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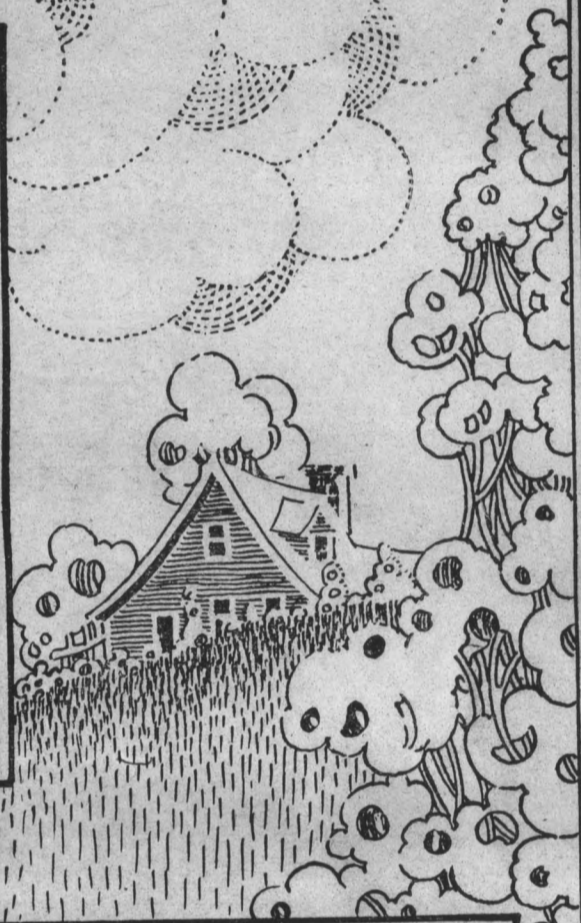
MICHIGAN FARMER

AND LIVE STOCK JOURNAL.
PUBLISHED WEEKLY. ESTABLISHED 1843.

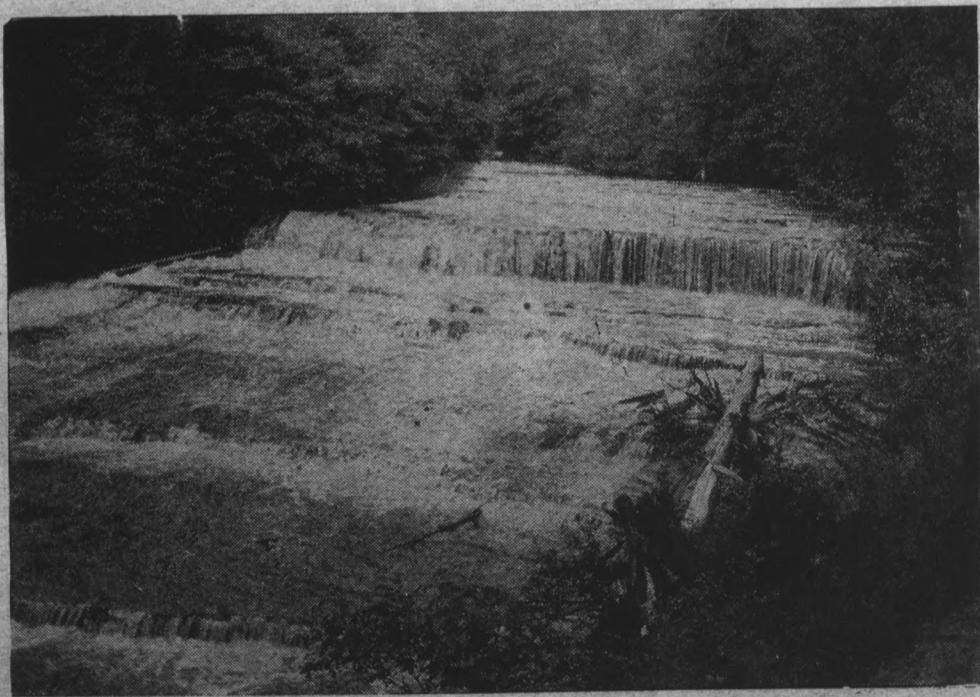
CLXX
Vol. CXLVX No. 1

DETROIT, MICH., SATURDAY, JANUARY 7, 1928

Whole No. 4794



SUMMER and winter scenes of the beautiful Autrain Falls in Alger County of the Northern Peninsula, not far from Munising. These falls attract annually thousands of visitors to that part of Michigan. This is one of the many beauty spots within the borders of our fair state with which Michigan people should become better acquainted.



