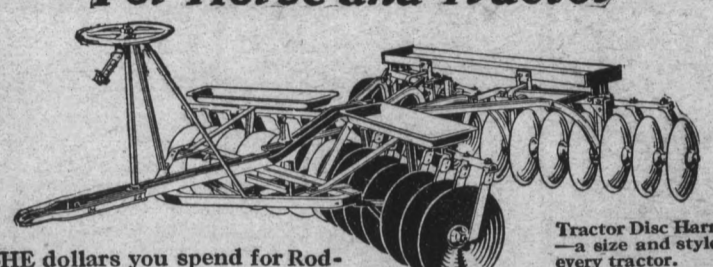


Roderick Lean

REG. U.S. PAT. OFF.

TILLAGE IMPLEMENTS

For Horse and Tractor



Tractor Disc Harrows
—a size and style for every tractor.

THE dollars you spend for Roderick Lean Harrows buy more in quality—more in long life, more thorough work, more convenience of operation, than any dollars you can ever spend for ordinary harrows.


60 years spent in specializing in harrow making are your guarantee that Roderick Lean Harrows are better than the average—not "just harrows."

And they cost you no more than ordinary harrows. The entire output of our huge factory is confined to harrow and cultivator manufacture—thus costs are lower—quality higher.

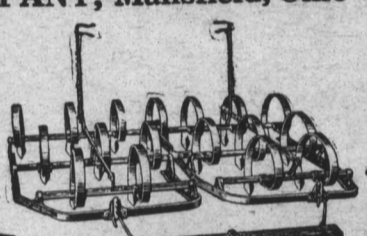
Why not get the most for the money you spend? Insist that your implement dealer give you information on Roderick Lean Harrows. If he cannot, write us.

Fordson Owners: See your Fordson dealer about the Roderick Lean Disc, Spike and Spring Tooth Harrows, built especially for the Fordson.

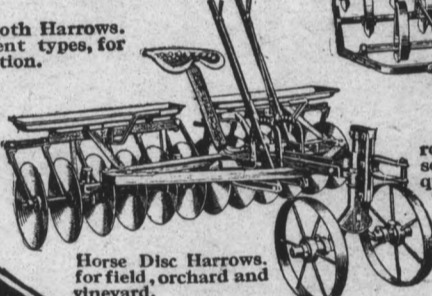
The RODERICK LEAN COMPANY, Mansfield, Ohio



Spike Tooth Harrows.
Ten different types, for every condition.



Spring Tooth Harrows. Eight kinds. Also special alfalfa and quack grass harrows.



Horse Disc Harrows.
for field, orchard and vineyard.

THE HANDY MAN'S CORNER

LOOSENS LIME WITH VINEGAR

WE have had trouble with lime collecting on the sink and toilet, and have learned that strong vinegar will loosen the lime deposit in an hour or two. I put cloths soaked in vinegar in the sink or toilet over the deposits, renewing them often. Then I brush and flush. This takes the brown crust off. After the treatment the sink or toilet will look like new. If you give it one trial I think you will not have to call a plumber. We have taken the Michigan Farmer for forty-five years and it has been very helpful to us.—Mrs. R. Yokom.

ally come on, it is probably that the poor circulation is due to the collection of lime in the water front or in the pipe leading from it to the range boiler, or else to the collection of sediment in the bottom of your range boiler.

First open the cock or drain on the pipe coming out of the bottom of the tank or range boiler and see if you can get any mud or sludge. If this does not do any good, the water front will have to be taken out and cleaned with a mixture of one part commercial hydrochloric acid to three or four parts water, filling it up and letting it stand overnight. The pipe also will probably have to be cleaned in the same way, or better replaced with a new piece. It would probably be better to turn the cleaning job over to a good plumber. It ought to be done at once, as it might shut the water off entirely and cause considerable damage.—D.

A-TYPE HOG HOUSES SAVE PIGS

SWINE authorities recommend the small A-type hog house for saving pigs. The low roof reduces air space and holds the warm air down close to the pigs. The ventilators when properly constructed furnish the right amount of ventilation. The slope of the roof prevents the sow from lying on the pigs. The high door in the front permits the sunshine to strike every part of the house floor and also provides good ventilation in summer time. And most important, the house is light and can be moved to clean ground each year.

CLEMENT WINS CORN CONTEST

(Continued from page 295)
acre. All of the cultural practices that bring about high yields were found to be profitable.

Legumes—especially sweet clover—in the rotation were important to the winners in the contest this year. In 1926, three high men plowed down alfalfa sod for their cornfield. This year, in Region One, the three men having the highest yield plowed down sweet clover, as did many of the other contestants. It is of interest to note also that only one grower of the twenty-nine did not apply either manure or commercial fertilizer or both on his corn ground. Fifteen different grades of analysis of fertilizer were used by this year's contestants, twenty per cent acid phosphate being the most commonly used. In plowing operations, fifteen of the growers made use of tractors, ranging from 8-16 to 15-30 in horse power rating.

Several varieties and strains of corn showed up exceptionally well this year. Mr. Clement, Mr. Wegner, D. E. Harvey and Sons, and Mr. Kimmel of Ypsilanti planted Clement's White Cap Corn, a strain developed by Mr. Clement. Mr. Gilbert of Waldron also planted a variety of his own, as did Mr. Ferden of Chesaning. The Clarage, Duncan, Silver King and Murdock also showed their relative merits in various localities.

The well-known Pickett variety was grown by three farmers and its earliness proved advantageous. Two of these growers produced over seventy-five bushels per acre. Polar Dent, the new strain bred at the Michigan State College in the hope of securing frost resistance, was grown by two contestants.

In the second and third regions, Golden Glow seemed to be the favorite, six of the growers in these regions growing this variety with very good results. Two of the men in this section planted M. A. C. Yellow Dent and one of these obtained a yield of seventy-three bushels per acre.

In the five years the contest has been conducted, Mr. Clement is the only grower who has the distinction of winning the corn growing championship twice. In 1928, the Five-Acre Corn Growing Contest will again be conducted in Michigan. There will be three regions or districts, with liberal awards or prizes for each region.

The results of this contest not only demonstrate the better cultural methods and the use of sound business policies in farming, but also the value of good seed, legumes, and fertilizers in the growing of better corn crops.

GOOD GLASS SUBSTITUTES HELP

MORE of the valuable rays of the sun—those which prevent leg weakness in chicks—will pass through some of the good glass substitutes on the market than will pass through common window glass. This is the finding of poultrymen at Iowa State College, in extensive experiments which they have conducted recently.

Sunlight through five glass substitutes was compared with that through common window glass and with direct sunlight for growing chicks. Four of the substitutes prevented any leg weakness and proved satisfactory. Those who are interested in the experiments with the glass substitutes may obtain full details by writing to the Bulletin Section, Iowa State College, Ames, for the new bulletin 246, "Value of Some of the Glass Substitutes in Growing Chicks."

The experiments with the glass substitutes showed that only a small amount of the valuable rays of the sun are needed, providing a well balanced ration is fed. The substitutes which would admit twelve per cent or more of the ultra violet rays were satisfactory in preventing leg weakness where chicks had an average exposure to sunlight through them of fifty-five minutes daily. This was true in the winter months at the time the tests were conducted.

Direct sunlight, when it can be obtained without chilling the chicks, is the best preventive of leg weakness, the Iowa poultrymen believe, and they recommend using as much direct sunlight as possible even when glass substitutes are used.—I. W. Dickerson.

HOT WATER PIPE POUNDS

Our hot water tank or range boiler is connected to the hot water front on our kitchen range. Just recently we have been greatly annoyed because of a pounding in the tank whenever we have a fire in the range, the noise being almost unbearable. Can you tell us the cause of this and how it can be remedied?—A. K.

This noise is nearly always due to poor water circulation through the hot water pipes. Sometimes it is caused by a part of the pipe being a little too low or too high, so that steam collects in the high spots and then goes out with a rush. Since this has gradu-



Buyers are hard to find—and tenants are hard to keep—on farms that have poor fences. G. T. Ross, Maryville, Tenn., paid \$1500 for 200 acres; fenced half the first year and quickly sold this hundred at \$2500—\$1000 more than he paid for the whole 200 acres. Samuel Allen, LaGrande, Oregon, can get twice what he paid for his farm since he fenced stock-tight.

RED BRAND FENCE

"Galvannealed" - Copper Bearing

not only increases the value of a farm—it makes big money for the man who never wants to sell. F. B. Dawson, Indianapolis, Ind., writes: "With the farm cross-fenced, proper crops produced, live stock used for foraging part of the crops, one man can handle a two-man farm." C. E. Fish, Collins, Iowa, cross-fences in 10-acre lots, hogs down corn and makes the money he saves in picking pay for the fence over and over again. Sowing rape and soy beans in the corn gives enough forage to keep the brood sows most all winter on the Lovell farm at Vernon Center, Minn. They hog down their corn and save hand snapping, hauling and feeding.

These things you, too, can do with RED BRAND FENCE. Pays for itself in 1 to 3 years from extra profits alone—and lasts for many, many

years. Heavy coating of "galvannealed" zinc keeps rust out. Copper in the steel keeps long life in. Full length stays, wavy line wires. Square Deal can't-slip knot help make this better farm fence trim looking, long wearing, hog-tight and bull-proof. Ask your dealer to show you RED BRAND FENCE.

What has been your experience with or without good fence? We will pay \$5 or more for each letter that we use. Write for details, catalog and 3 interesting booklets that tell how others have made more money with hog-tight fence.

Always look
for the
Red Brand
(top wire)

KEYSTONE STEEL & WIRE CO.
4920 Industrial St., Peoria, Illinois

Service Department

BILL FOR WOOD

From Nov. 19, 1913 to February 26, 1923, A sold wood to B amounting to \$43.42 for which B has never paid nor acknowledged same although he owns forty acres of land, stock, etc. Now A has sent account to B demanding settlement or threatening legal action. Can A legally collect a bill of such long standing on which no money has ever been paid?—J. S.

Claims for goods sold on running account are not barred until six years after the last item was sold and delivered.—Rood.

ADVANTAGES OF MAKING A WILL

What advantage would there be in making a will in a case where warranty deed for farm, certificates of deposit, and money out on notes are in the name of both husband and wife? How long would widow have to wait before she could sell the farm if a will was left? Could she sell at once if there was no will and the property all went to her? The husband has two children by a former wife. There are also children from the present union. Could the children be asked to sign off on personal property if there was no will made? Is it necessary for both man and wife to make a will?—Subscriber.

The advantage of making a will depends upon the circumstances of the family. The general law is designed to cover the ordinary case. The right to make a will is to provide for the unusual case, where the provisions of the general law do not suit the party. If the dispositions provided for by the statute in case there be no will suit the person concerned in making a will, there is no advantage in making one unless it might be to select a special person to act as executor.

Where husband and wife are named as grantees in the deed to land, they hold as tenants by entirety, and upon the death of either the survivor takes all and may dispose of it and give good title without any probate proceedings. Certificate of death of the other spouse is all that is needed to clear the title. Public Acts 1925 No. 26, provides, that when husband and wife owning land by entirety sell and take a mortgage for part of the price payable to both, the unpaid balance and interest shall vest in the survivor in case of the death of either, and that the same shall apply the unpaid balances due them on a land contract held by them as tenants by entirety. By Public Acts 1927 No. 212, all evidences of indebtedness payable to both husband and wife are declared joint with right of survivorship.

By Public Acts 1909 No. 248, being Compiled Laws 1915 Section 8040 it is declared, that when a deposit is made in any bank or trust company payable to either of two persons or survivor, it makes such persons joint tenants and the deposit may be paid to either or the survivor. By special contract other obligations and personal property may be taken and held by two or more persons as joint tenants with the right of the survivor to take the whole free from the claims of creditors, executors and administrators of the deceased.—Rood.

GYPNUM OR LAND PLASTER

I want to seed two fields this spring, one to alfalfa and one to sweet clover. Could I use agricultural gypsum to a good advantage? My land is sour and sandy loam. I do not know of any place where I can get gypsum. Could you inform me of such a place? Please advise.—F. C. C.

Gypsum or land plaster, is the sulphate of calcium and will not correct acidity in soil, that is, will not sweeten sour soil. What is needed is lime or marl the carbonate of calcium. It will be beneficial to use either lime or marl if the soil is sour. If the soil has a smart acid reaction it will pay to use as much as two tons of ground

YES! SUPERIOR Corn Planters will make More Money for you!



Whether you check or drill your corn, there is a SUPERIOR Planter or Drill to meet your requirements



USE SUPERIOR Corn Planters and you'll get bigger profits from your corn acreage. They'll help you raise more corn to the acre by eliminating unplanted hills and bunching. They'll help you raise better corn because of even, accurate planting of the seed, at exactly the right depth, throughout the field.

More than that! SUPERIOR Planters will give you these outstanding results with less

time and work. They enable you to cover more ground in a day. There are no clutches to get out of order—no fast-moving parts. Feed shafts and dropping plates run continuously. SUPERIORS are easier to handle, easier to operate, more certain and reliable in their performance. They are the greatest corn planters ever built—simple in design, rugged in construction, positive in the results they produce.

Get the Biggest Corn Crops Your Land Will Grow!

The SUPERIOR Planter has improvements that set new standards. It is positive and accurate in its action. Set it for the rate of seeding and it will plant acre after acre exactly that way. There's no bunching—no skipping—no wasting of seeds at the turns—no thinning out to do—no hills to replant. It throws out of gear automatically when furrow openers are raised. It has an absolutely accurate check row attachment—a channel steel frame—comfortable seat—adjustable markers. No other planter is so simple, so durable, so accurate, so dependable.

It can be instantly converted into a drill planter merely by moving a lever and locking the check row shaft. Fertilizer attachment can be quickly attached to any Planter.

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limestone per acre where you are to seed to alfalfa or sweet clover for both are greatly benefited by lime treatment. If you will look through your agricultural paper you will find firms that advertise ground limestone.

LICENSE FOR PEDDLING

Does a man selling and peddling fish shipped in from outside states and other towns in his own state have to take out a license or obtain a permit from the state?—A Subscriber.

The statute governing licensing of all hawkers and peddlers, being Compiled Laws 1915 Section 6969-6978, makes no exception of fish peddlers.—Rood.

RATE OF COMMISSION

What is the legal rate of commission in Michigan farms and farm land?—F. K.

There is no legal rate. It is all a matter of agreement. The customary rate is about 5 per cent.—Rood.

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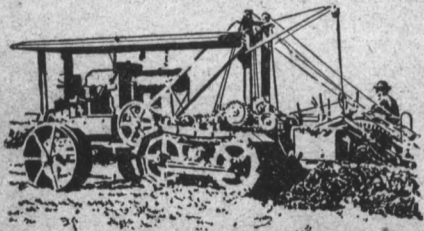
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Starting Garden Plants

How to Get an Early Start

By C. H. Chesley

IN order to achieve the best results
with some of the long season prod-
ucts up here in the north, it is
necessary to start the plants some
time in advance of the season when
it is safe to set them in the open
ground. The tender plants should not
be placed outside until all danger of
frost is past.

The Kind to Start

The plants which it will be found
best to start in advance are early cab-
bage and cauliflower, early celery, let-
tuce, beets, tomatoes, peppers, and
cucumbers. Some gardeners will find
it advisable to purchase started plants
from a greenhouse, at least of the
more tender kinds like tomatoes and
peppers. Others may be started in a
sunny window in the house. It is sur-
prising how many plants may be
started in the kitchen window, if one
desires to do so. The window may
be fitted with shelves, two or three,
and flats made to fit the shelves. Some
people make the mistake of starting
the plants too early. As a rule, plants
to be set in the ground in June need
not be started until the last of March.
However, early cabbage and cauliflow-
er plants may be set in the ground
even before the last frost has passed,
consequently seeds of these may be
planted at any time. As the seeds
sprout quickly and the plants make a
quick growth, four weeks will give
them a good start.

Use of Hotbed

Another way to start plants is with
the aid of the hotbed. This is simply
a glass-covered bed supplied with arti-
ficial heat to induce quick germina-
tion of the seeds and rapid growth of
the plants. The most common method
of making the hotbed is with the aid
of fermenting manure. Cold frame sash
can be procured of all dealers in gar-
den supplies. The standard size is
three by six feet. The best form of
permanent bed is made by excavating
a pit two feet or more in depth and
bricking up the sides and ends, or by
using cement. The bottom should not
be made solid but left open to the soil
to assure drainage. Two-inch plank
will serve the same purpose but will
not last as long. A plank form to
fit the sash should be put on above
the ground, the front facing the south
being six inches lower than the back.
If possible locate the hotbed on the
south side of a building or tight fence
to keep away the cold north winds.

When completed, put in from
eighteen to twenty inches of horse
manure, with which considerable
straw is mixed. Tread this down
solidly and put on five or six inches
of garden soil. The temperature will
rise rapidly and become too high for
seeds, but will fall in a few days.
When down to 80 degrees F., sow the
seeds. The bottom heat induces quick
germination and rapid development.
When hotbeds are started while there
is considerable snow on the ground, it
is well to provide mats or rugs to
throw over the beds at night. Where
the matter can be arranged it is a
good plan to heat the beds with a
steam pipe running from the furnace
in the house.

As a Cold Frame

The hotbed is also valuable for pro-
longing the season of vegetables in
the fall. Used as a cold frame, after
the heat of the manure has spent it-
self, it will grow cucumbers and other
vine plants to perfection. In starting
cucumbers and melons, berry boxes
may be used. The roots of such plants
are not the kind which can be des-
troyed with impunity, so seeds are
sown in the baskets and the baskets
destroyed when the time come to set
the plants in the open ground.

Hotbeds need fresh air at fre-
quent intervals. If the outside tem-
perature is below the freezing point,
care must be exercised in ventilating.
Let in just a little of the outside air
and close the sash. As the spring
advances and the weather becomes
warmer, allow the bed to remain open
for longer and longer periods, until,
just before setting the plants in the
open ground, the glass is left off all
the time for a few days. This harden-
ing process is necessary. Do not
water plants growing in the hotbed
too copiously. Too much moisture
causes what is known as "damping
off," which is really a fungus disease
induced by moisture and lack of prop-
er ventilation.

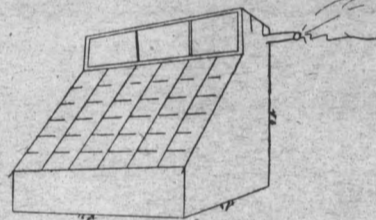
Transplanting Gives Strength

Transplanting the seedling is bene-
ficial in causing a strong root system.
When plants are started in the win-
dows, it is well to pick out the little
seedlings and set them in other flats.
This is of particular benefit in the
case of celery, which should be trans-
planted twice for best results.