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The Great

BETTER FARM EQUIPMENT
WEEK

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SUPERIOR DRILL
Now Improved!

Gives BIGGER
Yield from every
Acre Planted!

Quickly Pays for Itself—
in Extra Grain!

**ACCURACY IN PLANTING
NOW ASSURED!**

Superior Grain Drills assure the utmost accuracy in planting. Made in both Plain Grain, and Fertilizer and Grain Models. For team or tractor. Single disc, double disc, or hoe furrow openers. Special design for every type of soil in every section of the country.

Double-Run Force Feed insures precision feeding—perfect timing—even spacing. No seeds cracked or wasted. No skipping or bunching. Hyatt roller bearings and Alemite lubrication prevent wear on moving parts and contribute to longer life. Together with pitch and gather wheels they insure light draft and easy, efficient operation.

WE make strong claims for our Superior Drills. We claim they sow more accurately, do better all around work, stand up longer, help to raise bigger crops, make more money for their owners. And we prove our claims. We produce evidence to back up each and every statement.

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F. W. Blackford writes, "I have farmed all my life and have owned other kinds of drills, but this is my first Superior... everyone who has seen

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Observe the sturdy construction of the Superior. See how wear is prevented by Alemite lubrication. Note how lightly it runs because of

pitch and gather wheels and Hyatt roller bearings. Mark its ease of operation. It's the greatest Superior ever built! Examine it and you'll understand why it has won first place throughout America in competition with dozens of other makes.

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Other Superior Products Superior Black Hawk Spreaders, Superior Buckeye Cultivators, Superior Corn Planters, Superior Lime and Fertilizer Broadcast Sowers—implements known the world over for superior service. They, too, are illustrated and described in "Drilling for Dollars"—an additional reason why you want the book.

MICHIGAN FARMER
Classified Liners get results. Try one.

INTERNATIONAL PAPER COMPANY

New York, N. Y., November 29, 1927. The Board of Directors have declared a regular quarterly dividend of one and three-quarters per cent (1 3/4%) on the Cumulative 7% Preferred Stock of this Company, and a regular quarterly dividend of one and one-half per cent (1 1/2%) on the Cumulative 6% Preferred Stock of this Company, for the current quarter, payable January 16th, 1928, to holders of record at the close of business—December 29th, 1927. Checks will be mailed. Transfer books will not close.

OWEN SHEPHERD, Vice-President & Treasurer



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Kill this fellow before he ruins you and your crop! Government bulletins say: "Utilize as much of the corn crop as possible through the silo since the fermentation kills all the insects."

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Runs directly off crank shaft. No side pull on bearings. Oil tight case; no rattle; clutch disconnects when driving. Write for Special Offer!
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FREE Send name today for free literature on this latest, guaranteed improved power. Try it 15 days on your Ford at our risk.
E-Z POWER MFG. CO., Box 88 Atchison, Kansas

WOMEN APPEAL TO SUPERVISORS

THE Oceana County board of supervisors made an appropriation for hiring a home demonstration agent. Rural women from the county sent a delegation to the board of supervisors in behalf of the appropriation.

MIXES PYRATOL AND DYNAMITE

C. P. MILHAM, county agricultural agent in Ottawa County, says that a successful trial was made in the county of the use of a combination of pyratol and dynamite for ditching. Pyratol when used alone is not sensitive so that the explosion of one charge in a series will not explode the charge in the next hole. The addition of a half a stick of dynamite to each charge made it possible to explode all the charges set on the ditch line.

Infections of the teeth and tonsils may affect eyesight seriously.

PHILIPPINES COMPETE FOR AMERICAN SUGAR MARKET

THE vast development of cane sugar production in the Philippines is menacing the American sugar industry. This has led the United States Beet Sugar Association to ask Congress for restriction of the amount of sugar that can be imported from the Philippines free of duty.

Exports of sugar from the Islands to the United States have increased 300 per cent since 1913. Production has risen in this time from 345,000 tons annually to over 700,000 tons. With an enormous supply of cheap oriental labor and with vast areas of fertile land available to cane sugar production and with capital planning the exploitation of the Philippine sugar industry, the possibilities of further expansion are practically without limit.

Prior to 1913 a limit of 300,000 tons was placed on the amount of Philippine sugar admitted without duty. Since the enactment of the Underwood tariff act of that year, however, Philippine sugar up to any quantity has been admitted free of duty. The beet sugar producers are urging the restoration of the original 300,000-ton limit on Philippine sugar as a means of protecting the American sugar industry. They say that a large percentage of the 23 companies manufacturing beet sugar in the United States is losing money.

News of the Week

A Congressional medal of honor was given Robert A. Ried, of Pottersville, Pa., last week, sixty-three years after it was awarded to him for bravery in the Civil War.

Thousands of lobsters and perhaps millions of star fish were washed ashore on the British coast by the recent storm which swept the English Channel.

The claim of the Muscle Shoals property by the state of Alabama is without foundation, the Attorney-General stating that the U. S. Government has full title to the Wilson dam, the nitrate plant, and other government structures there.

Charles Schwab, steel magnate, received two dozen pairs of garters for Christmas because a picture of him playing golf showed his socks hanging down.

Col. Charles Lindbergh arrived at Guatemala City from Mexico City on Dec. 28th. This is his first stop on his Central America air tour.

The Mexican senate unanimously approved the Calles bill which reformed the articles 14 and 15 of the oil laws which caused so much friction between the United States and Mexico.

The strikers in the I. W. W. Colorado coal mine strike attempted to poison the water used by the miners in the Columbine mine. One hundred I. W. W. members are held.

All efforts to find "Dawn," Mrs. Grayson's airplane, off the coast of Newfoundland, have failed, and it is believed that Mrs. Grayson and her three flying companions are dead as a result of their attempt to fly to England.

The consolidation of the Wayne County and Home Savings Bank and the Peoples State Bank, both of Detroit, will make it one of the largest banks in the country.

John Pierpoint Morgan, international banker, has been made chairman of the board of directors of the U. S. Steel Corporation to succeed the late Judge Gary.

Application have been made to the American Red Cross for famine relief for 4,000,000 people in the provinces of Shantung and Chih, China.

Violent earthquakes shook Rome, Italy, Dec. 26th.

COMING EVENTS

Jan. 3-Mar 2—Short courses in Dairy Production, Horticulture, General Agriculture, Poultry, Agricultural Engineering, Home Economics, M. S. C., East Lansing, Mich.

Jan. 9-14—Short course in Commercial Horticulture, Michigan State College, East Lansing, Mich.

Jan. 30-Feb. 3—Farmers' Week, M. S. C., East Lansing, Michigan.

Jan. 30-Feb. 4—State Potato Show, Michigan State College, East Lansing.

Feb. 6-11—Short courses for fruit growers, and market gardeners, M. S. C., East Lansing, Mich.

Feb. 28-29—Pre-spring meeting of Michigan State Horticultural Society, Hotel Roosevelt, Pontiac.

DEVOTED
TO
MICHIGAN
VOLUME CXLVX

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

QUALITY
RELIABILITY
SERVICE
NUMBER I

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

A Call on the County Agent

And a Visit to Mr. Hansen's Farm

By C. E. Millar

GOOD morning, Dick. How's everything?" I remarked as I walked into the office of one of my county agent friends recently.

"Fine! Glad to see you. How are things at the College?"

"Oh, we've been having big doings up there celebrating the selection of the second group of Michigan's Master Farmers. I suppose you read about it in the papers."

"Yes, I saw the paper reports and listened in over the radio to the speeches. It's a great movement, this Master Farmer idea."

"You know there was something intensely interesting to me about the farming system of these men and the reasons given for their selection as Master Farmers."

"That so, what was it?"

"Each man ascribed his success in farming to the soil management system he followed. Every one of them holds that unless a man paid particular attention to keeping his soil fertile he might as well quit farming."