SMALL GREENHOUSE

A FEW miles from here I ran onto
a little greenhouse on a small
farm that seems to be a paying propo-
sition. The owner is a young gar-
dener who also farms some. He lives
a mile or so from a town of about
6,000 people.

The size of this house is eight by
nine by sixteen feet. The last is the



A Small Farm Greenhouse

length of the building and is nine
feet in height. There is a well fitted
door in the end and a stove in the
building. The stove pipe runs through
the entire length and comes out at
the opposite end from the stove of
course.

At the time the building was built
an old factory was being dismantled
in the nearby town so the sash bill
was much lower than it would be in
the regular market.

The entire front is glass. The draw-
ing will show the shape I think. Five
rows of three foot sash makes the
front slant. The pieces of two by four
that support the separate sash make
up the extra width of a foot. The top
row of sash slips under a water table
made of a two by four so that they
fit tight and yet keep the water out.
The lower ends may be raised though
for ventilation. There is the sun's
heat in this house about as long as
there is any sun.

Flats are used for the plants incu-
bated inside this building. They mea-
sure twenty by thirty inches. On tem-
porary shelves or rather pieces of
two by four there is room for twenty-
seven flats in the sunlight. Back of
these more can be put and by chang-
ing them from day to day all can be
in the sun a little at a time. They all
have the heat of the sun all of the
time.

Here is what the owner told me the
building would do under regular con-
ditions. Lettuce can be brought
through the ground in forty-eight
hours. It takes four days for toma-
toes to come up. One and a half days
bring cabbage up and other vegetables
are correspondingly quick.—Earl
Rogers.



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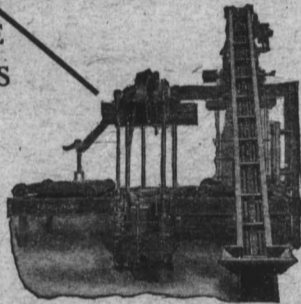
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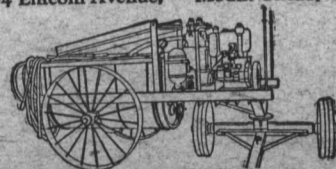


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TB. in Poultry and Hogs

The Elimination of Avian Tuberculosis

By H. R. Smith

There has just come to my office a report from the Chief Government Inspector at Buffalo, showing the post mortem findings on 1,005 hogs from accredited counties, killed in Buffalo, February 13, 1928. The bulk of these hogs came from points in southern Michigan though a few were from northern Indiana. The packers buying them paid a premium of ten cents per hundred above market price because they came from counties where all of the breeding cattle had been tested for tuberculosis, the reactors slaughtered and the premises disinfected. Cattle tuberculosis had therefore been practically eliminated from these counties and they had been officially designated as Modified, Accredited Areas, by the Federal Government and the State cooperating.

This report is of great interest because it reveals a serious situation with respect to the prevalence of tuberculosis in poultry flocks in southern Michigan and northern Indiana. It is not unlike other post mortem reports that have come from Buffalo, Detroit, and other northern markets. In this particular report it is shown that 191 hogs out of the total of 1,005, or nineteen per cent, from several accredited counties were retained for tuberculosis. In a large proportion of these cases the cervical glands in the throat were affected with tuberculosis. In other cases the lining membrane covering the intestinal tract was found to be affected with this disease. It is encouraging to note that not one of these hogs were condemned outright for tuberculosis, which would indicate that the disease in cattle has been quite thoroughly eliminated.

The avian type as found in poultry, when transmitted to hogs, very rarely causes the entire carcass to be condemned. The very fact that in this particular case the lesions were localized, being confined mostly to the glands of the throat and membrane surrounding the digestive organs, would indicate that practically all of the loss in this instance, through the condemnation of heads and viscera, was caused by the chicken germ.

When we first proposed to the various packing companies in the country, the payment of the ten cent premium on hogs from accredited counties, five years ago, it was not known at that time that tuberculosis in poultry was an important factor in causing this disease in swine. The research work on this subject as carried on in various universities in the middle west has been done during the past four years. All of this work has now definitely established the fact that tuberculosis in poultry can be readily transmitted to hogs when the flock is infected with this disease and when they are allowed to mingle together in the hog lots where the pigs can pick up the germs found in large numbers in chicken droppings.

Last week I saw killed in Milwaukee, Wisconsin, eighty-nine hogs produced on a certain farm in Green Lake County, Wisconsin. We were interested in seeing these killed because there had been no tuberculosis in the cattle on that farm for a period of six years as determined by the annual application of the tuberculin test. Recently, however, quite a large proportion of the chickens on that farm reacted to the tuberculin test and the flock was known to be infected with this disease. We were therefore not greatly surprised when we observed that out of the eighty-nine hogs, forty-four showed tuberculous glands in the throat and several more in the lining membrane of the digestive organs. No carcasses were condemned. It was a

clear case of avian tuberculosis in hogs.

The post mortem reports which our commissioners at the various live stock markets are receiving on premium hogs furnish an excellent picture of the region where tuberculosis is most prevalent in poultry. Over \$50,000 per month is now being paid by the packing companies in premium checks on hogs bred and fed in accredited counties. If none of these hogs showed tuberculosis after slaughter, they would be worth ten cents per hundred more than the same class of hogs from non-accredited counties. We are finding that they are actually worth more because so very few of the hog carcasses are condemned for tuberculosis. There is, however, still a large loss on heads and viscera



Every Chicken Enthusiast Likes to Watch Chicken Activities

when the hogs come from sections where tuberculosis in poultry is very prevalent. Apparently this is true of southern Michigan.

I recall four years ago when the first load of accredited hogs to receive the premium were shipped from Hillsdale County, Michigan, to Buffalo, quite a large number showed the head lesions. We immediately made arrangements to have these tuberculous glands from Hillsdale County hogs shipped to Dr. Van Es of the University of Nebraska, one of the best authorities in the world on avian tuberculosis. He inoculated chickens and guinea pigs with these glands and later found that the chickens contracted the disease but in only one instance did a guinea pig show it, indicating that it was the avian type and not the bovine. I was not surprised that it came from chickens because I had observed that our own flock and many of the neighbors' flocks of poultry in that county were infected with tuberculosis.

As a double check Dr. Rich tattooed these Hillsdale County accredited hogs so that they could be identified on the killing floor and could be traced back to the point of origin. In most of these cases the tuberculous hogs were traced back to farms where there had been no reacting cattle but where the chickens were found to be infected.

Fortunately, there is very, very little tuberculosis transmitted from chickens to cattle and none from cattle to chickens. Avian tuberculosis, while readily transmitted to hogs is only slightly transmitted to people. Research work is now being done on this phase of the problem. As is well known, the bovine germ as found in milk, may be transmitted to children and is readily transmitted to pigs.

Tuberculosis in poultry is practically a development of the past two decades. It has been spreading rapidly because it does not usually reveal

(Continued on page 314)

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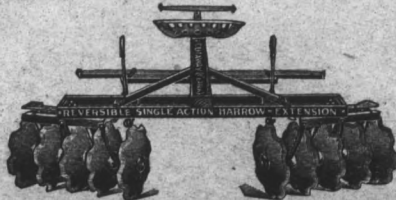
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Readers' Opinions

THE TAX BURDEN

A PROGRAM of road building is put on here and the plans and expense is staggering. Many people in moderate circumstances seem certain to lose their homes. Some have been careful, thrifty people too and are trying to save a little for old age. But most of the leaders in the move seem absolutely heartless and it seems to verify the saying "Man's inhumanity to man makes countless thousands mourn." Besides the road building, there are other propositions calling for large amounts of tax money. If they carry, many families might just as well move out, first as last. Many men absolutely refuse to see the great wrong of it. Many poorer people are not wise enough to do much to protect themselves. One naturally wonders what the state will do when overloaded with these lands taken for taxes. What will the commonwealth accomplish by making so large a percentage of people homeless?

Gas tax is fair. Those who use the roads should help pay for them. There is justice in certain exemptions like tractors and so forth. But the joy rider who does not like gas tax can escape, the same way as the man who dislikes dog tax. The joy rider can economize by using less gas; the man who keeps fewer dogs is less liable for the tax. Both can out-wit tax liabilities considerably if they try.

But the main idea is to do something and get it done quickly.—Mrs. Florence Howard.

FARM LOANS

THIS is my first letter to you although I have read your paper for six years, and I don't believe farming is a success without it. There are so many helps and so many new ways of turning a farm over to new ways of making money I often feel discouraged, but when I look at some of the long and tiresome years our forefathers have toiled to make a go at farming, I take new views of farming and try again.

I bought a half interest in a hundred and twenty acre farm three years ago and moved here with high delight, a good high land, none better for alfalfa. It lays in the heart of that district in Sanilac County. Everything went on nicely at the start. We built a new house twenty-four by twenty-eight and a new hen house twenty by twenty-eight, a brooder house fourteen by thirty-two, and was getting along splendidly when the bank that held the mortgage went busted. Then trouble started. It left the people stranded and nobody to take up any mortgage and the receivers wanted their money. To make things worse the Government loan was in the hands of private people that were not fair-minded. I applied to one company, paid my ten dollars and waited three months for a word. I got it—they had turned me down. One of their members had a grudge against my partner and poisoned my chance of a loan.

Not discouraged I tried another, paid my fifteen dollars with hopes. Some years ago the inspector had a law suit and had lost. He was supposed to be a fair-minded man to handle Uncle Sam's money and to be just to every man. Now I believe that the money the Government had put out for the benefit of the farmers had been put into the hands of fair-minded men and kept for that purpose and not for a lot of money sharks to speculate on. We, as farmers, should have a fair chance to protect some of our hard-earned investments on our farms, for if we all quit farming and went to the city, someone sure would be willing to lend a few dollars honestly.—C. H.

Record Garden Yields



Make Big and Sure Profits

The demand for health-giving vegetables is growing; wayside markets open new opportunities for quick, profitable sales. Use the **Isbell Seed Annual** for your guide. It tells you how and when to plant. It quotes you direct-from-growers prices on MICHIGAN GROWN

Isbell's Seeds
As They Grow Their Fame Grows
TRADE MARK

Northern-grown seeds are the best, hardest, earliest maturing seeds—safe anywhere. 49 years growing seeds in Michigan—ceaseless experimenting, careful selection, and perfect cleaning have made more than 200,000 satisfied Isbell customers. You buy direct from the grower and save money. Satisfaction guaranteed.

Write Today!

Get the 1928 Isbell Seed Book. It's a valuable guide for growing great crops. Gives complete cultural directions. Post card brings it, free. S. M. ISBELL & CO., Seed Growers 123 Mechanic St. JACKSON (12) MICH.



It's just common sense

TO HAVE a good flashlight handy around the farm, I mean. It's so convenient for doing chores in the dark—getting down feed, hunting up a lost tool, and in a dozen other ways. I figure, too, that it's the best fire insurance I can carry. Mine's an Eveready, always loaded with genuine Eveready Batteries.

I favor Eveready Batteries from experience. They're longer-lasting, brighter-burning. Those little Eveready cells produce more light and keep at it longer than you'd ever guess a battery could. They're filled to the skin with the stuff that makes light.

I've got the flashlight habit—and I tell you it's a good one for the farmer.

Get the Big FREE DASS STRAWBERRY BOOK

Illustrates heavy yielding big-rooted healthy, northern grown Strawberry, Raspberry and Blackberry plants. All varieties. Fruit Trees, Grape Vines at Big Bargain prices! \$3.00 PER THOUSAND buys guaranteed, big-yield Strawberry Plants that thrive anywhere. Lowest prices. Send at once for our free catalog. Don't buy until you get it. DASS NURSERY CO., Box 8, Bridgman, Mich.

NOW is the time to order Nursery Stock
SELECTED TREES AND PLANTS
A complete assortment—hardy and northern-grown
Write for 1928 Catalog "West has the Best" Lock Box 142
MAPLE BEND NURSERY
T. B. WEST & SONS
PERRY - LAKE COUNTY - OHIO

FRUIT TREES
Seeds—Berry Plants—Ornamentals
3-4 ft. Apple, 25c; 3-ft. Peach, 20c each post-paid. Guaranteed to grow. Farm, Flower and Garden Seed. We have 500,000 Fruit Trees, Evergreens, Shade Trees, etc., in fact, our 1927 Catalog has everything for Garden, Farm and Lawn.
ALLEN'S NURSERY & SEED HOUSE
BOX 7, GENEVA, OHIO

KITSELMAN FENCE
FACTORY TO YOU
Prices Slashed to the Bone on Farm, Foultry and Lawn Fences, Steel Posts, Gates, Barb Wire, Paint and Roofing. Quality guaranteed. 24- to 24-hour service. All Kitseلمان Fences now SUPER-Galvanized with 99 1/2-100 percent pure zinc, same quality as on TELEPHONE Wire. Factory Prices lowest in years. WE PAY THE FREIGHT. You save. Don't delay! Write today for FREE Catalog!
KITSELMAN BROS., Dept. 278 MUNCIE, INDIANA

Radio Department

TRANSATLANTIC COMMUNICATION EXTENDED

CROSSING over one ocean and under two seas, voice communication was made possible from all of the United States and Cuba to Stockholm, Sweden, beginning February 20. The rate for Stockholm will be \$6.75 higher for three minutes and \$2.25 higher for each succeeding minute than the present rates to London. Thus a Michigan call to Stockholm will cost \$84.75 for three minutes, and \$28.25 for each additional minute.

The route travelled by an American-Swedish call is of particular interest because of the unusual number of nations through which it passes and its various modes of travel. Jumping the Atlantic to Great Britain by means of the radio-telephone link, the call will be passed by means of a submarine cable under the North Sea to Holland and from thence across Germany, via Hamburg to Rostock, from whence it will again dive under water across the Baltic Sea to Malmo, Sweden. From Malmo the course is in a general northeast direction by land cable to Stockholm, completing a total wire distance from London of approximately 1,000 miles.

CHARGING RADIO BATTERIES

Please advise on how to charge a 45-volt and also a 90-volt wet B battery without using a charger from a 32-volt farm light plant. Should this be done from a light socket or direct from battery?—S. P.

Wet B battery cells are usually

BOYS AND GIRLS AND RADIOS

IF you are fortunate enough to have a son or a daughter or perhaps more than one in your home, not the least of your problems have been to keep them interested in farm life. Through the 4-H clubs, the development of social life in your community, and by home improvements, we trust you have succeeded.

But what about these home improvements? Among them, did you install a radio? If so, what was your purpose in doing so? Do you think it has helped to solve your problem of increasing or maintaining the interest of your boys and girls in farm life? Do they seem more contented at home or do they still have that urge to seek their opportunity in the city?

Write us all about your opinion on this matter in one of your everyday letters. A special prize will be awarded for each of the letters published. Address your letters before March 9, to the Radio Editor, Michigan Farmer, Detroit.

grouped eleven or twelve cells to the group. Twelve cells is most common. I am sending a blue print which shows a method for charging the groups of cells in parallel. This same method could be used whether you are charging two groups of cells, three groups, or four groups.

The resistance, we are recommending a light bulb, would, however, differ according to the number of groups being charged. To charge one or two groups of twelve cells each, use a 25 watt tungsten bulb, 32 volts. To charge four groups of twelve cells each, use a 50 tungsten bulb, 32 volts. To charge six trays of twelve cells each, use a 100 tungsten bulb of 32 volts.

In wiring the groups of cells, be sure that the lead wires are all the same size and same length, and that good connections are made, otherwise

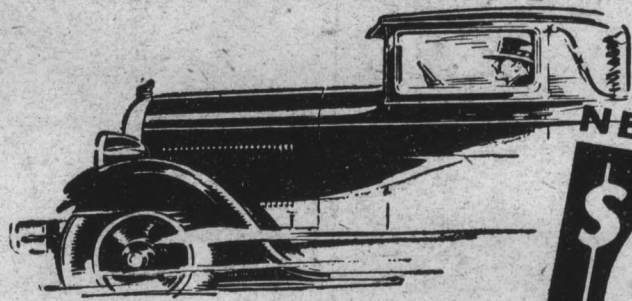
the groups of cells may charge at a very different rate. If all of the groups of cells gas too vigorously and get hot, it will mean that you do not have resistance enough and you should use a smaller light bulb. If one or more groups of cells gas more vigorously than other groups, it will indicate that the wires are not giving the same resistance or that in some cases you have poor connections.—F. E. Fogle.

RADIO BRIEFS

An eleven-year-old lad wrote to Walter Damrosch, director of New York Symphony Orchestra, that he was glad that he had broken his leg but a short time before the children's concerts for the appreciation of music were broadcast. It gave him an opportunity to remain at home to hear the program through the family radio set. The school he attended had not been equipped for reception in time to hear the program.

A weather forecast prepared to serve farmers is broadcast at nine o'clock, at noon, and again at six o'clock every day from station WLS.

CHRYSLER



NEW LOWER PRICES
\$670

and upwards

New Chrysler "52"

Two-Door Sedan	\$670
Coupe	670
Roadster (with rumble seat)	670
Touring	695
Four-Door Sedan	720
DeLuxe Coupe (with rumble seat)	720
DeLuxe Sedan	790

Great New Chrysler "62"

Business Coupe	\$1065
Roadster (with rumble seat)	1075
Touring	1095
Two-Door Sedan	1095
Coupe (with rumble seat)	1145
Four-Door Sedan	1175
Landau Sedan	1235

Illustrious New Chrysler "72"

Two-Pass. Coupe (with rumble seat)	\$1545
Royal Sedan	1595
Sport Roadster (with rumble seat)	1595
Four-Passenger Coupe	1595
Town Sedan	1695
Convertible Coupe (with rumble seat)	1745
Crown Sedan	1795

New 112 h. p. Imperial "80"

Roadster (with rumble seat)	\$2795
Five-Passenger Sedan	2945
Town Sedan	2995
Seven-Passenger Sedan	3075
Sedan Limousine	3495

All prices f.o.b. Detroit, subject to current Federal excise tax. Chrysler dealers are in position to extend the convenience of time payments. Ask about Chrysler's attractive plan.

All Chrysler cars have the additional protection against theft of the Fedco System of numbering.

YOU can now buy a Chrysler—quality unchanged—at the sensational new lower prices of \$670 and upwards.

In no other make can you obtain such outstanding value.

Because no other builder of motor cars combines such volume production with Standardized Quality of engineering and precision manufacturing.

See the Chrysler line at these new lower prices. Select the car which best fits your particular need. Inspect it. Test it. Compare it with any other car of its price.