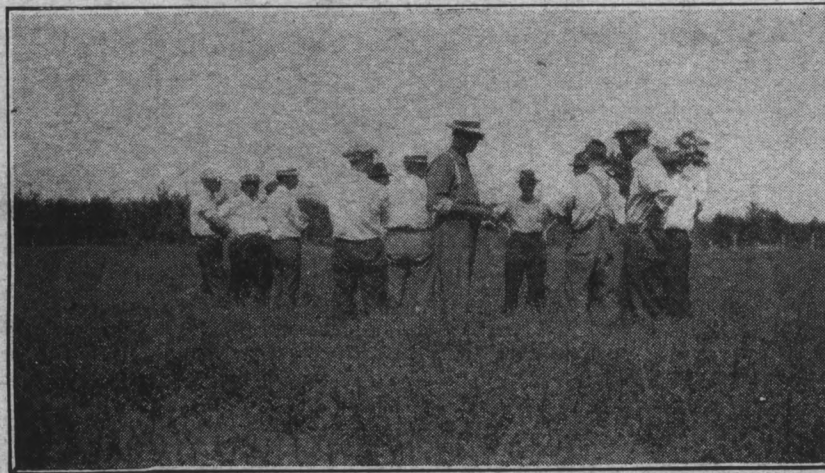
"The same thing holds true in this county. The farmers who suffer least when the lean years come are the ones who pay most attention to their soils problems."

Our conversation was interrupted at this point by the entrance of Mr.

Hansen, a farmer of the county. After the usual introduction and preliminary remarks about the weather, the county agent asked Mr. Hansen if there was anything in particular he could do for him.

"Well, nothing special. I just came in to talk things over a bit," replied Hansen. "I'm not satisfied with the

yields of crops I am getting. We work just as hard as ever and take good care of our crops too, but they don't seem to do as well as they used to. My wheat, for instance, only went thirty bushels. This was a good wheat year and we used good seed and fitted the ground carefully. Then there is my clover seeding; when I was a boy,



Where the Alfalfa Was Small and Thin, the Soil Was Found to be Sour, But Where the Growth Was Thick and Rank the Soil Was Sweet

Dad used to grow clover so thick it would almost choke the mover and now I have trouble in getting half a stand. It seems to winter kill so much, I don't think we have as much snow as we used to. Guess the climate is changing."

"How did your corn do? I was by there when you were planting and you had the soil in fine shape."

"Yes, we put lots of work on that corn ground and kept the crop well cultivated, but it didn't yield so well. It didn't seem to grow fast enough in the spring and then this fall it wouldn't ripen up. We will have to buy seed next spring."

"That's too bad. Did your other crops make a favorable showing?"

"Just so, so. About as well as a lot of the neighbors, I guess, but nowadays a fellow has to get considerably above the average yield of crops if he is to make anything farming, according to my notion."

"I tell you what, Mr. Hansen, suppose I come out and go over your farm with you this afternoon and see if we can find the trouble. From what you say I think your soil needs bracing up a bit."

"That will suit me fine, Dick. I'd like mighty well to have you go over (Continued to page 13)

Relations of Farmer and Sportsman

While State Owns Game Conference Recognizes Right of Farmer to Choose His Own Guests

THE fact should be emphasized that there is a difference between sportsmen and mere shooters; that the sportsman and the farmer should be allies; that their interests are identical and that the fellow who is merely a shooter and not a sportsman is responsible for the annoyance to the farmer which casts odium on the sportsman.

Recognizing that the game belongs to the state and that its habitat belongs to the land owner the latter has the right to select his guests and he naturally will recognize those who cooperate with him and are not offensive.

The true sportsman will be and is anxious to help the land owner restrain the irresponsible, to assist in patrolling his premises and furnishing him protection. He will join with the owner in the expense of planting food for game and placing hedge rows along the fences and in the control of vermin which is destructive to game and domestic poultry. In other words the land owner and the sportsman can legitimately and profitably cooperate to the fullest extent, to the end that both will receive many benefits. The owner will be relieved from vandalism and be protected from marauders. The game, which is an asset to his property, will be conserved and increased, insectivorous birds, which are essential to crops, will be preserved, and the sportsman in return occasionally will have the privilege of enjoying a day in the field.