We are positive you will be satisfied that the only way to obtain Chrysler's superior performance, quality and value is to buy a Chrysler.

A Michigan Farmer Liner Gets Results—Try One

who buys CAMBRIA FENCE

CAMBRIA FENCE is bought by farmers interested in the security of their stock and crops, and in the orderly arrangement of their properties.



Ask your Dealer for Cambria Fence

Cambria Fence is a hinge-joint, cut-stay standard field fence, with the distinctive feature of being made of selected steel wire, uniformly and thoroughly coated with zinc by Bethlehem's own process.

Cambria Fence is easily and quickly erected, always neat, uniform and secure—it retains its newness and snap—it adds to the value of property—it is a good investment.

BETHLEHEM STEEL COMPANY, Bethlehem, Pa.

BETHLEHEM

Larger Yields Per Acre Mean MORE MONEY for YOU!

Fertilizer Makes Earlier—Bigger Crops

Your cost per acre for land, taxes, seed and even labor is about the same for growing a twenty bushel crop as for forty, but the cost of growing per bushel is less for the big crop and as a result you make extra profit.

In Darling's Animal Base Fertilizers part of the nitrogen is available at once and feeds the plant during early growth. The remainder of the nitrogen is supplied gradually and feeds the plant throughout the season. This gives the plant a quick start and

steady, sturdy growth

DARLING'S ANIMAL BASE FERTILIZERS
For Every Crop

Our Superphosphate

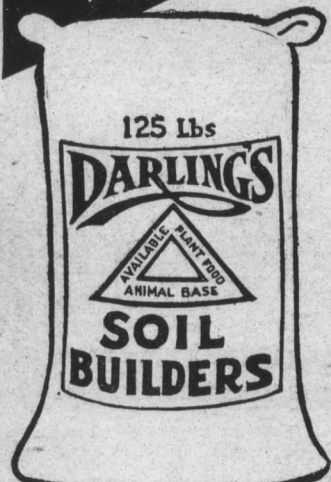
[Formerly Acid Phosphate]

is made by special process. Superphosphate made this way is better because it contains less free acid and less moisture.

This gives our Fertilizer mixtures better handling qualities and they do not clog in the drill. Our new million dollar plant is the only one in the middle west using this special process.

Write today for literature on Darling's Fertilizer and information about our agency proposition

DARLING & COMPANY
DEPT. 20
4201 S. Ashland Ave., Chicago



News and Views

From INGLESIDE FARM—By Stanley Powell

ARE you troubled with tractor salesmen and agents for live stock minerals? They've been thicker than flies around molasses here at Ingleside for some time back, but I don't think they'll be bothering me much in the immediate future. Want to know the secret? Read on.

Our first step was to decide what type of a tractor we thought would best fit our needs—and purse. Then when the next tractor agent appeared we acted rather indifferent, but let him know that we were a little interested in such and such a tractor and asked him to leave a bid on how much cash it would take along with our old tractor to buy a new one with extension rims on all four wheels.



When the next agent called I told him that he might leave a competitive bid. I kept this up for some time until I guess all the

dealers handling that particular make of tractor within a reasonable radius of Ingleside had come, looked over the old tractor, and left a bid.

Now I didn't tell any dealer what any other agent had offered, nor tell any of them how their bids compared with the others. But the strangest part of the proceedings was that each proposition that was made to me was a little better than any that had preceded it! When I finally closed a deal it was at a saving of exactly \$125 over the first offer.

The affair was handled without the least bit of "Jewing down" and in such a way that none of the agents who didn't land the business could complain. None of them had been led to think that they were going to land the deal and nobody's offer had been used as a club to beat down any other dealer's price. And there was another thing about it, too. The salesmen made relatively short calls when they heard that I was taking bids, whereas otherwise they might have pestered me for half a day apiece, trying to get my name on the dotted line.

Handling Mineral Salesmen

But for every tractor dealer that has visited us there have been at least two calls from salesmen trying to load me up with live stock mineral mixtures. I have listened to their stories with more interest than enlightenment. But as I didn't expect to obtain much unbiased and scientifically accurate information from someone having a concoction to sell, I accepted their literature (of this I now have one drawer in my desk nearly full) and resolved to seek advice from a more unprejudiced and authoritative source.

While in Lansing for the Master Farmers' Banquet and Farmers' Week I took the matter up with the State Veterinarian, the State Chemist's office, and C. F. Huffman, of the M. S. C. Dairy Department, who has for years devoted his entire energies to elaborate experiments and research as to the relation of minerals to the health and production of dairy animals.

Mineral Fed Cows Unthrifty

Anyone who will study the dairy cows on which Mr. Huffman has been conducting long-time experiments and who will note the condition of those fed certain minerals for several months and who will examine the pictures of the dead calves produced by those fed many mineral preparations,

will hesitate before paying several dollars a hundred pounds for a complicated mineral mixture of unknown composition. If you want more information regarding minerals for live stock, write Mr. C. F. Huffman, Dairy Department, Michigan State College, East Lansing. In the meantime, a modest amount of odorless steamed bone meal will keep the cows supplied with phosphorus and lime.

As we now have an unusually heavy proportion of swine to the skimmed milk that we have for them, I am experimenting with making swill out of semi-solid buttermilk and water. But like most other farm experiments I don't suppose that the results will be very conclusive. There are so many factors that operate simultaneously that it is almost impossible to know to what one cause to attribute any good or bad result that may be secured.

M. S. C. Experiments Helpful

The average farmer has neither the facilities, nor the time, nor the temperament and training to conduct accurate and convincing experiments. We must depend on our College Experiment Stations to do that for us. In the college experiments just one factor is varied at a time and careful "checks" are made so that whatever results are secured may be intelligently interpreted.

Eleven Aeroplanes Over Ingleside

Speaking of "flying in the face of Providence," eleven aeroplanes have flown over Ingleside today. I don't know whether they were friends or foes, or whether they were spies or messengers of good will, but anyway they emphasized that we are living in a new and marvelous age and that we must bestir ourselves or be left behind.

Up at our local Grange we discussed "Farm Relief" at our last meeting. Of course we didn't quite settle this matter, but give us a little more time. Most of us don't think until we have to and I must confess that I was sadly out of date as to the status of the fight for "Equality for Agriculture" which the farm organizations are waging down at Washington in that "Cave of the Winds" known as Congress. Preparing for this discussion I waded through some wordy documents which had, hidden away in them, some very interesting information.

Mr. Charles Voorhees of Albion declares that he has been reading these articles ever since we started writing them and that he is especially interested in what we have to say regarding taxation. He calls my attention to a certain speech on the tariff and farm relief which he read recently in the Congressional Record.

Acknowledging his good letter I replied in part, "You have my envious congratulations if you can keep up to date with the Congressional Record. For some years I received this publication daily, but could never find time, energy, or patience to read it very thoroughly."

A ewe lamb that I had never liked redeemed herself by a ten pound fleece. A yearling ram that had been running with various bunches of grade ewes and had seen a lot of service and little grain, sheared a fourteen pound fleece. A ram lamb to which we never paid any special attention sheared thirteen and a half pounds.

A parachute that can be used in drops of less than 100 feet is being tested.

Gas caused over one-fourth of American battle casualties in the European War.

TRY a Michigan Farmer Limer to sell Your Poultry, Real Estate, Seeds and Nursery Stock and Miscellaneous Articles. See Page 321 for Rates.

Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow

Why has the new Ferguson Plow for Fordsons so much lighter draft?

Ferguson-Sherman, Inc.
EVANSVILLE, INDIANA

Ask your Fordson dealer or write us for the answer. A new question every month—watch for it!

\$25,000 Damage Claim

Tried in Pontiac Circuit Court Last Week

L. C. Curtis of New Hudson was sued in the Pontiac Circuit Court for \$25,000 as a result of an automobile accident on the corner of Butternut and 16th Streets, Detroit, resulting in serious injuries. The matter was tried out in Circuit Court last week on two of the cases and a judgment of no cause for action was rendered for Mr. Curtis.

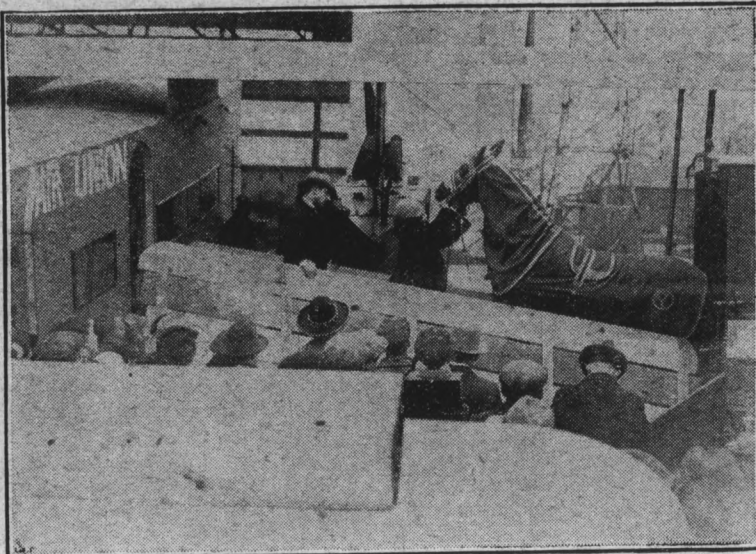
Mr. Curtis says, "This is the first serious accident that I have had and I have been carrying automobile insurance for a number of years. It was a great satisfaction to be able to go to the home office of the insurance company within a few miles and to discuss this claim. The matter was thoroughly prepared and I found that the Citizens' Mutual Automobile Insurance Company was represented by one of the best lawyers in Pontiac, Clinton McGee. The company was more than fair in offering to make a settlement but when the plaintiff became unreasonable, they were well prepared and the case was decided in my favor. This company seems to have an organization in practically every county and it is a great satisfaction when you get into trouble to know that you have the backing of experienced men that you know. I believe that anyone taking out automobile insurance will do better to take it out with a company in their own state."

Mr. Curtis, like thousands of other people who have had automobile accidents, testifies to the satisfaction rendered by the Howell company. It is estimated that 80% of the automobile insurance of Michigan is written by Michigan companies. The Citizens' Mutual Automobile Insurance Company of Howell has written more automobile insurance than any other company in Michigan and has an organization in your county.

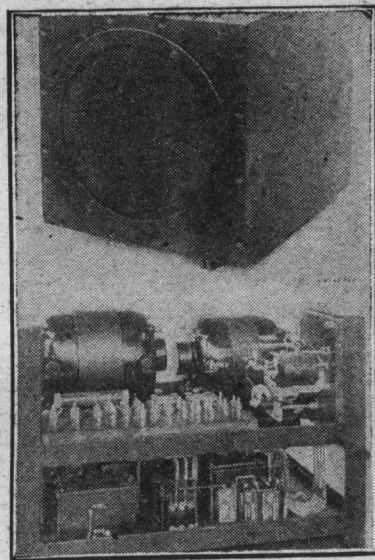
WORLD EVENTS IN PICTURES



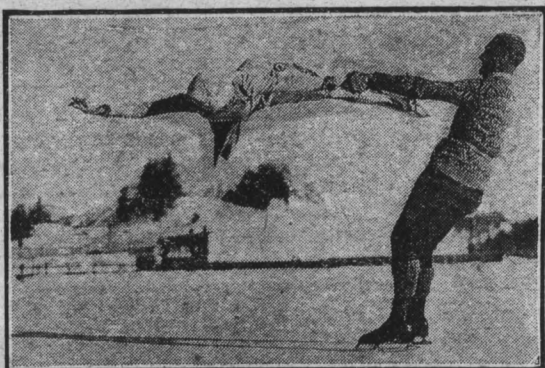
Pres. Cosgrave, of Irish Free State, sits at George Washington's desk in Philadelphia.



A real Pegasus! For the first time, a horse is carried in an airplane. Betty Rand, an American girl, leading her favorite mount, Phantome, to be transported from Paris to London.



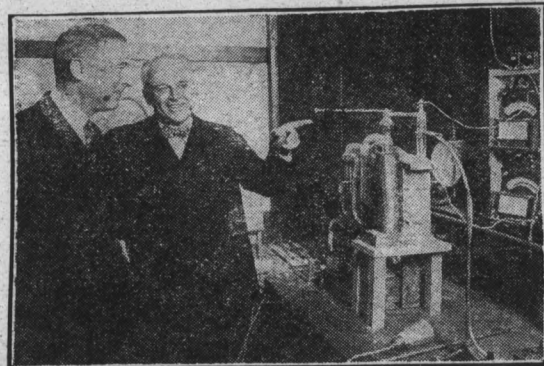
By means of this instrument, radio communication between trains has proven successful.



Phil Taylor of New York makes a human merry-go-round of Freda Whitaker as they practice for the winter carnivals.



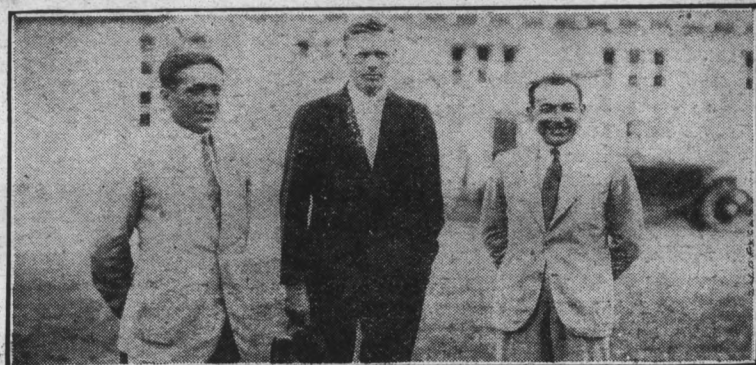
Europe looks to Titulesco to settle military dispute between France and Germany.



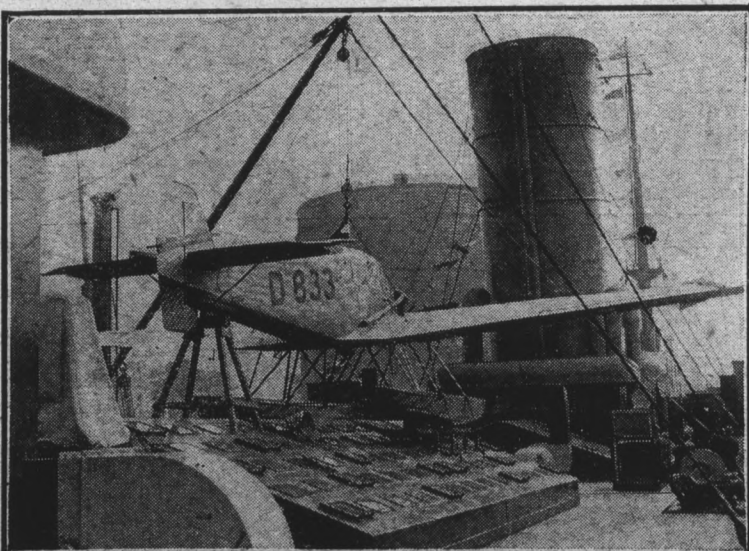
Dr. E. B. Craft, noted for research in television, and talking pictures, visits Dr. R. A. Millikan, discoverer of cosmic ray.



A real sheik-ling is the fourteen-year-old sultan of Morocco. Recently he made his first visit of state to the northern capitol, Fez.



At Panama, Lindy met the French aces, Dieudonne Costes and Joseph LeBrix, who flew from the African coast to Brazil. The French fliers are now on their way to Washington.



The latest innovation in pleasure travel is to carry a passenger seaplane aboard pleasure liners so that the passengers may use it for short sight seeing trips.



For the second time in twelve years, a large section of the business district in Fall River, Massachusetts was destroyed by fire. The damages are estimated to be \$20,000,000.

NOW thoroughly organized, the Pleasant Ridge unit of the Brown County 4-H Club set out to play as well as to work. Its officers, as an executive committee, with the help of Miss Collins and the two county agents, began plans for organized activities. Bob's experience as a team leader stood him in good stead. At the first meeting after his election he found the reports of members most interesting. Garment club workers, dressed in the green and white of the club, presented an attractive appearance. Parents and friends had gathered on the consolidated school grounds. A picnic dinner was spread, and after this was over a spirited ball game between the dads and their sons was put on. Substituting for Father Barton, who declined to play, John O'Neal went behind the bat for the dads. Ross Burton, watching the boys like a hawk, mentally made notes of promising material for the county club team. With Bob Barton as captain of the juniors, the youngsters ran over their seniors in a hot five-inning battle, 14 to 4. "Look out for us next time," warned O'Neal, rubbing a leg bruised in sliding home. "Hadn't played ball for twenty years. We old-timers will get you yet."

It was a great day. There was an atmosphere of neighborliness and friendship which took strong hold upon Bradley Barton. Before the gathering broke up, Bob's father made a little speech. "I can't play ball," he announced plaintively. "Neither can we, Barton," spoke up another dad, who had done his best, and the crowd laughed. "I can't even start to play ball," went on the speaker, "but there's one thing I can play. That's a violin. I'm ready to organize and teach a 4-H club orchestra made up of club members and their folks. All who will join come to our home Saturday night." The offer was received with a rousing cheer, and Bob felt a glow of pride. It was great to have one's folks take part in the social life of the young people.

Ross Burton left the school grounds with a feeling of great satisfaction and a queer sensation that, after all, he did not know this young new friend. On the ball diamond Bob Barton had been transformed from a quiet, rather diffident youth to a fighting player, who drove his mates to give the last ounce. It had mattered little that the pitching against the boys was weak and ineffective, Bob had shown no mercy. "If he'll fight like that in a scrub game," mused Burton, "what will he do against Harmon? But he lacks a lot of being the finished player Hal Carson is. Hope he can play the outfield."

When the county group as a whole came together for its first good time and business meeting, Ross Burton set out to pick his team. On the fine diamond of the Warford school grounds thirty lads came out for the coveted positions. It soon was evident that, except for Ted Baldwin, shortstop, who fielded with uncanny

skill, Carl Mooney, an outfielder, and Vance Horton, the old team's pitcher, no member was sure of his place. When two nines finally had been selected for a trial game, Bob Barton found himself on the second team, while the graceful, hard-hitting Carson held down first for the regulars. There was mockery in Carson's eyes as he took his place. "Baldwin will captain his team," Burton announced, "and Barton will lead you other fellows." With Burton as umpire the fight was on.

The second team never had a chance. While Bob strove and exhorted, Horton held the scrubs in the hollow of his hand, and a smooth-working infield smothered every recipient rally. Carson, fielding his position in faultless style, crashed out a triple to bring two runs. His one



error was on a low throw from the shortstop, but Bob also had failed on a similar chance. After five innings of play, Burton called the game. "Good work," he commented. "I think we can show Harmon a thing or two this year. Now I want to try Barton and Carson in the outfield." Bob heard this announcement with a feeling of depression. He knew that his work was not as good as Carson's at first base, and the regular outfield had shone in combat. But obediently he took his glove and went out on the field. Ten minutes later he was back on the sideline.

"I'm ready to announce the team," Burton said, and the group of chattering lads fell silent. "I might say in the beginning that neither sentiment nor friendship should have anything to do with the team's selection or how it is run. By that I mean that what we want is a team that will fight for old Brown County and any old member or any other must not feel badly if he fails to place as a regular. There is no surety that those on the team now will be there when we play Harmon. But the boys I name now are regulars unless displaced, and will proceed to the election of a captain. Our first game will be against Channing High next Saturday. Now for the team."

It was as Bob had feared. When the names were called, but one player on the second team had displaced a first. And that player was Shannon Price, left fielder, who had shone afield and at bat. While the disappointed candidates cheered their suc-

cessful rivals the team itself drew together and, after short consultation, named Ted Baldwin captain. Hal Carson had thrown out more than a hint that he was eligible for the honor, but there had been no encouragement. Applause and congratulations showed Ted's selection was popular, but he showed little elation. As Bob slapped his pal on the back and congratulated him, the successful first-base candidate paused for a word to Bob.

"Fortunes of war, old man," said Carson, "but don't feel badly over it. You never had a chance. I'm glad that I'm to have a good substitute."

Bob Barton's level gaze measured his cocky opponent. "Don't be so sure, Carson," he replied, "that it won't be you that's playing substitute when the big game comes. A man isn't whipped till he's down for

keeps." Carson's laugh was insolent as he moved off, and the fire in Bob's veins glowed hot. Nor did the fact that Katie O'Neal was waiting to climb into the smart Carson runabout lessen his feeling of bitterness.

"Tough luck, tough luck," bewailed the new captain. "Good Lord, Bob, why did you have to have such a rotten day? I had counted sure on your making the team. Gosh, but you are a rotten outfielder! And now that I'm captain, it won't be fair to coach you to beat Carson. Darn the luck, anyway!"

"Forget it, old kid," said Bob. "I'm tickled pink that you were made captain. And just put this down in your little notebook: When the Harmon game comes your Uncle Dudley is going to be right in there at first base."

Bob's words were light, but some way they carried a tone of conviction which impressed Coach Burton, who had approached. "By George," remarked Burton, "you might do it, too. I like your spirit, Bob. But as matters stand, Carson, except for his one fault, is a wonder, while you are just a good first baseman with plenty of fight. I like that, though," and his smile was warm. "I can't help you, but I wish you luck. I'd hoped that you might make the outfield."

"Not me," said Bob, and his words were clipped. "I'm a first baseman or nothing. But I want you to have the best team possible. Carson is weak on bunts; you should drill him on that."

"Mighty white of you, that sugges-

tion," commented Burton. "I didn't notice it, as he got his man. Well, it's a fair field and no favors. I'll lay one bet: you'll skin the life out of Carson on pig raising."

Somehow, though, there was little consolation in that promise, although Bob had come to have a real affection for Lady Mary and her promising progeny. There is a vast difference between the glamor of athletics and the worthwhile work of pork production, even if one has an embryo champion. When Bob returned home and imparted the news that he had failed to make the team, Mother and Father Barton held an indignation meeting. When assured that Burton had the choosing, however, their wrath soon cooled.

"Of course, it was fair, son," said Bradley Barton, "but nobody can make me believe that a boy like young Carson can beat a son of mine. Fight him for that place, Bob. We'll stand back of you," Bob thrilled to the feel of his father's hand on his shoulder, and his eyes were moist. "I'll do my best, dad," he replied. But in his heart he knew that Hal Carson was a player of great promise, a lad with more natural ability than ever he could hope to possess. With little time for practice, and no friend to coach him, how could he hope to overcome the handicap?

To a degree the answer was found when John O'Neal came over to the Barton home that night. "Heard Hal beat you out for the team," was O'Neal's comment. "Don't take it to heart too much, Bob. These town lads have plenty of time to play ball. But we can't have Pleasant Ridge taking dust from anyone. I was a fair ball player once myself. Kinda like to get back in trim again. Evenings when we feel like it, bring your bat and glove and come over. I'll call you up. See if I can't help improve your fielding game." Quick in his expressions of appreciation, Bob wondered what had prompted O'Neal's offer. Was there something else back of it more than community pride? Bob wished he knew.

(Continued next week)

NO REPORT FROM WORLD HIKERS

WE had hoped to have another of the travel stories by Francis Flood for our readers this week. Our last report from the world hikers described their plans to attempt to cross the Sahara Desert via motorcycles. Three weeks have elapsed since we last heard from them. We are hopeful to have another of their stories for you by the time the issue of March 10 goes to press.—Eds.

That germs of tuberculosis are present in healthy human beings was demonstrated when examination of five hundred adults who had died of a variety of causes was made, and tuberculosis germs were found in ninety-seven per cent of the bodies.

Frank R. Leet

Activities of Al Acres—Trouble With the Help



Cows and Spuds Mix Well

(Continued from page 293)

plant food replacements are made, the soil fertility can be maintained even though large amounts of plant food go to market with the tubers. And it is because disease and fertility are such important factors in potato growing that they maintain a dairy herd.

They do not claim anything out of the ordinary for their pure-bred Holsteins, the foundation for which they bought some fourteen years ago. They were unfortunate, as countless others have been, in buying some "white plague" with their first purchases and it has been an expensive job to test it out, but now they are away to a sound basis. The herd is in the local cow testing association; the milk provides another cash crop and gives the Rossman trio another avenue with which to maintain the fertility of their soil and keep busy in the winter as well. At the head of the herd at present, is a bull whose first five two-year-old daughters to be tested averaged 375 pounds of butter-fat, so they have the means of improvement already on the ground.

Plan Fertility Program

But in connection with the dairy herd there are two features that deserve special mention. Some years ago they came to realize that plant food was their stock in trade. Since the urine contains about forty per cent of the nitrogen and sixty per cent of the potash recovered in the manure, they reasoned that this was the most important part, and to conserve it they built a manure storage. This is high enough to house a manure spreader, has a concrete floor, and the carrier track comes into it from the barn. The manure is spread out evenly. The hogs are allowed access to it in the winter and by keeping it packed, firefanging is prevented.

Another idea which they believe saves fertility is to make two moderate applications of manure previous to planting their potatoes rather than a single larger one. Many potato growers spread from ten to fifteen loads of manure before plowing the soil. Such large manure applications make scab more prevalent. The Rossmans make two applications, six loads of manure each per acre. They are put on a year apart on the alfalfa sod that is plowed down for the spuds.

In practice, they combine a three and a four year rotation in such a way that potatoes are not planted back on the same field oftener than once each seven or eight years. If they are to plow down an alfalfa sod, they will put a six load per acre application of manure on the alfalfa at the beginning of the second year, then another application on the alfalfa sod before it is to be plowed up for potatoes. They believe that this gives them much better utilization of the plant food in the manure than to make a single twelve load application.

The two rotations are: Early potatoes or corn, wheat, and alfalfa two years; the other is late potatoes or corn, oats, and sweet clover. There is an equal acreage of corn and potatoes so that the second time around on the rotation, corn is put in where the potatoes were before and the potatoes are shifted to the field that grew the corn before. This is giving them a freedom from disease that is not enjoyed by those who have potatoes oftener on the same soil.

As to commercial fertilizer practice, they fertilize only the potatoes and corn. They have tried various fertilizers in plots for the last three years to determine what combination gives them the best results. This year they thought they had it when they put on 500 pounds of an 0-12-6 in the row at the time the potatoes were planted. Each year they have had a

plot on which straight acid phosphate alone has been used and each year this has ripened the potatoes so much ahead of the normal growing season that the phosphated rows have given a poorer yield than the check plot on which no fertilizer at all was used. And each year it has seemed that these phosphate-alone rows were more subject to disease. The past season was one of abnormally light rainfall and as the drought wore on, all of the potatoes looked as though something might be wrong with them. The phosphate-alone rows ripened during the drought while the phosphate-potash rows remained growing and took advantage of the September rains.

On the corn, they have been using 100 pounds of acid phosphate at planting time.

It will be seen from the rotations given above that the soil where the early potatoes were, is worked down and put into wheat while the late potato ground is put into oats the following spring.

Potato soil management presents some strange paradoxes. Potatoes need a large supply of nitrogen for their growth, hence the potato farmer is put right to it to grow either alfalfa or the clovers which require a sweet soil. On the other hand, the sourer the soil the smoother the potatoes and the less susceptible to scab. Torn between these two opposites, the Rossman Brothers have come to the practice of liming the soil immediately following the potato crop and this gives seven or eight years for the lime to get partially cropped out of the soil. They have been using four yards of marl after the early potatoes and from one to two tons of coarse ground limestone after the late ones before the oats are sown in the spring. Operating along these lines, they are growing enormous crops of the legumes and keeping their potatoes clean, a prime requisite to the production of certified seed.

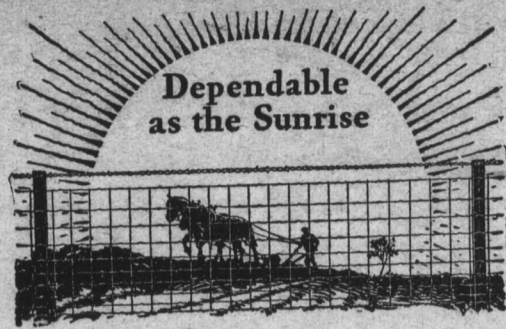
New Method of Seeding

Until last spring, they have been getting better stands of alfalfa and sweet clover where sown with oats rather than wheat but last spring they tried a new method of seeding the alfalfa with the wheat that seems to have proven itself a winner. Before the alfalfa seed was sown, they set the teeth of the spike tooth harrow straight up and went over the field twice, kitering. Then they sowed a bushel of Ontario Variegated alfalfa seed on eight acres. Followed then the cultipacker. When I was there, it was a stand that anyone could be pleased with and Manning, who was showing me about on this particular jaunt, told me that he cut off the tops of the alfalfa when he cut the wheat. The wheat was not hurt for it made thirty-four bushels per acre.

Just a step away, they had sowed ten pounds of seed per acre with the oats and had nowhere near so good a stand. They believe, as do many other farmers I know, that there is yet something to be learned about seeding legumes with oats. Next spring, they expect to fiddle the sweet clover seed on after the oats are drilled, then go over the field with a cultipacker.

The old sheepshed has become a potato storage with about 6,500 bushel capacity. The straw loft is overhead and the problem of all who store potatoes is adequate ventilation. To secure this, they started a tile some 200 feet from the barn, put down an inlet and let this continue about four feet under the ground. This allows the cold air to come in and tempers it before it gets to the potatoes. Inside, there are six slatted partitions, separating bins that will hold about a thou-

(Continued to page 319)



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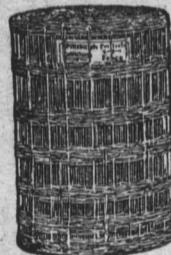
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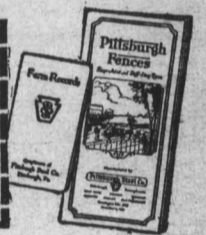
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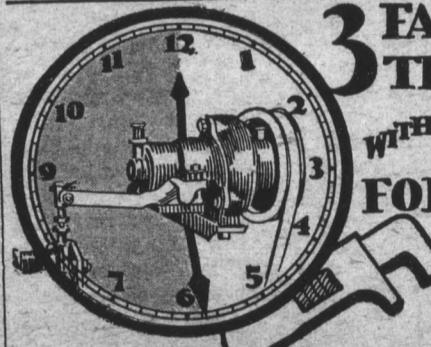
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3 FARMERS TELL OF THEIR EXPERIENCES WITH PICKERING FORDSON GOVERNORS

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Mr. Virgil G. Putnam, Bedford, Iowa, writes: "My Pickering Fordson Governor not only saves fuel, but it holds the motor at an even speed and prolongs its life."
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The WOMAN'S INTERESTS

Landscapes with Native Plants

Wild Flower Farm Brings Beauty of Woods to Farm Home

By Hazel Atchison Matkuis

HOW many farmers' wives are there that, because of a mortgage to meet, failing of crops from time to time, etc., must do without the many things that would make for beauty in their home and surroundings? And, to my way of thinking, beauty in our home and home surrounding makes for our spiritual uplifting.

I know of one such woman, a farmer's wife of meager means, whose home is set in grounds of remarkable beauty. This woman, a lover of flowers, has gone into the silent places that surround all our farm homes and robbed from Mother Nature, native flowers and shrubbery until her home is a veritable fairyland of beauty and a rendezvous for all wild things.

Now, with the return of birds and warm sunshine, that imaginative mood comes to all of us to bring beauty into our surroundings, and what one can do, we all can do.

The post of this woman's mailbox, at the corner of the gravel drive, is completely hidden by wild rose vines; and, bordering this drive, are great clumps of wild tiger-lillies, blue flag, dwarf sumac and wood ferns. The foundation of the old house is completely hidden by massed shrubbery of witch hazel and our wild elderberry bush; and what cultivated shrub is more beautiful than this shrub in form, leaves, flower, or fruit.

On either side of her front door two straight little hemlock trees stand sentinel, and throughout her grounds are other evergreens. She tells me, the secret of transplanting evergreens satisfactorily from forest to home, is to dig only small specimens. There are many locust and nut trees—one flowering dogwood, and one big shade bush that casts its shade over a grape-arbored side porch. All these rare wild trees and shrubs have been successfully transplanted by this woman who made a study of their natural habitue, and with careful planting and watering, she has made them live and flourish luxuriously.

On an old stone wall, that divides lawn from meadow, bittersweet, rose, wild-grape, and woodbine vines run riot and form a tangled sanctuary for all bird life; and close against this wall are found species of all our Michigan wild flowers—carefully planted and kept well mulched with leaves. Here are hepaticas, violets, adder's-tongue, bloodroots, Jack-in-the-Pulpits, May-apples, trilliums, Dutchman's breeches, wild geranium, cowslips, the tall burnt-orange umbels of the butterfly-weed, wild bergamot, blue gentians, and our common golden-rod—unbelievably beautiful in cultivation.

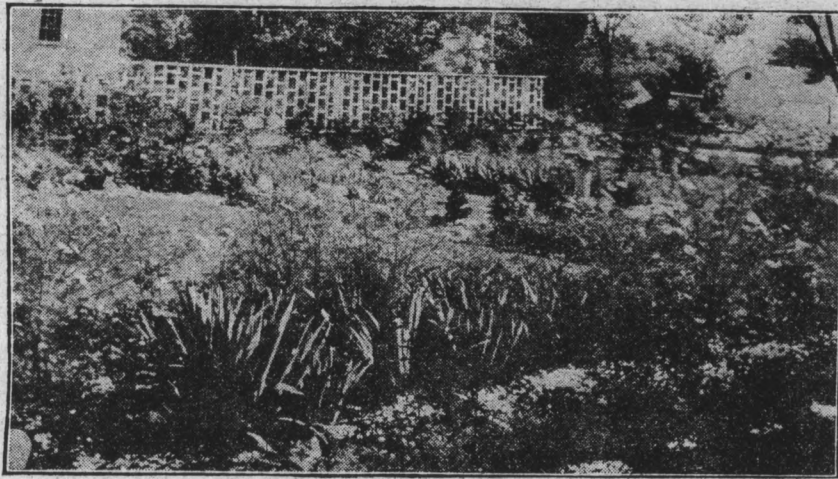
This woman's home inside, as well as out, all through the warm summer months, is a home of colorful woody things. Bowls and bean-pots are filled with bouquets of orange lillies, fragrant elderberry flowers, golden-rod, blue gentians, etc.; and all through the winter months with great clusters of bittersweet and rose-berries.

So, after all, many things in life are only ornamental superficialities that, if we hunt, we can always find real simple things as a substitute, as this woman found wild flowers and shrubbery a substitute for greenhouse

varieties equally as beautiful and much more soul-satisfying.

CALLING THE ROLL

AS the Michigan Farmer has been a welcome visitor in my father's home since I was a little curly headed



By a Careful Choice of Native Plants a Garden Like This Costs But Little

girl of five, and probably long before that, I thought perhaps a roll-call of some of the former writers of our beloved sheet (a small four pager) would not be out of order. And

"here's hoping" to see again in print some of the names of our former friends, in response to this request or roll-call.

First, the one name of Beatrix was with us in print each and every week. Then our own Ella Rockwood (known to us then as Ella R. Wood), Daffo-

dilly, Bruno's Sister, Sister Gracious, A. L. L., Evangaline, El See, Hulda Perkins, Jeanne Allison, M. E. H., Bess, Grandpa, Simon's Wife, Shiftless, Busy Bee, and Theopolus.

Conquers Food Dislikes

By Hilda Richmond

IT has been my good fortune to bring up a boy who disliked many wholesome foods—in fact, he says that he still dislikes them. I say good fortune, advisedly, for his peculiar appetite has caused me to put my wits to work to get around his dislikes, and to enjoy the game. Most children have certain things that they will tell you, they violently dislike, or that it makes them ill to eat them, or that they would rather go without a meal entirely than to have to partake of the dreaded articles. I was brought up, as many mothers have been, to "eat what was put on my plate without question," but I do not wholly approve of that drastic way of doing things. I found what I believe to be a better method and it has succeeded.

Among the things that simply could not be eaten without great unhappiness and discomfort were carrots, butter, milk, cream, apples, raisins, eggs, cabbage, turnips, and beans. Meat, potatoes, bread, jam, and pie would have formed the whole diet if the youngster had been allowed to choose. However, one by one the hated things have been eaten with enjoyment. Moreover, he is in perfect health and isn't laid up periodically with indigestion as he once was. If anyone thinks of trying this plan, it might be well to caution them not to boast of their attainments, as it causes youngsters to be suspicious of everything.

By the aid of the food chopper, carrots were ground fine, together with turnips, and put into vegetable soup, salads, boiled dinners, and various

creamed dishes. Turnips mashed with potatoes was a favorite dish, though it was filled with cream and butter. As long as it was called mashed potato, it was delicious. The butter was not cooked but beaten into the hot mixture just before it went to the table. Usually some kind of errand or employment saved this sight of butter going into the foods at the last minute. Eggs in pumpkin pie were never detected, even egg dropped in soups after the old time custom were enjoyed. Some one may think this a weak way of managing, but it was good fun to circumvent a delicate boy without rousing his antagonism to food. In spite of his size, he is still a small eater, and it was no use to deprive him of all food by making him feel that tricks were being played upon him.