To this end owners of cultivated lands should be encouraged to form groups and lease to the state their shooting privileges, the same to be administered by the state in such manner as to insure the owners adequate protection against vandalism,

THE report published herewith was presented by a committee of which W. B. Mershon of Saginaw is chairman, to the recent National Game Conference in New York. This report is on the relations of the hunters to the land owners and has special significance in Michigan because of the situation resulting from the enactment of the anti-trespass measure.

similar to the Connecticut plan for state-leased streams and ponds.

The title to all forms of protected wild life is vested in the several states, provinces and the federal government for the purposes of regulating the time, manner, and extent of taking the same by the individual, equipped under statute and authorized to hunt, pursue, or kill such game birds or animals.

A license issued to the gunner by any duly constituted authority is a privilege granted under the statute to the hunter to kill game in the political division or subdivision set out in the face of the license.

When a government or its agent grants such a privilege to a hunter in the form of a license, it conveys no waiver of the rights of the property owner or landlord in the protection of his property, both personal and real, against undue trespass on the part of the licensed hunter.

Posted lands are not conducive to the protection of game so long as we have hunters who are not sportsmen. A true sportsman seeing a poster, "No Hunting Allowed," will not enter the premises, but the fellow who does not care to respect the rules of sportsmanship, upon seeing the forbidden sign, will be tempted because little or no hunting has been done on the premises, will disregard the notice and shoot on the posted property to the disgust and annoyance of the owners.

The several states and provinces, the federal governments of the United States and Canada and the organized sportsmen should join in organizing an educational campaign and carry it to both the hunter and land owner, teaching the hunter the necessity for the protection of hunting areas from fire and for the care and protection of fences and live stock on the farms, and informing the farmer that but for the revenue which the hunters contribute annually through the purchase of hunting licenses there could be no protection given by his government to the game on his premises and no propagating and planting of game to restore depleted covers.

It must not be lost sight of in administering the game laws that not only is the game which is shot by the hunter protected but the insectivorous and seed-eating birds, without which agriculture would be impossible, also are protected. The revenue derived from the hunters' license pays for all this as well as the re-stocking and care of game. The protection from forest and other fires is also contributed from the same source.

It is of the greatest importance to the sportsmen individually and collectively to furnish grain and other crops to property owners and to cooperate with the state in planting and cultivating food for game birds and quadrupeds. Food bearing plants and shrubs should be generally planted in game covers and brood stock of game species should be furnished by individual sportsmen and clubs as well as the state to assist the land owner in restocking his cover.

All who go afield must recognize the fact that good sport can no longer be had for nothing. Like the automobile or other desirable means of pleasure and recreation it has to be paid for. It is a form of recreation which can no longer be obtained free. Recklessness in destroying wild life without any care for the future should be universally and most severely condemned and all sportsmen should recognize the fact that effective methods of maintaining the supply, such as are employed in agriculture and stock-raising, must be applied.

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Editors and Proprietors
1632 Lafayette Boulevard Detroit, Michigan
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NEW YORK OFFICE, 420 Lexington Ave.
CHICAGO OFFICE, 608 South Dearborn St.
CLEVELAND OFFICE, 1011-1013 Oregon Ave., N. E.
PHILADELPHIA OFFICE, 261-263 South Third St.

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- HOME:—Aid in the solution of all kinds of home problems.

VOLUME CXLVX NUMBER ONE

DETROIT, JAN. 7, 1928

CURRENT COMMENT

Farm Prices Maintained

A REPORT just issued by the bureau of agricultural economics at Washington shows the general level of farm prices on December 15 to have held at the same point as reported on November 15. This general level was 137 per cent of the pre-war prices. During the month indicated, there were some advances and some declines in prices, but the general average was maintained.

The fall decline in farm prices usually takes place between September and December. Last year this decline amounted to 6.8 per cent for all farm prices. This year the decline amounted to only 3.8 per cent. From this it would appear that prices for farm products generally are occupying a somewhat stronger position, especially when it is observed that the level for December 15 is ten points above that of a year ago.

Want Michigan Beans

CONSIGNMENTS of beans have recently been shipped from Michigan and New York state to the United States Navy. This is the first of our beans taken by the Navy since 1925. The reason is that heavy losses were sustained by the Navy on the purchase of beans from the two states in 1925 due to the excess of moisture in the crop. As a result of this experience the commissary department of the Navy refused to buy Michigan and New York beans. The 1927 crop, however, is of normal quality and fully up to the Navy standard.

This experience would seem to suggest to Michigan bean interests the need of thoroughly standardizing the bean product. It is a mistake to allow one grade of beans to go out one year and then, because of weather conditions, permit another standard to hold

the following season. We are not alone in holding the opinion that government standards should be made compulsory in the marketing of this crop. We further believe that the bean market will be on a more stable basis when artificial drying of the product in wet seasons is generally practiced.

The TB. Testing Work

ELSEWHERE in this issue is an article covering the tuberculin testing situation in Michigan. Insufficient funds have lead Governor Green to order the discontinuance of testing work until July 1, 1928. We wish to commend the Governor upon his effort to keep down the cost of running state affairs. There are a few things that require more thoughtful attention from our statesmen than keeping public expenses within reasonable limitations.

We are wondering, however, if in the tuberculin testing work that it is real economy to delay this public health campaign. As noted elsewhere in this issue, the percentage of tubercular patients suffering from the bovine type is placed at around seventy per cent in Scotland; whereas, in Michigan it amounts to not over ten per cent, due to the clean-up work that has been going on in this state for a number of years.

These further considerations—that this work will cost less if prosecuted vigorously, that the marketing plans of farmers in certain sections will not be disturbed due to recent action of the Detroit Board of Health, that farm communities and our cities will be provided with their full quota of clean milk at an earlier date, and that the forces doing the testing work will not be completely disorganized—all these lead us to believe that it would be economy from the standpoint of the state to immediately provide for the financing of this work.

A Good Record

WE have just received a copy of the report of the pig survey taken December 1 under the authority of the United States Department of Agriculture. This report shows that there were eleven per cent more pigs saved this past fall than during the fall of 1926.

An interesting feature is the average number of pigs saved per litter in the twelve north central states. In this territory pigs saved averaged 5.80 per litter this past fall, for the spring of 1926 it was 5.65, and for the spring of 1927 it was 5.55. Michigan led all the states in this group in the average number of pigs saved per litter. Her record for the above surveys was respectively 6.6, 6.3, and 6.6.

Since it has been frequently demonstrated that profits in the swine business depends very largely upon the number of pigs raised from each litter, it would seem from the above record that Michigan ought to be a good place to raise hogs.

Light on Fabrics

A GAIN Congress will be called upon to consider the much discussed truth-in-fabrics bills. These bills were introduced in the House by Senator French of Idaho and in the Senate by Senator Capper of Kansas. The purpose is to make it mandatory to mark plainly any woven or knitted fabrics containing substitutes for virgin wool.

In the past, farm people and farm organizations have given these bills their fullest support. There has not been, however, the united backing of the organized sheep industry. This support will be necessary, no doubt, if these bills are to be reported out by the committees to which they have

been referred for consideration. There is little likelihood that the clothiers will ever, of their own volition, mark clothing so the untrained person may purchase woolen fabrics with a full knowledge of what he is getting, without the aid of such a measure as is here proposed. We cleaned house in the field of drugs, why not perform a similar task in the merchandising of clothes?

Women in Agriculture

OF the 8,500,000 women gainfully employed in the United States, 261,719 are engaged in agricultural pursuits, statistics show. In other words one out of every thirty-two working girls and women make a living from the soil.

The emancipation of women during the last decade has permitted them to enter fields formerly held only by men. Women doctors and lawyers have become a matter of course and it is no longer uncommon to hear of women engineers, architects, surveyors, and dentists. But in no field which in the past was restricted to men, does there appear a greater enrollment of women than in agriculture.

According to a most recent survey there are 187,686 women in this country who are actual farm owners; 73,081 who are farm tenants, and 770 who are farm managers. This increasing number of feminine poultry raisers, apiarists, dairy farmers, stock raisers, fruit growers, truck gardeners, and dirt farmers who would indicate a strong feminine back-to-the-farm movement.