Apples in salad, nut meats, fruits of all kinds in gelatin, chicken pie with peas, raisins ground and placed in puddings, parsnips chopped fine and cooked in beef broth, bean soup put through the colander, celery chopped fine and put in soup, green beans cut fine and cooked with meat in succotash—in short, everything by hook or by crook found its way to his stomach and caused no discomfort.

By avoiding taking the child away from home much until his dislikes are conquered, almost any mother can make him over, for the hope of being an acceptable guest everywhere often is a great incentive to the youngster whose finicky tastes keep him from social pleasures.

Of course there were many more, but these names come to my mind today. As I look out of the window and see the feathery snowflakes coming down, I recall that one of the writers at that time sent in a very beautiful little poem (original with her) entitled Snowflakes, and the last verse read like this:

As you softly cover the unsightly earth

With a mantle so beautiful and free,
So the faults of others our thoughts
should enfold

With the mantle of Charity.

Will the author recognize her little poem I wonder?—Mrs. M. S. R.

(We would be delighted to hear from these past contributors. Our older readers are anxious to hear from their old friends and I feel sure our new readers would welcome a message from the past.—Martha Cole).

FAMILY DIDN'T RECOGNIZE FURNITURE

DURING the January meeting of the home furnishing leaders of Bay County, one of the leaders who entered the class for the first time, told the following story:

She had moved from a small house into a large house. She was discouraged with her home because the furniture didn't seem to belong to this new house. The leader in her community had invited her to the local meetings but she had felt too rushed for time to go—finally she did go to one of the local meetings. As a result, she rearranged the furniture in her home following the principles of design as described by the local leader.

She said she was very happy with the result and that her boys and girls, when they came home for Christmas, didn't recognize the furniture and insisted she had new pieces. When asked if she would like some new pieces, she said she would not because she now was satisfied with the old—her home was really homelike.

One example she gave was the effect of rearrangement of furniture in the appearance of her kitchen. Previously she had the kitchen cabinet across the corner of the room in order to help "fill up" the large kitchen. But after her study of design, she placed the cabinet back against the wall and in such a way that it balanced the sink. That change gave the kitchen a new appearance—one that was beautiful and satisfying. Now this woman is to be a leader for the rest of the project year.—M. A.

AIN'T IT SO?

Ain't life jest a mess o' grievin',
Allers givin', no receivin',
Sorrors comin', old friends leavin',
Land o' want and woe?
Old debts payin', new debts owin',
Strife an' trouble allers growin',
On our way but where we goin'?
Grim death waitin', this we know,
Tough time livin'—ain't it so?

Ain't life jest a mess o' gladness,
Happiness an' banished sadness,
Goodness crowdin' out the badness,
Joys unendin' high an' low?
Pleasures comin', hard time goin',
No more rainin', sunshine showin',
Flowers bloomin', soft winds blowin',
Good luck with us as we go,
Sweet time livin'—ain't it so?
S. D. McDowell.

WHAT WE'LL WEAR THIS SPRING

RECENTLY we announced our new Fashion Magazine. Many readers ordered promptly and now we are receiving letters from some letting us know how pleased they are with the new book. We think you should have a copy for this book will be of mate-



rial assistance in the selection of your spring wardrobe. It contains dainty lingerie, morning wear, charming afternoon frocks, sportswear, a good variety of styles for the kiddies and a selection of embroidery. Price 13 cents. Send for your copy today to the Pattern Department, Michigan Farmer, Detroit, Michigan.

READERS VOTE FOR THESE

Scalloped Celery and Carrots

- 2 cups diced celery
3 tbs. flour
3 cups diced carrots
1 1/2 cups milk
4 tbs. butter
Salt, pepper

Cook the vegetables, season, and arrange in a buttered baking dish. Grate a sprinkling of onion over them. Make a cream sauce of the butter, flour, and milk and pour over the vegetables. Cover with buttered crumbs and bake until browned.—Mrs. F. S.

Sally Lunn

- 2 cups scalded milk
About 5 cups sifted flour
4 tbs. butter
2 eggs
2 tbs. sugar
Salt
1 cake compressed yeast

Add butter, salt, and sugar to the hot milk. When lukewarm, add crumpled yeast cake, and stir until dissolved. Add enough sifted flour to make a thin drop batter, add beaten eggs, then the rest of the flour to make a stiff dough. Put in buttered cake tin that has a center funnel. Let rise until double its size. Bake forty-five minutes in a hot oven. A second rising will make the grain finer.—Mrs. L. D.

Raisin Pie

- 1/2 pkg. raisins
1 cup boiling water
1 tb. vinegar
1 tb. flour
2/3 cup sugar

Beat flour to a smooth paste and add after the other ingredients have reached the boiling point. Bake between two crusts.—Mrs. F. G.

Hurry-up Hot Chocolate

Use a half pound can of cocoa, filling same can once with sugar and twice with water. Mix with a pinch of salt and cook in a double boiler for thirty minutes. Add one teaspoon of this paste to a serving cup of hot milk, and top with a dip of whipped cream. This paste can be kept in the ice box and is handy when making only a cup or two of chocolate or for chocolate flavoring.—Mrs. F. P.

Buttermilk Cocktail

Add one teaspoon of sugar to some buttermilk, the amount varying with the acidity of the buttermilk. Add a tablespoon of grape juice or orange juice. Fill the glass with charged water. Some prefer to grate a bit of nutmeg on top.

HOW WE DISPOSE OF OUR WOOL

WE have been farming for past fifty years and during that time we have always raised sheep, keeping from ten to fifteen. During these years, I have never sold the wool com-

mercially with perhaps two exceptions. The wool is washed several times and rinsed through several waters. I never have the rinse water too hot. A little more than luke warm is just right and the wool will be clean. It is then dried, preferably out in the sun and wind where it will dry and have a fresh, clean, wool smell. It is then carded and made ready.

Now the best part of my story is that we use every bit of the wool in making comforts of three and one-half pounds each. Up to this time, I have made over sixty wool comforts myself and with help, have made numerous others. I have sold comforts for many years until the past two years when I am not able to do the work any longer. Wool comforts, properly made, always find a ready market. One winter I made fourteen and had calls for them before I had my first one finished. The price I charged, depended upon the grade of comfort, ranging from five dollars to ten dollars and as high as fifteen dollars for a comfort weighing about four and one-half pounds, which is plenty heavy enough and warm enough for any bed when made of all virgin wool.

At current prices for wool, one would be tempted to sell, but there is an added profit in making up the wool into comforts, and one's time is also profitably employed during the winter months.—Mrs. H. W. Swope.

FOR BALKY JAR LIDS

A STRIP of rough sandpaper placed around a screw top cover will give you a firm grip and make it easy to open a balky jar lid. This can also be used with the same effect when sealing jars. The heat will not penetrate the sandpaper quickly and you have the advantage of a cool firm grip to tighten the lid.—Mrs. C. H. F.

FROM A HOMEMAKER'S BAG OF TRICKS

IN making jam from canned fruit, as I frequently do in early spring, I find that caramelizing part of the sugar as for pie or cake, gives a flavor that is a welcome change. Also, combining acid fruit, as plums or rhubarb, with elderberries or other sweet fruits gives good results.

Old pieces of velvet should be saved for polishing cloths. They are as good as chamois skin.

When you drive a tack or nail into plaster, if you will first stick the point into a bar of soap, it will not crack the plaster.

A fascinating wardrobe for a wee baby can be made from a box three feet long by two and a half feet wide. Enamel the outside blue and pad the inside with blue sateen. One can use Mother Goose pictures on the cover if desired. This will help to keep the little clothes and toilet articles together.

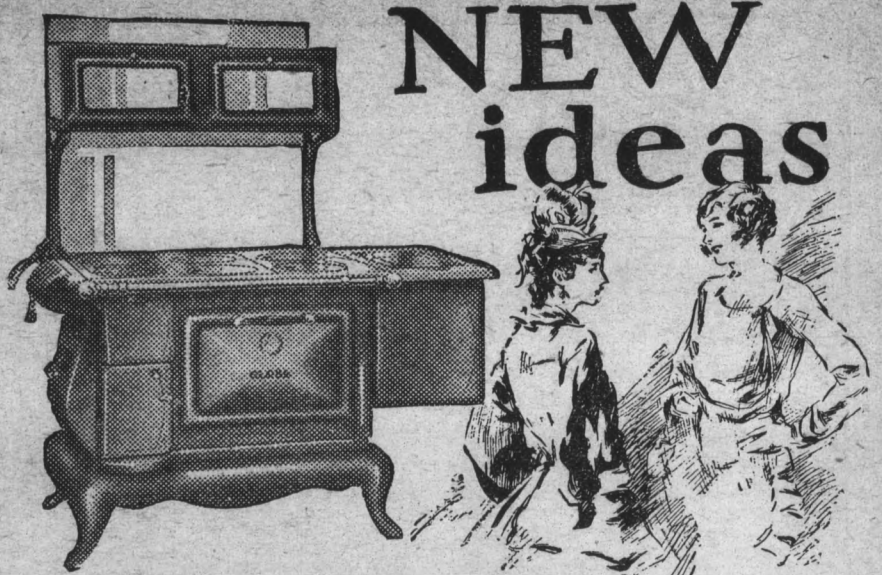
When stewing pumpkin for pie, clean and cut in small pieces as usual but do not peel. Stew with very little water and when tender press through a very fine colander. The peelings will not go through and much time is saved.

Old powder puffs which have been washed please the children as erasers for their small blackboards. By slipping the tape over their small hands, they are able to manage them better than the regular erasers.—Mrs. A. S.

WHEN YOU'RE AWAY

- When you're away the stove won't light, When you're away the pump sticks tight, When you're away the children fight, It seems that nothing goes just right.

When you're away the hired man's cross, When you're away the farm's a loss, When you're away I never say, That anyone but you is boss. Elsa Steward Clark.



NEW ideas

plus an age old principle

... and then, my dear," says Mrs. 1860 to Mrs. Modern Housewife, "set it on the back of the stove to simmer."

They are speaking the same language—good cooking—two artists discussing an art which is not lost, bless your soul...

"That means, of course," according to the woman of today, "that the whole meal will be ready at the same time. What a relief!"

And her shadowy, ancestral visitor nods understandingly, glad to find another who has rediscovered the convenience, the everlasting satisfaction of cooking on a good coal or wood-burning range.

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Rural Health

By Dr. C. H. Lerrigo

WARNING AGAINST RABBIT DISEASE

THE winter months being the season for rabbit hunting I am bound to remind you again that the disease of Tularemia, which is transmitted by rabbits, is one that may be serious in its effects. We now have a record of seventeen deaths in the United States and many hundreds of cases. The cases that get well only do so after a long, painful, and crippling illness.

Those most likely to be attacked by the disease are butchers and others who skin and cut up rabbits. There is nothing to be feared from eating the flesh of a cooked rabbit but all such cooking should be thorough. All of the cases so far investigated seem to have come from personal contact, generally while skinning the rabbits or cutting them up before cooking. In every case it has been found that the person contracting the disease had a broken surface somewhere on the skin which allowed the infection to take place. From this it would seem quite safe to handle rabbits, if you feel sure that you are not carrying a scratch or cut that may allow of infection. The trouble is, however, that one is quite apt to overlook or disregard some apparently unimportant lesion that proves to be plenty large enough for infection to occur. It must be borne in mind that Tularemia is a bacterial disease and that a bacterium is a microscopic organism that is quite invisible to unaided vision. The blood or serum of the infected rabbit coming in contact with the skin is dangerous at any time, and anyone handling rabbits while this disease is

going around should certainly wear rubber gloves.

When infection occurs the symptoms of the disease generally follow within a short time, perhaps within the next twenty-four hours. There is much inflammation about the site of the infection and the glands draining that area soon become enlarged and painful. Fever usually accompanies the inflammation and after a short time the glands may suppurate and sloughing occurs. The fever has been known to last as long as four to six weeks and after that a long time is necessary for the infection to clear.

MAY ESTABLISH HABIT

Our little girl is six months old and is in perfect health. I have been using the syringe regularly every morning, before bath, in order to keep her from soiling her clothes later on in the day. Is it injurious to her health to continue using the syringe to move her bowels or is it better to let nature take its course?—Michigan Mother.

A small amount of warm water, injected carefully, is a perfectly safe procedure where it is necessary. It has the disadvantage of forming a habit that may be a little difficult to break. I think if you place the child on her nursery chair at a regular hour you will get just as good results without the aid of the water. Instead of breaking if off abruptly try using a little less and a little cooler water each day.

Mary: It is so cold at our house that when I pour water out the window its freezes into an icicle.

Jane: Oh, that's nothing. It is so cold at our house that I have to build a fire under the cow to keep her from gving ice cream.



STATE SECRETS

There is an old fashioned conundrum, You may have heard somewhere; "If Miss Ouri wears Mis' Sippi's New Jersey, Now what can —?"

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 Georgia and its capitol is Atlanta.

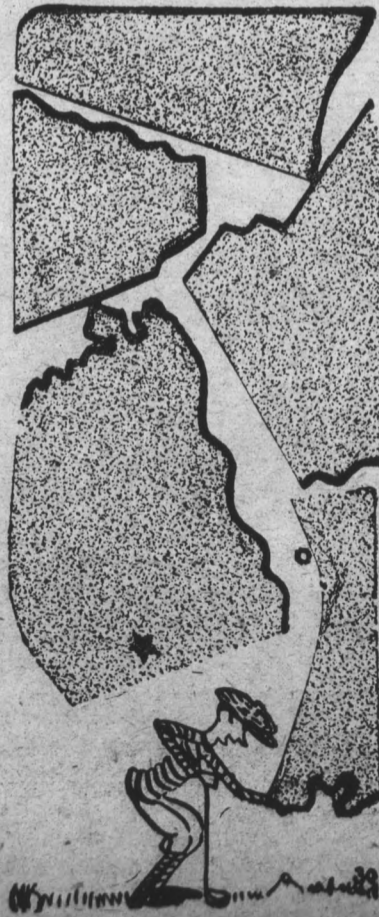
TELL FORTUNE WITH SHOES

DID you ever tell your fortune with your shoes? It's just heaps of fun. The next time your little friends come over to play, you can entertain them with this game.

First seat all of the players close together in a circle and throw an auto robe or a blanket over their feet. Each player then takes off his left shoe, and under cover of the blanket, passes it to some other player. The shoes are then thrown out in a heap in front of the "fortune teller" who may be an older brother or sister. The "fortune teller" reads the fortunes from the shoes, based on "wear at the heel, spend a great deal."

If the heel is unevenly worn, it indicates an uncertain temper; if the shoe is well kept, a successful life for the owner; if run over, misfortune, etc. At the end of the fortune telling, each player must reclaim his own shoe.—Aunt Martha.

The answer to last week's "Who Am I?" guessing contest was the Flicker or some of you may call him Yellow Hammer. How many of my little readers guessed this one?—Aunt Martha.



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Thousands of motherstell us they would not be without *Children's Musterole*, the milder form of *Musterole* especially prepared for babies and children.

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To further convince you I quote here a few of the many Bargains found in this catalog: PEONIES, assorted, 3 for \$1.00; ROSES, Rambler, assorted, 4 for \$1.00; RASPBERRIES, red or black, 20 for \$1.00; JAPANESE BARBERRY, 1 yr. old, 8 for \$1.00; PRUNES, 4 for \$1.00; PHLOX, mixed, 8 for \$1.00; LILIA, 16 for \$1.00; JACK PINE Seedlings, 3 year, ov. 8 to 8 in. high, 25 for \$1.00. Any six for \$5.00.

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Training Twelve Men

Our Weekly Sermon—By N. A. McCune

AND he appointed twelve that they might be with him." That is simple. If these men were to become great teachers they must be with a great teacher, and the closer and the longer the better. That this training had effect, is too well known to require comment. It may be said, however, that the method Jesus used was common in the East at the time. Out-of-door schools were organized in Greece, where famous teachers like Socrates walked to and fro, debating with his admiring followers. John the Baptist had his disciples, and his was, we may be certain, an out-doors school. His influence extended far, and his disciples were found, long after his death, in the cities of Asia Minor. He followed the example of



the Old Testament prophets, who had their schools of the prophets. Elisha followed and almost worshiped his teacher, Elijah. These must have been excellent schools, too.

Given a strong-minded teacher and out-of-doors, and what results! Plenty of ventilation and light in that school room. We don't know everything. The ancients knew a good deal.

The teaching profession needs more respect than it is given in America. Give a youth a teacher of ability, personality, and the love of his work, and you have given that youth a fortune. How we look back upon real teaching! The other day a man was telling about his professor of philosophy in college. So intense did the discussions become, under this man's magic touch, that dinner would sometimes be forgotten, and even a ball game slighted. The discussions of what had been said in the class room lasted far into the night, and the students of this man were looked on as almost loony. But each class, as it came along, was affected in the same way. That is teaching! Those careless fellows would never be the same, after such an experience.

The pupils of Agassiz were affected much the same. One summer he took a selected group to an island in Buzzard's Bay, where an old sheep barn had been fitted up as a laboratory. Those were summer days to be remembered. So deeply affected were both master and pupils that he one day stopped the class discussion and led the class in silent prayer. Whittier afterward took the incident for the subject of a poem, "The Prayer of Agassiz," which is among his published poetry. Agassiz said, "a physical fact is as sacred as a moral principle." He also said that he would not tolerate anything in laboratory which would be improper in church. Reverence is always found in great teaching, just as wonder is found in great students. Was the teaching of Jesus as interesting, do you imagine, as that of Agassiz, or the professor of philosophy? We know that Jesus was so engrossed in his work at times, that he did not care for food, and I suspect that his pupils often got into such animated discussions that they too forgot the meal ticket. "Declare unto us the parable," they would say, after a public discourse. No doubt such explanations often lasted far into the night. They did not know it, but they were sitting under the tutelage of the Master Teacher of history.

If Christ was teacher then, he is now. It is an interesting approach to the Christian life to think of it as a school, ourselves the learners. That being so, a natural question is, are we learning anything? Would we "pass," if examined? Have we grown

in religious mentality the past month, or year? You sometimes meet church members who apparently have not had a new idea about God, prayer, the bible, the church, the spread of religion into modern industry, foreign missions, or any sort of missions, in twenty years. Are we any more forgiving than we were five years ago? Are we more willing to overlook the derelictions of others, and more severe with ourselves? No? And we claim to be the pupils of the great religious Teacher of all time?

When these went out to teach and preach, they were told not to take anything in the way of provisions. This may have been to teach them that real religion consists more in being than in having. Most of us are not happy unless we are accumulating things. The happiest man, according to our philosophy, is the man who has gathered together the largest heap of possessions. When a man dashes past in a Packard, we figure that he is more successful than one who goes by in a Chevrolet. We teach our young people so. When the orator delivers an address to the graduating class in high school he tells them to get ahead, get a big position, amass money, be talked about, be somebody. This is sound enough doctrine, no doubt, only it is not the doctrine that Christ taught. Some things that he taught we do not believe, or we certainly do not practice them. Having is our creed. Being was his creed. "A man's life consisteth not in the abundance of the things which he possesseth." It is very possible, according to Jesus that the man in the Packard may be the poorest man in the whole community. He may be poor in soul, "wretched, and miserable, and poor, and blind, and naked," to quote a man who knew Jesus, and if he is so, it does not matter how many acres he has, or what automobiles he drives. Once Jesus called a millionaire a fool, and no doubt that was a mild term, and would be mild today, when applied to some rich men.

Our ideas of life do not accord with much that Christ taught.

SUNDAY SCHOOL LESSON FOR MARCH 4th, 1928

SUBJECT:—Training the Twelve. GOLDEN TEXT:—16:15.

"By the Way"

Tommy sat with his feet in the aisle and was chewing gum. "Tommy," said the teacher, "take your gum out of your mouth and put your feet in."

Mother: "Yes, Jack is her half brother." Child: "But, mother, where is the other half?"

First Man: "What's them?" Second Man: "Them's cranberries." First Man: "Are they good to eat?" Second Man: "Are they, why them things stewed makes better apple sauce than prunes."

Teacher: "If the president, vice-president, and all the members of the cabinet should die, who would officiate?" Tommy (rather thoughtfully): "The undertaker of course."

Clerk: "Why do you say your envelope reminds you of a map?" Man: "Because it's all the world to me."

Mother to Bobby: "Surely you did something else but eat at the school treat?" Bobby: "Yes, mummie, after tea we sang, 'We can sing full though we be.'"

Mother learned afterwards the hymn selected had been "Weak and Sinful Though We Be."

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A NORTHERN POULTRY SUCCESS

POULTRY raising in the Upper Peninsula of Michigan sounds impossible no doubt to a good many southern Michigan farmers. I imagine there are some who actually think a White Leghorn would not survive a northern winter in an unheated house.

A small flock of 186 White Leghorn hens averaged 192 eggs per bird for me in an unheated house not equipped with lights during 1927. These birds gave me a profit of \$4.24 per bird for my labor for the year or a total of \$788.64 above feed costs.

To give my reasons for this record would make a long story, for I find that successful poultry raising means that exactness in details must be followed. By that I mean, a farmer cannot expect results by simply throwing in feed occasionally, watering when the water tanks go dry, and cleaning roosts on the yearly basis.

A Good Start

Five hundred baby chicks were purchased from a reliable accredited hatchery in the state, brooded in a ten by ten colony house and raised on commercial chick feed. Cockerels were sold at about two pounds for broilers and weak and slow maturing pullets culled out leaving me 186 pullets for winter production.

The most practical methods were used throughout. A Michigan shed type house thirty-two by sixteen as recommended by the Michigan State College housed the birds. It was single boarded with ship-lap over tar paper, the tar paper being white washed on the inside to brighten the coop and prevent the birds from picking at the paper. To prevent frosted combs at thirty-five degrees below zero weather as we had last winter, it is necessary to have proper ventilation and a dry floor. A double boarded floor with tar paper between was provided as was proper ventilation. As stated before no artificial light was used as I do not have electricity on the farm as yet, but hope to use lights next winter. Commercial scratch feed was fed with carrots for green feed, and oysters shell and grit were before the birds at all times.

Dropping boards were cleaned the first thing every morning, the birds fed at the same hour twice daily and fresh water supplied every morning. Frequent changes of straw bedding on the floor kept the floor dry and clean. To such seemingly minor details as mentioned above, good breeding in the birds and proper feeding and housing, I give credit for the splendid showing made by my small flock.—T. H. Whitburn.

MARKETING POULTRY AND EGGS

RAY A. GULLIVER, representing a firm buying poultry and eggs in Central Michigan, addressed the poultrymen during Farmers' Week. He claims that under-consumption rather than over-production is the greatest marketing problem at present. If people can obtain better quality eggs, they will use more of them. Efforts are being made to get both poultry meat and eggs from the producer to the consumer as soon as possible. Many consumers have been prosperous in recent years and demand quality goods.

Quality Makes Profit

The quality product must be turned out by the producer as it is not a surplus of quality goods but the poor stuff that makes bad markets. The breeding stock that lay small eggs are apt to produce pullets that will lay more small eggs and good sized eggs are naturally desired by consumers. Every case of dirty eggs hurts the entire industry. Clean eggs sell better and quicker than dirty eggs.

Sanitation is necessary all along the line from the hen house to the consumer and the wholesaler and re-

tailer must be careful as well as the producer. The retailer that places eggs near a stove may offset all that has been gained by previous good care. The biggest thing that is holding up the poultry industry in Michigan is lack of sanitation.

Held eggs often cause trouble in the egg market. Sometimes a case of eggs will have good eggs in the bottom and poor ones on top showing that they were held too long in the baskets and when the crates were packed the fresh eggs on top go into the bottom and the stale eggs from the bottom of the basket go on the top of the crate.

Poultry with crooked breasts look bad on the market and in the packing boxes and should be used at home if possible. Thin poultry do not look well on the market. Many birds are thin, not because of lack of feed, but due to sickness at some time in their life or low vitality. These thin birds do not fatten readily. When these seconds are placed in the fattening batteries, they are apt to be thin when they come out. It does not pay to try and fatten poultry of that type.

POULTRY HOUSE EQUIPMENT

AT the Farmers' Week poultry meetings, J. M. Moore described an easily constructed dry mash hopper. It consists of a box five or six feet long eight inches wide and six inches deep with a one inch lip on each side. The lip keeps the hens from working the mash out with their bills.

This box hopper is raised on legs about fourteen inches from the floor and this keeps the straw litter out of the laying mash. The ends of the hopper are built up with pieces in which holes are bored. Then a nail is placed in each end of a board about the length of the hopper. This board fits over the mash just high enough from the mash to keep the hens out of the hopper. If a bird lights on the board it will spin and cause the bird to jump. This will prevent the hens from roosting over the mash. A hopper of this size is large enough for one hundred hens.

Use Sanitary Fountains

Water fountains should be the type which can be opened and cleaned. A one hundred hen fountain should be large enough to allow eight hens to drink at the same time. Disinfectant can be used in the drinking water to prevent the spreading of colds but should not be used unless necessary as the hens like the water the best when it does not contain dope.

Nests should be installed at the rate of one to five birds or twenty nests per one hundred hens. A nest should be built so the hen can walk into it and not jump down upon the eggs. It must be easily taken apart for cleaning to help in keeping down red mites during the summer.

The size of nests should be twelve by twelve inches for Leghorns and twelve by fourteen inches for the heavy breeds. Hinge the tracks in front of the nests so they will fold back and hook over the entrances. Then the nests can be closed late in the afternoon until pullets are broken of the habit of roosting on the entrances and adding dirt to the nesting litter. The nests can be built without backs and the sections hinged to the side walls. Then they can be swung out to allow the old litter to fall at the back.

Straw Loft Poultry House

When an old building is remodeled into a poultry house through the use of the straw loft, the front of the house should be divided into one-third siding, one-third glass, and one-third open front which can be covered with cloth curtains during storms. About two feet of straw should be used in a straw loft poultry house and it can be placed on strips of wood or two inch mesh poultry wire.

Poultry Diseases

The First of a Series—Sanitation and Prevention

IN no line of farming is the old maxim, "an ounce of prevention is better than a pound of cure" of greater value than in poultry raising. With other live stock it may pay to cure the animal, but a sick chicken is rarely worth the expense and bother of curing. Therefore, a sick chicken is practically a total loss, while a healthy one has possibilities of profit.

Sanitation is the one great factor under man's control whereby he can keep his birds well and lay the foundation of profit from his poultry. Sanitation is that "ounce of prevention" which one must use to succeed with poultry.

Investigation by the Kansas Experiment Station has shown that where poultry is carelessly kept the average losses from flocks run up to a total of forty-one per cent, but where a regular schedule of sanitary practices is followed the losses from disease are only about seven per cent.

Poultry needs more sanitary care than do other farm animals, for the average poultry flock is housed in congested conditions where each individual comes in contact with the exudations and excrements of the others and the accumulations which pile up rapidly. We clean the stables daily for our few cows and horses, give them fresh bedding, brush them frequently, and feed them in clean feeding places. But with poultry, we let the excrements accumulate, the litter get damp and dirty, and then throw the feed into the filth for the birds to get their exercise and food. Furthermore, we often compel the birds to live in ill-ventilated, unhealthy houses. Is it any wonder that poultry diseases constitute the greatest problem of the poultry raiser?

A survey of the situation shows that the poultry diseases are most prevalent during and following the winter months with the greatest losses occurring in April and May. This is because the hens' vitality has become so weakened from an attempt to resist the unsanitary conditions which have prevailed during the winter or shut-in months, that many of them succumb in spring. As at least one-half of the year in this state is shut-in time for chickens, one can readily see the importance of keeping hen house conditions healthful.

The chief basis of maintaining sanitary conditions is to have a house which provides plenty of ventilation without draught, is always free from dampness, and has sufficient light. The state experiment station will be glad to furnish plans of a practical house, and suggestions on sanitary poultry house equipment and flooring.

The droppings should be cleared away every day or at least several times a week. The litter should be frequently renewed, especially if it gets damp. If dampness in the litter, or house, persists, look to the ventilation, for proper ventilation will prevent dampness.

Most all the diseases of the animal kingdom come from what the animals eat, drink, or breathe. Therefore, it is necessary that the drinking vessels should be cleaned thoroughly every day, filled with clean water, and placed so that the chickens cannot throw dirt into them; the feed should be clean and free from mold and mustiness.

Correct feeding is also necessary, for disease is often the result of the lack, or over-abundance, of certain food elements. Therefore, the hens should have access to a ration which is balanced, or which they can balance, according to their own requirements. Certain amounts of grains, proteins, and green feeds are necessary to maintain health and good egg production.

Another factor in maintaining the health of the chickens is the control of parasites, such as lice and mites. These parasites weaken the hens and thus lower their resistance to disease. Spraying or painting the roosts and nests with carbolineum, crank case oil and kerosene, crude oil and crude carbolic acid, or some good commercial mite spray is effective for controlling mites. Then hens also should be dusted occasionally for lice with a good lice powder, especially if they do not have opportunity to dust themselves.

At least annually, the hen house should be thoroughly cleaned and washed out. This should be followed by a spraying with some good coal tar preparation, chloride of lime, or other good disinfectant.

The use of disinfectant through the year is also a good practice, but it should not be used with the thought that it can overcome the effects of careless and unsanitary practices. Disinfectants are only efficient when they supplement, not supplant cleanliness.

Nor can the use of materials in drinking water for the purpose of preventing or curing disease be safe if the water itself is not clean. In fact, any material strong enough to kill disease germs would also harm the birds. However, some materials hinder the spread of disease through the drinking water. Permanganate of potassium is the most common of these. Enough may be used to turn the water cherry red in color. It has been found, however, that the addition of drugs to water usually cuts down the consumption of water, which of course is undesirable.

Another very important factor in keeping the chickens free from disease is the sanitation of the ground over which the chickens roam. A thorough plowing of the ground and planting it to crops every year or so, is very beneficial. If the birds are kept in yards, double yarding is advisable, cropping one yard while the other is being used. In the most modern poultry plants, the chickens are not allowed on the ground at all but are kept on cement runways which are always kept clean and sanitary. Quite a few of the serious poultry diseases come from contaminated ground, therefore, the need of this special care with reference to the ground. For safety's sake, chickens should not occupy the same ground more than once in three years.

Many poultry diseases are contagious and are brought into the flock by various means, such as persons, new stock, and wild birds. Modern practices now involve the screening of the coops from sparrows which are frequently carriers of diseases from other flocks. However, birds which are fed and watered right, and kept in sanitary coops and under sanitary practices, have usually developed a resistance against these contagious diseases and, therefore, are not nearly as susceptible to them.

When disease develops, immediately isolate all the affected birds. Should any of them die, burn or bury them deeply. But if one is not certain of the cause of the trouble, have a post mortem examination made before disposing of the birds. If no one locally can do this, send the dead bird to the Bacteriology Department, Michigan State College with a letter telling the symptoms of the disease. The birds should be sent promptly, as many reach their destination in a badly decomposed condition and, therefore, are useless for post mortem examination.—("Roup and Colds" next week.)

THE right kind of feed will nourish them during the chilly days and the rainy days. For life, health and quick growth, order Purina Chick Startena and Purina Baby Chick Chow from the store with the checkerboard sign. Startena contains cod-liver oil—potent in vitamin D.

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Buy Mich. Accredited Baby Chicks from Michigan's largest poultry farm. We buy no eggs to put in our incubators but produce them on our own farm from selected hens mated with 50% 200 to 330 egg Tancered males, pedigreed. All breeders have been bloodtested for **BACILLARY WHITE DIARRHEA** for the past 4 years which insures you chicks practically free from this dread disease. No better chicks at any price. Only one grade.
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64 BREEDS Most Profitable pure bred Northern raised chickens, ducks, geese, turkeys. Poultry, eggs, chicks, incubators at low prices. 35th year. Largest plant. Valuable 100-page book and catalog free.
R. F. Neubert Co., Box 814, Maumet, Minn.

GREEN FEED FOR CHICKS

WHEN brooding winter chicks it is necessary to furnish green feed as a substitute for the bits of fresh clover and other green feed which spring chicks gather on the range. This succulent feed helps to balance up the more concentrated dried buttermilk starting mash and seems to help in preventing digestive disorders.

If you live near a town where the dealers sell head lettuce from California, it is sometimes possible to obtain a few bushels of the outside leaves which are trimmed off before the heads are placed on display on the market stands. These green leaves are tender and succulent and seemed to be greatly relished by the chicks. They can be cut into short bits by running through a food chopper and a few handfuls given each day to every colony house of chicks.

Hoppers for Hay

Small wooden hoppers built close to the floor can be used for bright green alfalfa hay. The chicks will soon learn to pick at the leaves and the remaining stems can be added to the brooder house litter whenever the hoppers are replenished with fresh hay.

Sprouted oats are one of the standard green feeds for chicks. It takes time to prepare them and we have not found it necessary to use sprouted oats when the chicks have clover chaff, alfalfa, or alfalfa meal mixed with the starting mash.

After chicks have reached two weeks of age, we have sometimes used chopped carrots or cull apples as succulent feed and found them to be relished by the chicks. They also like fine bits of sliced onions. I do not believe that potatoes either raw or boiled are of much value in a chick ration.

Sods for Chicks

As soon as the grass starts to grow in the spring, it livens up the chicks to cut green sods about a foot square and place two or three of them in each brooder house close to the canopy. The heat from the stove will tend to sprout the grass more rapidly and the chicks will soon eat all of the fresh grass and even scratch the roots out of the dirt. When they become dry and the grass is exhausted the sods can be replaced. Pieces of sod placed in brooder houses should be taken from soil that is apt to be free from poultry disease due to the ranging of other years.

If time is lacking to prepare green feed for chicks, I think it pays to buy high grade commercial alfalfa leaf meal. A few hundred pounds will furnish green feed for a lot of chicks. Many of the best chick starting mash-ers contain a little alfalfa meal. These mashes should be used according to the directions of the manufacturers but chicks on a starting mash containing alfalfa meal often seem to thrive and grow rapidly without the necessity of furnishing them with any other source of green feed.

TB. IN POULTRY AND HOGS

(Continued from page 301)

itself by outward evidences of the disease and we do not have post mortem inspection of poultry. In the application of the tuberculin test on flocks in many of the middle western states, it has been shown in numerous instances that as high as twenty per cent of the chickens may be infected with this disease and still show no physical symptoms. Chickens carrying normal flesh will often react and when posted will show the characteristic yellow spots on the liver and spleen and nodules filled with a cheesy substance attached to the intestines.

Of course, when certain chickens of mature age reach an advanced stage of the disease, they do become thin in flesh and often die. It is then

nothing unusual for the farmer to throw the dead bird into the hog pen, which invariably gives hogs the disease when they eat it. Even though the chickens don't show physical symptoms, the egg laying capacity of the flock must be considerably reduced by this disease.

Young Chicks Not Reactors

Very fortunately, and this is the most important part of the whole story, very few chickens under six months of age react to the test or show evidence of tuberculosis and comparatively few under twelve or even eighteen months of age reach a stage of the disease where they give off germs through the droppings and thus become a source of danger to other birds and to the hogs. As in the human family, tuberculosis in poultry, cattle, and hogs progresses slowly in the system. If every farmer would make it a practice to dispose of all birds at the end of the first twelve months of production, he would soon eliminate tuberculosis from his flock because the old birds are in most instances the spreaders.

No doubt this explains why there is so little tuberculosis in poultry in the eastern states. They have plenty of it there in cattle, probably the most of any section of the country, but very little in hogs and poultry. Why? The principal reason is that the farms in the east are smaller and poultry raising is a primary industry; in other words, more commercialized. In that section you find farm after farm where only young birds are kept for egg-laying purposes, because they know that the most eggs are produced during the first year of the life of the hen.

Coöperate with College

Through the courtesy of Prof. Card, head of the poultry department of Michigan State College and Prof. Mussehl, head of the poultry department in the University of Nebraska, we tabulated trapnest records on a total of 276 hens, representing three different breeds—mostly White Leghorns. In only two instances did these records show that more eggs were produced during the second year than the first year of production. All of the other birds showed a larger number during the first year, the average being thirty-four per cent more eggs laid during the first twelve months than during the second twelve months.

Some prefer to hatch eggs from birds more than one year old, thinking that the chicks will have more vigor. That is a debated question. However, a large number of farmers now buy young chicks from hatcheries. If the flocks producing eggs for these hatcheries contain birds over one year of age, such flocks should be tuberculin tested under State and Federal supervision. While a limited amount of research work shows that there is very little transmissibility of avian tuberculosis through the egg it is a wise precaution to see to it that young chicks come from clean farms.

Keep Chicks Sanitary

As has already been pointed out, that these young chicks, when purchased should be put on clean soil away from the poultry lots where infected birds may have deposited germs of the disease. Keeping only young birds and following proper sanitary methods will in a short time eliminate tuberculosis from the flock, making the flock much more profitable to the owner and at the same time eliminating the danger of infecting his hogs with this disease through association with the chickens.

Milk supplies enough or most of the minerals needed in the diet of poultry except lime and phosphorus. Where much milk is fed, oyster shell or limestone and bone meal should be added to the ration to provide an adequate supply of these minerals.



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Chick Mash 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.

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HEALTHIER CHICKS WITH A MARIETTA BROODER HOUSE

Now you can be sure of healthy, husky, fast growing chicks. Marietta Brooder Houses with windows that admit the life-giving, health building Ultra Violet Rays of the sun are putting poultry raising on bigger profit paying basis. Sanitary, vermin-proof round construction. No corners for chicks to crowd in. Walls are first grade beveled silo stock, selected Oregon Fir. Floors match and are cut round. Raise more and healthier chicks. Get our special low price and easy payment plan.
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MICHIGAN ACCREDITED
Try some Silver Ward Select Chicks this year and see the difference. They are chicks that will develop into high record money makers. Of course, they are Michigan Accredited. Such strains as Barron and Tancered Leghorns, Sheppards Anconas, etc., have been blended in their making.
GET THEM C. O. D.
You can now pay for your chicks when you get them. Absolute confidence in our chicks and faith in your honesty makes it possible for us to ship you your chicks C. O. D. Our free catalog tells all about the details. Get it today.
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Why not buy Baby Chicks that are insured for the first critical thirty days? Send for one of the most amazing propositions ever offered on quality Baby Chicks!
FREE BOOK explains our insurance proposition on White and Brown Leghorns, Barred and White Rocks, Reds, White Wyandottes, Ducks, Geese and Turkeys. Get your copy of this book!
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Rugged, vigorous chicks that will live and grow. All flocks and hatchery Michigan Accredited. Send for our free catalog. It tells all about our stock and prices. We hatch B. P. Rocks, R. I. Reds and S. C. White Leghorns.
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Shows and describes 63 varieties Old Reliable Blood Tested Flocks **SHOEMAKER STRAINS**—best for 38 years. Gives facts about handling, feeding, housing, diseases and remedies. **LOW PRICES** on eggs, eggs, chicks, Brooder Stoves and Supplies. **BOOK FREE!**
C. C. SHOEMAKER, Box 105 Freeport, Ill.

A Blow to Farm Thieving

(Continued from page 296)

and trespassers who molest the property of members of Protective Service where the Michigan Farmer Protective Service sign is posted.

Rapid Transit Helps Thieves

There is food for thought in Attorney General Potter's letter in reference to the part good roads and automobiles play in the life of the sticky fingered gentry, for the development of these two modern necessities has brought the property of the farmer as close to the congested portion of our state as it was twenty years ago when it lay adjacent to the large city. This has permitted the person with predatory instinct the opportunity to appropriate the property of others. This condition must be met, and it can best be met by the cooperation of the property owners themselves. In short, cooperation of the law enforcement agencies and courts.

Many Are Enrolling

From the way enrollments are coming in for membership in the Protective Service, it looks as though a large percentage of Michigan farms are going to be posted with a Michigan Farmer Protective Service sign. The enrollments are coming in by the hundreds every day. Farm folks are out to stop thieving and trespassing. They have their coats off and their sleeves rolled up and are going into the fight with us in a way that insures success.

I wish I could print the many interesting letters coming in from our readers commending us for this Protective Service, many of them comparing it with Federal travel accident insurance policy, for in reality life and property protection go hand in hand. It is gratifying to know that people really appreciate a helping hand, as that is what many travel accident insurance policies have meant to members of the Michigan Farmer family in cases where death and disability settlements have been made. It will be our aim and purpose to make this property protection fill its place in the public needs, as we have with the travel accident protection.

To print the letters of commendation on this service thus far received it would take an entire issue of the Michigan Farmer and I doubt if that would begin to hold it. One of the first applications that came in for membership in the Protective Service was from Drake Sisters, Sandcreek, Michigan. "I am writing to say that our farm, while in one piece, sprawls over enough country that we have openings on two roads, each a mile from our building. Because of this we need more than the one sign I am ordering herewith. The trespass protection will be of assistance and it is surely needed. We had twenty acres of corn in one of the back fields last year into which we turned a carload of feeder steers, but the field was so infested with hunters that while

the cattle ate the corn they put on no weight as they were forced to use up their energy in fleeing from hunters. It got so that at the sight of anyone they would go over or through a good fence as though it were not there. Before hunting season they would come and eat out of our hands like lambs. Hunters this year cost us the value of this corn crop as more corn was ruined than was consumed by the cattle, and what they did eat went for energy to permit them to run instead of putting on fat. We want to post our whole farm and need at least two more signs immediately, if they can be gotten through your good paper. With deep appreciation of the service the Michigan Farmer is giving the country folks, we are cooperatively yours, Drake Sisters."

Further Help Has Been Planned

This is another angle to the trespass situation, and it would seem that loss can be sustained without the accidental shooting of animals at the hands of careless hunters.

Here is word from a hatchery owner in Ottawa County. "I certainly am glad to know that something is being done to curb this thievery. In this community, considerable poultry and other farm products have been stolen. While I have been very fortunate to date not to have losses by thefts, I am better prepared than the average farmer to ward off thieves. I have a complete burglar and fire alarm system installed that certainly would be a hazard to any sneak thief who might take it upon himself to pilfer my property. I hope this movement will be a success and will meet with the hearty cooperation of every farmer in the state." This party is fortunate in having his farm so well protected. In an early issue we will explain how to construct at small cost an effective burglar alarm system which will give you additional protection against thieves.

Get Your Property Posted

The Protective Service appeals to farm folks in every part of the state. To join this drive against thieves and trespassers, your premises should be posted at once to protect yourself, family, and property. Thieves are organized—and the only way we can stop them is to organize against them. A state-wide drive against thieves and trespassers is on. Post your farm with Michigan Farmer Protective Service sign and Horton Trespass warning sign.

POULTRY NOW LIVE STOCK

THE bill specifically defining live poultry as live stock under the quarantine laws has become a law. The measure was supported by the poultry associations. They want the live stock quarantine act to apply to live poultry.

"No Chick Raiser Should Be Without Dr. LeGear's Chick Diarrhoea Tablets"

—says OTTO KIRCHER, Secretary, Missouri State Hatchery



One of America's most successful Baby Chick Hatcheries—capacity 300,000 eggs. Their "Better Chick Manual" is free. Send for it today. Address, Dept. L, Missouri State Hatchery, Butler, Mo.

Read His Letter

November 7, 1927.
Dr. L. D. LeGear Medicine Co., St. Louis, Missouri
Dear Sirs: We have closed a most successful year. Successful because our customers have been well pleased.
We hatch chicks free from bacillary white diarrhoea but as there is no way to make them free from common bowel trouble, also known as white diarrhoea, we recommend to our customers that they use Dr. LeGear's Chick Diarrhoea Tablets.
In every case where our recommendation was followed the customer had the best of success and was well pleased. It would mean better satisfied customers and more repeat orders if every hatchery recommended the use of your tablets. It has been worth thousands of dollars to our customers this season alone. No chick raiser should be without them. Very truly yours,
MISSOURI STATE HATCHERY.
OCK-HH Otto C. Kircher, Secretary.

How many baby chicks have you lost as a result of Chick Diarrhoea? Plenty! And you're not the only poultryman who has suffered. Hundreds of thousands—yes, millions of chicks from three days to three weeks old succumb annually to this deadly disease. Chick Diarrhoea losses run into the millions. And yet there are thousands of poultrymen who successfully combat this great poultry evil. How do they do it? Note what the Missouri State Hatchery has to say about using



Dr. L. D. LeGear, V. S., in Surgeon's Robe Graduate Ontario Veterinary College, 1892. Veterinary practice for 36 years. Poultry expert, author, lecturer and authority on ailments of Stock and Poultry.

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| Poultry Prescription—Mineral-ized | Antiseptic Healing Powder |
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| Chick Diarrhoea Tablets | Heave and Distemper Remedy |
| Poultry Worm Powder | Worm Remedy |
| Cold Tablets | Gall Remedy |
| Poultry Bowel Regulator | Bilster (Spavin Remedy) |
| Head Lice Remedy | Antiseptic Healing Oil |
| Sore Head Remedy | Colic Remedy |
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Dr. LeGear's Chick Diarrhoea Tablets

Dissolve Dr. LeGear's Chick Diarrhoea Tablets in all drinking water for the first three weeks. Don't wait until symptoms appear. Start when the chicks are three days old and protect them every day through this vital period. This simple, tested remedy costs so little every poultryman should have it at baby-chick time. Get and use a full can. If not satisfied, dealer will refund full purchase price.

Use Dr. LeGear's Stock Powders

MINERAL-IZED—makes cows give more and richer milk. Horses and mules will work harder. Calves, hogs and sheep will grow faster. Steers will be in tip-top shape for market. Get and use full pail or package. If not satisfied dealer will refund your money.

Dr. LeGear's Poultry Prescription

MINERAL-IZED—contains essential MINERALS for egg production, rich blood, bone tissues and feathers—TONICS for the blood, nerve and egg organs—CONDITIONERS for the digestive organs—LAXATIVES for the bowels; all being vital ingredients lacking in home or commercial mixed feeds, without which best results cannot be obtained from poultry. Satisfaction guaranteed or your money refunded.

FREE! Dr. LeGear's Big Stock Book: "Care and Treatment of Stock and Poultry"—128 pages; 50 illustrations. A scientific treatise on diseases, treatment and care of horses, cattle, hogs, sheep and poultry. Ask your dealer for free copy, or send us 10 cents to cover mailing.

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HOLLAND HATCHERY

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

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

Holland Hatchery & Poultry Farm Van Appledorn Bros. 77C Holland, Mich

Town Line POULTRY FARM

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

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

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

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

SILER'S Standard Bred Blood Tested CHICKS

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

Barred Plymouth Rocks and S. C. White Leghorns
Write for free catalog and prices

SILER HATCHERY BOX A DUNDEE, MICHIGAN



KARSTEN'S QUALITY CHICKS

Assure you large white eggs and lots of them, as the Karsten's are the breeders that offer you chicks from breeders from trap-nested stock and at prices you pay for common Leghorns. Send for Karsten's new Leghorn book written by men who have been breeding S. C. White Leghorns for years and who know "Their Chicks." This free book fully explains Karsten's Famous Feed Formulas and gives full instructions on feeding and care of chicks and laying stock.

Karsten's Farm, Box 17, Zeeland, Mich.

Succeed with Chicks

by learning chick raising essentials from

Michigan Farmer Chick Bulletin

Describes short practical method of raising chicks which assures success.

Has been approved by poultry experts and practical poultrymen. Contains unique labor-saving feeding method, suggestions on disease prevention, and many practical hints in care and management which make a big difference in results.

Send Self-addressed Stamped Envelope to

Poultry Dept., Michigan Farmer, Detroit, Mich.

For Your Copy

OUR BOYS AND GIRLS

For Dad About Dad

What Some M. C.'s. Think About Him

WHO does not sincerely desire to forever "love, honor, and obey" their Dad? My Dad—the man from whom I inherit my good name, and whom I look to as my constant friend and advisor, what hopes I have of pleasing him! He expects me to amount to something, and how could I ever disappoint him?

As I write, my Dad sits before me. My baby brother, who is now fast drifting to the land of sleep, rests contentedly on his chest, while Dad rocks, and hums a baby song. The



Gladys Hinchey's (Standing) Dad Promised Her \$5.00 to Raise the lamb.

sleepy eyes of the dreaming child slowly close—open—close again. While Dad—dear, patient Dad, his strong, brawny form awkwardly sprawled on his chair and his feet extended at full length, rocks silently and sings quietly, half asleep himself, and unconscious of my admiring gaze.

The resting child—tiny, helpless, and dainty—and Dad—big, powerful, leathery, and yet gentle Dad—tell me, who can, is there a more beautiful picture?

I am contributing an earnest and noble wish when I say that I hope—sincerely hope—that every boy of today will become, some day, as good a Dad as my own is now.

So, heres' to my Dad—may he live long in happiness, and may he win the respect from the other children that he has so unconsciously won from me!—Ruth I. Burkett.

Of course, we all have the best parents in the world but I want to prove to you that my Dad is one of the finest men living.

I had for my inheritance, a very warm temper. It was from the English side and from the German, a stick-to-it policy. Thus from the start things were rather complicated for me.

By some miracle, Dad had escaped from all this and was very "easy-going." Nothing seemed to anger him, in fact, I have never seen my Dad angry.

It was a great disappointment that all we children should have such tempers. He has talked to each one of us for hours, but nothing seemed to avail. Finally, Dad told me that no one would ever like a person with such a ready temper. I resolved to overcome my fault.

Asking Dad for his assistance I began a long struggle. When I felt myself slipping I gritted my teeth and kept my mouth shut.

"You will win yet, Idolia," were always Dad's words. "You are doing better."

And Dad, by his wonderful knowledge has lifted me from one of the

worst habits that there ever has been or will be.

"I once had a temper like your own, Idolia, it was a trial to me. I lost friends, I was an exile, when in a fit of temper every one shunned me. Control your temper."

And this pleading, telling, coaxing me, with tears in his eyes, he has helped me to break my worst habit.

Dad also taught me the value of money by letting me work.

"A little work will not hurt you, earn your own money, learn to know what a dollar will buy."

And while my Dad is not known to the world, everyone who knows him respects him, admires and loves him, dear old easy-going Dad!

Three cheers for Dad! May he live forever.

And to all the "Dads" who read this, inspire confidence in your children. They will love you all their life. Be a pal to your children.

There are three of us children at home, and Mother and Dad, and all are just a bunch of children together, taking life as it is, hard or soft.

The older boys affectionately call

Dad "Bill" and he does not resent it. —Idolia L. Smith.

My Dad is my best friend. He and I have no secrets from each other. As we work together in the barn or in the woods on Saturdays he explains the difference in cows; he believes that farmers should keep high grade cows and the same kind of a bull. He is never too hurried or busy to explain something I do not understand about our machinery or about our auto.

When I get A's on my report card, I am sure of words of praise, and also a reward in the shape of a good movie, a new book or a piece of money. He tells me that he believes the farm is the place for a young fellow who wishes to succeed honorably, and he thinks farmers will be "the rage" in a few years.

We expect to go to the Dad and Son banquet to be held at Ovid. I know I'll be in good company.—Osmond L. Beckwith.

While Father-Son banquets are over now, the boys and girls wrote their opinions of dads during the Father and Son time. In order that the above letters will not make dads feel too elated a few others will be printed next week. I would appreciate comments on these letters from dads and others.—Uncle Frank, Just Another Dad.

A Father Says

A Good Word For the Modern Youth

THROUGH efforts put forth by the young folks and Uncle Frank, Our Page has grown to be a governing influence in the lives of our boys and girls.

The notes from Uncle Frank have met with my approval because they always point out the right way. Well, may we feel a sense of safety and security for our boys and girls when men and women do their best to guide the thoughts of our young people into proper channels. The splendid letters I find on Our Page from boys and girls prove to me that boys and girls of today are doing a great deal of good for the world through their constructive thinking.

I believe in the boys and girls of today—they are just as brave, noble, and true as any class of boys and girls ever were in the past. We have only to think of the brave, noble deeds the boys and girls are doing today to realize they are a noble type.

It is delightful to remember the many boys and girls who through faithful and patient work are winning prizes in contests. A boy, a high school student, in one of our southern states won a two thousand dollar prize in an oratorical contest. He didn't go and buy an automobile—he presented the two thousand dollars to the school for the promotion of public speaking. If we were all as generous and unselfish as the boys and girls of today, this world would be a better place in which to live.

I think it was about time we were starting a campaign. I wish we might all pledge ourselves to a campaign to advertise "What's right with boys and girls." Let us advertise from the pulpit, through the press, over the radio. Let us "say it with flowers." Let us prove by the smile on our faces, the light in our eyes, that we know what's right with boys and girls.

We often speak with pride of our material wealth, our resources, our raw materials, manufactured products, our treasures in the way of art, music, and literature, when boys and girls are our real treasures. Some of them are

diamonds in the rough, but with a little patience, love, and encouragement, they will come out revealing beautiful traits of character and gifts of ability we never dreamed of.

When we have been interested in setting good examples for our boys and girls, when we have thrown around them influences—influences such as will inspire them to reach out after and attain ideals of beauty and per-



Somebody's Dad and the Family Dog Enjoying Each Other

fection—we have the satisfaction of knowing that those ideals will stay by them, will guide them in the way they should go.

Some one has written a little poem of which I will give a line or two; I wish boys and girls, all of us, might ponder it. It goes this way:

"There is a destiny that makes us brothers;
None goes his way alone.
All the good we send into the lives of others;
Comes back into our own."
Cyrus Bigler.

Cypress swamps in Louisiana, long regarded as useless, are to be replanted with Tupelo gum trees.



another part of farming

A PART from the planting and harvesting of crops, farming is a big maintenance problem, requiring constant upkeep of machinery and buildings and the purchasing of necessary supplies.

Our "tag" stores are an important link in maintenance, for here you get the personal, right-at-home service that helps you buy from the most thrifty basis.

When you tie your farming efforts to a "tag" store you move toward greater profits.

Now

you will want brooders, modern chicken raising equipment and supplies to bring up your baby chicks so that they will make the most profit for you. See us for poultry equipment. We can save disappointment and loss for you, as well as money on the goods you buy.

Your Farm Service HARDWARE STORES



CONTEST CONTEST

SEVERAL have recently written that they like the theme or essay contest best, and I am glad they have shown that preference. However, the other easier types of contests bring the greatest number of responses.

This week the contest will be of the essay type. Please write on "The Kind of Contest I Like Best and Why." Do not use more than 250 words and don't fail to put your name and address in the upper left hand corner of your paper.

This contest closes March 8th. Be sure to send your papers to Uncle Frank, Michigan Farmer, Detroit, Mich., in plenty of time.

ADD-A-LETTER WINNERS

MORE than half of the contestants did not get the right idea of this contest. They used most any combination of letters as long as they started with T.

Some time soon we will try this type of contest again, to find out if more can get the idea behind it. The prize winners this time are:

Fountain Pens

Helen Reesor, Woodland, Mich. Cecil Nelson, Filion, Mich.

Note Books

Syma Vaataja, R. 1, Box 39-A, Chassel, Mich. Lena Houck, R. 4, Quincy, Mich. Lilly Tervo, Chassel, Mich.

Michigan Farmer Pencils

John Vloch, R. 2, Carleton, Mich. Weikko Raisanen, Ewen, Mich. Louisa Atherton, R. F. D., Gaines. Carson Nelson, Filion, Michigan. Mary Vloch, R. 2, Box 70, Carleton.

Largest Number of Words

To, ton, tone, stone, stoner, treason, treasors, assertion, serrations, reassertion, reservations, preservations.

SNOW

How it glides from air to earth, Cov'ring all with mantle white, Makes the fence posts in the lane, Hideous ghost forms in the night.

Comes with Christmas, adds it zest, Tucks the leaves all snug in bed, Puts them all to peaceful rest, Sleep in peace, ye leaves of red.

Blankets the earth with beauty rare, Fills the vales with carpets bright, See the woods! What beauty there, Ah, 'tis a wonderful sight.

Shining sleds all red and yellow, Gliding down the long, steep hill, There! See that little fellow, Surely must of took a spill.

What a blessing in disguise, Fills every heart with joy, Thrills e'en the old and worldly wise, How they wish they were a boy! By "The Critic"

AGRICULTURAL HIGH SCHOOLS

BY CHARLES B. PARK

ON July 1st, 1909, Michigan Agricultural College created the first Department of Agricultural Education among the land grant colleges of the United States. This Department prepared a course of study in Agriculture which could be adapted and utilized in public high schools.

Immediately following the passage of the Tufts Bill indicating Michigan's willingness to cooperate in the Smith-Hughes Act, several high schools applied for federal aid and became Michigan's first Smith-Hughes Agricultural High Schools.

with thirty-one on the waiting list. This is an increase in number of 259% over a period of nine years.

The Smith-Hughes Student Project is probably doing as much in the development of a new era in agriculture as any other one thing. By the project the high school student is able to apply the principles of the classroom in actual farm practice conducted through the summer season as in crops or through the winter season as in dairy.

A Financial Success

In Michigan last year 264 boys conducted bean projects with a total net return of \$57,032.49; 174 boys conducted potato projects with a total net return of \$57,032.49; 174 boys conducted poultry projects with total net returns of \$19,668.90.

The Smith-Hughes cooperative adult extension school is another activity by which agricultural departments are able to be of direct value to a community. Large numbers of farmers are attending such schools each year in Michigan and while seeking modern agricultural knowledge are becoming directly associated with our high schools.

Stimulates Competition

Another important activity is that of directing and promoting fairs, exhibitions, and competitive shows. Many Smith-Hughes Schools in Michigan have sponsored agricultural mid-winter fairs with exhibits which excel in quality and quantity those of most county fairs.

The development of judging teams is another phase of agricultural teaching which tends to mature and season the selective ability of the student. The ability to judge various farm products will mean dollars to our future farmers.

Participation in competitive functions with project products and department creations is of value to a community and to the student. Many schools compete at county fairs, state fairs, at Farmers' Week, and at local fairs in grain, poultry, and animal classes.

A Lasting Influence

In conclusion, may I say that the high school reaches the student at one of the most important periods of his life. In that period, life begins to be real and each individual thinks of the place he is to occupy in the world's affairs in the years that are before him.

Under FLEX-O-GLASS CHICKS GROW Amazingly FAST



Both chicks from the same hatch, were fed the same in the brooder houses shown below.

Glass Kills Your Chicks

IT sounds as ridiculous as Radio did to our grandfathers, but this test at the Nebraska Experiment Farm proved it true beyond any doubt.

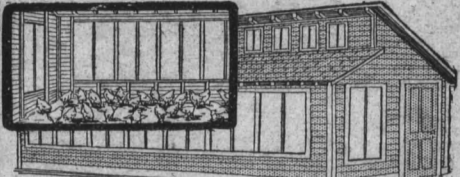
Similar tests were conducted by the Iowa, Ohio, Wisconsin and Kansas State Experiment Stations, the American Medical Association (the world's greatest authorities), as well as thousands of users in every State.

FLEX-O-GLASS Hotbeds Are Better

Gardeners—Get stronger, bigger plants that will grow when transplanted. Because FLEX-O-GLASS admits concentrated Ultra-Violet rays and Infra-Red (Heat) rays, it makes plants grow much stronger and faster than when under plain glass.

PRICES—All Postage Prepaid. Per yd. 36 inches wide: 1 yd. 50c; 5 yds. (at 40c) \$2.00; 10 yds. (at 35c) \$3.50; 25 yds. (at 32c) \$8.00; 100 yds. or more (at 30c per yd.) \$30.00.

FLEX-O-GLASS MFG. CO. 1451 N. Cicero Ave., Dept. 657 Chicago, Ill.



FLEX-O-GLASS ADMITS ULTRA-VIOLET RAYS

One-Eighth Cost of Glass—Weather Proof—Unbreakable. Keeps Baby Chicks Healthy. It doesn't pay to turn your chicks out in the spring rains, slush and snow. Catch cold and die.

Genuine FLEX-O-GLASS GUARANTEED Most DURABLE

FLEX-O-GLASS was the first material advertised for admitting Ultra-Violet Rays from the sun. It always looks new and bright, even after many seasons of exposure to wind, rain and snow.

Special \$5 Trial Offer

Use FLEX-O-GLASS 15 Days at Our Risk. The Flex-O-Glass Mfg. Co. will send you 15 square yards of FLEX-O-GLASS in a roll 36 inches wide and 45 feet long, postpaid to your door, for \$5.00.

Find enclosed \$5.00 for which send me... yards of Flex-O-Glass 36 inches wide, by prepaid parcel post. If I am not absolutely satisfied after using Flex-O-Glass for 15 days I may return it and you will refund my money without question.

PROFIT PRODUCING CHICKS

Bd ROCKS Michigan Accredited Chicks that are bred from proven blood lines. BIG DISCOUNT NOW! PAY \$1 UP DOWN—BALANCE C. O. D.

NOW IS THE TIME TO BUY BROILERS

Table with columns for Stock types and prices. Includes Michigan Accredited—Blood Tested State Inspected Stock.

ACCREDITED WHITE LEGHORN CHICKS

Table listing Hollywood and Hollywood sired stock with prices for Star Matings, Utility Matings, and Commercial Matings.

TRADE MARK OF QUALITY CHICKS

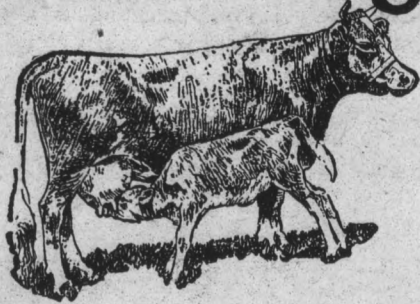
S. C. Wh. and Br. Leghorns, Bl. Minorcas... \$12.00 per hun. Arrowhead Poultry Farm Hatcheries at Montrose, Birch Run and Lapeer, Michigan.

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.

CHICKS AND DUCKS... MICHIGAN FARMER Classified Liners get results. Try one.

No More troubles of Calving



STOP dreading the time when your cows freshen! The troubles you've looked upon in the past as part of the hazard of dairying are no longer a menace to your profits. Dairymen without number are now using Kow-Kare at freshening because of its marvelous invigorating action on the reproductive organs.

Kow-Kare is a concentrated tonic-medicine that has no other function than the building up of the digestive and genital organs. By using this famous cow medicine with the feed for two or three weeks before and after freshening you are assured a healthy cow—and a strong, vigorous calf. Retained Afterbirth and the other disorders you have learned to dread have no terrors for you if Kow-Kare is your reliance.

Kow-Kare, used sparingly with the feed helps your cows fill the pail under the most adverse conditions of winter feeding—when dry, heavy feeds put an added burden on digestion and assimilation. Try Kow-Kare when troubled with Barrenness, Retained Afterbirth, Abortion, Bunches, Scours, Lost Appetite, etc. Its health-building action will give you a convincing demonstration of its money value to you in the business of dairying.

Dairy Asso. Co., Inc., Lyndonville, Vt.

Makers of Kow-Kare, Bag Balm, Grange Gargol Remedy, American Horse Tonic, etc.

KOW-KARE

FAMOUS CONDITIONER OF MILCH COWS



Feed dealers, general stores, druggists have Kow-Kare—\$1.25 and 65c sizes (six large cans, \$6.25). Full directions on the can. Mail orders sent postpaid if your dealer is not supplied.

Write for free book, "The Home Cow Doctor"

SAVE the Teat

Use Moore Bros. PURPUL medicated Wax Dilators to heal without closing. After operating, when sore or congested, for reducing spiders insert this wonderful healing dilator. Avoid expensive troubles, lost quarters.

Package Sent FREE

Write us dealer's name and we will mail generous package free. At dealers 25c. dozen; 5 dozen \$1, or mailed postpaid.

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MICHIGAN Concrete STAVE SILOS

The last word in a permanent silo. Write for free illustrated literature. Tells how we manufacture and erect for you under best known processes. Special Terms if You Order Now!

MICHIGAN SILO CO., Kalamazoo, Michigan

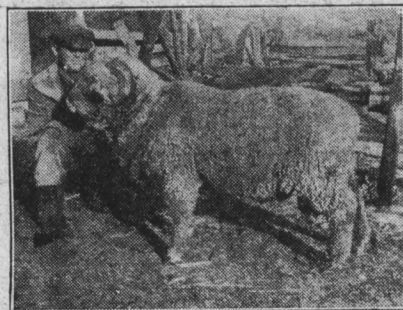
LIVE STOCK AND DAIRYING

BECKER HERD LEADS STATE

EIGHT herds were retested during January in Michigan dairy herd improvement associations. The herd of O. J. Becker, member of the Ingham-Lansing Association, composed of seven grade Holsteins and Guernseys is the highest butter-fat producing herd for Michigan for this period.

This herd tested by Leslie Wilcox averaged 1,348 pounds milk and 61.67 pounds butter-fat and was retested. A neighbor to Mr. Becker, Mr. O. J. Moore, a member in the same association, owns nine pure-bred and grade Holsteins which also was retested and averaged 53.47 pounds butter-fat under four times a day milking.

Other herds which were retested are as follows: Doan Straub of Berrien County; Barn No. 9 of the Detroit



Father and Son Farm Partnerships Usually Start with Live Stock

Creamery, Macomb County; Henry Meyers of Oceana County; Wm. Wright of Allegan County; O. O. Dunham of Berrien County; and Oscar Wolf of Gratiot County.

The high cow for the state during the month is owned by the Detroit Creamery herd in Macomb County tested by R. N. Barney. This cow under official test milked four times daily and retested, produced 3,512 pounds milk and 116.2 pounds fat.

Out of the 18,840 cows reported for January, 1197 were found to produce over fifty pounds butter-fat. There were also sixteen pure-bred sires purchased by members and 165 cull cows found to be unprofitable and sold. Michigan dairymen are depending largely on good legume roughage mainly alfalfa and corn silage plus a balanced grain mixture in their feeding program in order to get greatest dairy profits.

HOW QUALITY LAD WAS FED

YOUR favor asking for the method of feeding Quality Lad is at hand and will say that this steer was born October 2, 1926. Out in the pasture he ran with his dam until after Thanksgiving day. He was then taken into the barn and ran in a large shed with his dam and about sixteen other cows and calves about the same age until May, 1927. The cows were not tied up but were fed as a loose bunch.

The calves, including Quality Lad, were placed in two separate bunches and fed all that they would clean up morning and evening of the following mixture of grain: 200 pounds crushed oats, 100 pounds of ground corn, 100 pounds of bran, 50 pounds of pea size oil meal. This mixture was moistened with about one gallon of molasses, mixed with four gallons of hot water. The calves were fed at the same time the cows were and after their grain was cleaned up, was again turned into the shed with their mothers and got most of their hay with their dams which were fed liberally of alfalfa.

When the cows were turned out to pasture in May, some of the calves were weaned; others were turned on

pasture with the cows. Quality Lad and a few others were kept up at the barn and their dams were brought to the barn morning and evening for nursing until the first of August, when Quality Lad was weaned. He never was given any other milk besides his own dam's. The mixture of the grain feed was the same all the time and he was never fed separate, but always with a bunch of from six to ten calves. I never knew just how much he was eating, but will say that they were carefully fed and the feed increased to about all they would clean up twice a day. A near estimate of the feed he was consuming would be about twelve pounds per day at the finish besides all the alfalfa hay that he would eat.

We have a bunch of calves this winter being taken care of in just the same way, including a full sister of Quality Lad, and from this bunch we will again pick our show calves for this year's fairs.

I note from the picture of him in your January 14th paper that you got his age of ten months and weight of 950 pounds. This is an error as he was fourteen months old when he weighed 950 pounds, but was ten months old when he was Grand Champion steer over all breeds and ages at the Michigan State Fair, 1927.

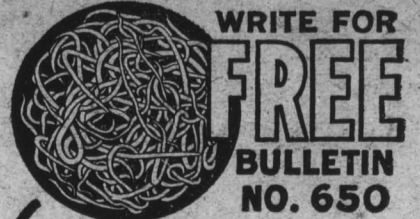
It might be interesting to your inquirer to know that his sire, Quality Marshall, has not been defeated in the show ring in 1926 and 1927 which included the International Stock Show in Chicago in 1926. His sister was first prize two year old Michigan State Fair and second prize at the International, 1927, also Top Quality and Quality, two other steers, three-quarter brothers of Quality Lad which was first prize steer at the 1927 Michigan State Fair, were all fed the same grain mixture as given for Quality Lad.—Sidney Smith, Supt., Wildwood Farms.

VOLUME REDUCES COST

THE quantity of milk handled by an individual country milk plant is the most important factor affecting the cost of getting milk ready for shipment to market, said C. K. Tucker of Cornell University.

The cost of operating plants shipping raw milk in forty-quart cans in 1925 was thirty-three cents for each one hundred pounds of milk where the average amount handled was ninety cans of milk a day. This cost was reduced to twenty cents where the average volume of milk received increased to 439 cans a day. In the plants handling smaller quantities of milk, it would cost \$296 a year to handle the milk from a herd of fifteen cows, each of which produced 6,000 pounds of milk a year. This cost would be \$176 in the plant handling larger volumes of milk or \$120 less.

The saving in cost of operating with increased volume of milk handled was not quite as much in the pasteurizing plants as in the plants handling only raw milk, or in the bottling plants as in the pasteurizing plants. In raw milk plants, which handled on the average 230 cans of milk a day, the operating cost was twenty-three cents for 100 pounds of milk. In pasteurizing plants handling a similar volume of milk, the cost was twenty-nine cents, and in bottling plants it was sixty-nine cents. The larger operating cost in pasteurizing and in bottling plants was due chiefly to the fact that more labor and equipment were needed for putting the milk through the additional operations which were necessary in preparing it for shipment.



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Put down in black and white what YOU want your Silo to be. Then let that stand as OUR Guarantee of the **COPPER METAL SILO**

Most Modern, Most Practical Silo, COPPER-IZED Metal throughout. Many exclusive features. Backed by 23 years of Experience and Responsibility. Tell us what size silo you want so we can quote factory-to-you prices. Special discounts on early orders.

The Thomas & Armstrong Co. Dept. D London, Ohio Est. 1894 Buckeye Brooder Houses, Corn Cribs, Grain Bins

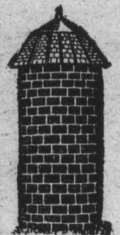
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I will condition a Horse or Cow in twelve days

Put flesh on its bones. Give it life and vigor. Can add 50 per cent to looks and value. Satisfaction guaranteed or no pay. Send postal for free offer.

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ROSS METAL SILO Lifetime Satisfaction

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New models, vastly improved. Unexcelled for close skimming, easy turning and convenience. Quick cleaning Bowl, Sanitary Marvel. Skims warm or cold milk. Makes thick or thin cream perfectly. 7 sizes, 850 lbs. to 1-cow size. Prompt shipment from point near you. Prices same everywhere. Freight Prepaid—Factory \$2.30 Prices. Monthly payments low as \$1.00. Write for FREE Catalog Tells about money saving offer, low prices, free servicing; New models. Write today.

American Separator Co. Box 24-J Bainbridge, N. Y., or Box 24-J 1929 W. 43d St., Chicago, Ill.



Quick growth—Early maturity Quality crops... And How?

IT IS within your power to shorten the time required to grow and mature first quality crops by the liberal use of proper type plant foods.

Think what this means—being practically able to do away with immature soft corn and chaffy wheat and to secure the higher prices realized for best quality grain!

Springs are frequently late, and frosts too often come early.

As natural soil fertility decreases, soft corn increases and nubbins multiply. The increase in immature corn the past few years is not so much due to change of season, or late, wet spring, but to the constant depletion of the original plant food minerals from the soil. Cornland soils are becoming more and more unbalanced as crop after crop is taken off, with a never-ending removal of the minerals necessary to plant life. Much formerly fertile soil has given up so much of its available plant food minerals and nitrogen that its power to produce nitrates for the early spring needs is diminishing.

The Ohio Agricultural Experiment Station during 1926 and 1927, by using 300 to 400 pounds of a complete fertilizer together with manure, has decreased the time between corn planting and silking from 20 to 30 days, on one soil type, as compared with "no treatment" plots. Shortening the growing period may be of great importance in fighting the corn borer. The secret of maturing crops quickly is forcing the early growth of the plant. Little or nothing can be done to shorten the time between the flower and the ripe fruit, or between silking and mature corn. Much can be done to shorten the time between

seeding and blooming or silking. The nitrogen in manure and other organic material in the soil must first be converted by soil bacteria into ammonia and then into nitrates, before it can be utilized by plants. The soil in these northern climates is cold and wet in the spring, and these bacterial processes are slow. This delays the formation of ammonia and nitrates from manure and soil organic matter, and *sufficient nitrate* is generally not available from soil sources soon enough to force as early, quick and heavy a root, stalk and leaf growth as the plant should have.

This immediately available nitrogen should be supplied, and with it an abundance of soluble phosphorus to develop rapid root growth and to force early, heavy fruiting, together with potash to insure good sap circulation, cell development, starch formation and plant health.

It is quite evident that a largely increased use of manufactured fertilizer is necessary to replace plant food lost or shipped off the farm, so that good quality crops can be grown quickly and matured early.

Armour's BIG CROP High Analysis Fertilizers furnish these plant foods in available form, properly combined to insure quick, heavy growth and maturity, and maximum yields of first quality.

Charles H. Mansfield
President

Armour Fertilizer Works, Chicago, Ill.

**Armour's BIG CROP
High Analysis Fertilizer**