The reason for this sudden popularity of the farm among women is undoubtedly due primarily to two factors—the revolution of transportation and the improved rural living condition. What the automobile has not done to popularize the bucolic life by bringing the city within easy reach of the farm, has been accomplished by the introduction of labor saving devices and home comforts into the farm homestead.

Tales From Sales

IN reading between the lines of auction sale announcements, one occasionally gets an interesting insight in the history of individual farming operations. Recently we saw in a local Michigan paper an interesting contrast in this respect.

One announcement of a complete dispersal started with the statement that, "Having tried farming for thirty years without success, I have decided to retire." This man's sale list included haying and general farming equipment, but no live stock, except two old mares.

The other advertisement in the same paper announced the sale of some choice grade and pure-bred Guernseys. The farm was apparently well stocked and the farmer was holding the sale to get rid of surplus animals. This announcement made no reference to an intention of quitting farming, nor that the farmer had been a failure.

The first farmer failed apparently to make any efforts at adjustment. Thirty years of failing at farming is not credible. Long before that time had expired he ought to have found a way out or quit farming. We feel sure that if this farmer had, several years previous, bought some good stock from his neighbor and thoughtfully fed what he grew on the farm, he would have had little need to advertise his inefficiency.

This matter of adjustment is important. The way to success is an ever-changing route. New problems constantly arise. They must be met with intelligence and determination. We know of a farmer who for sometime had a very discouraging time trying to specialize in fruit, but he came to

the realization that he must make a change, so he added dairying and is now going ahead hopefully.

Compulsory Farm Training

HERE is a suggestion on how a better understanding between country and city might be brought about. Dr. Browne, chief of the United States Bureau of Chemistry, put forth the idea of compulsory service on farms. Require, says the doctor, that every citizen spend two years of his life upon a farm. This would furnish a far greater assurance of the welfare of the country than two years of compulsory military training, it would give the needed discipline in economy and thrift, and a first hand understanding of the basic elements of our national prosperity.

Of course, Mr. Browne does not expect that his suggestion will ever be tried out, but he used the illustration to emphasize the importance of agriculture in any preparedness program.

Typewritten

AS you will see this is written on a typewriter and Im donic it because the editor of the michigan FArMer says lots of farmres are writin thier eletters on typewrotters because ti is more business liek. I'm glad ofthis cause ti shows thefarmers is gettin more porgressvie and upto date than thay was.

Thereaint on reason why farmers shoouldn't have tyepwriters as wellas business men, even ifthey can't have them stenograppers with sikl stockins and fer coots liek business men have. Thats good cause faerms ain't got time tofusswith sliksstockins and such thinks. And another thing your tyepwrotter wont siton your lap unless you want it tooo? and fi you like to set it on your lap itll staythere, that's somthing all stenogrphers won't doo? sosomebusiness men tell me.



Nowyou kin seeby waht i'M doin that tyepwritton is easie, 'cause if you got four figners on tow hands you cin do it. If you use your eyes and figars you can pik and hunt your lettres and getthe righth onse****soetimes.

Theysay the right wya to work one of these things si not to look where youre strickni) but falways liek to see what I-M doin? One of they greatset plaesures I get out oflife is what iget through my eyes. But they say you got to learn the sence of tuogh only? butmaybe they aer taklin* about stenogaphres, not tyepwrotters. Soem o? them stenograpers si suer got the sence o? touch allrright. YOU kin tell ti bythier looks? and its wise fur a fellow to keep his hadns in his pcolets when he's aruoud thme *cause fi he don't he si goni to bee tooched?

bUt bissuness si busniess everytime, and its busniessliek to haev a tyeprotten lètre adn there aint on raeson why a faremr can't haev a tyepwrotten lètre liek thoes fellows that sit ni hootel lobbees soeokin cigars, etc watchin the damse gonj byy) bESides the stuff soem farmers wreit can't be reed no btter than nohtin. So? fi they ain't got a wife who kin wriet thier lettres fer them or theydont wnat thier wifes toknow what theyre writtin? they better get a tyewriotter liek me and then they suer kin keep thier writtun's secret and still maek them undresatndable liek i do.

Gee iM tired from pickinand hnutin fur lettres? so I*IL be glad when farmes kin haev stengoraphrs and be business liek with ease liek regular bisuness men? tHIN faermin will be on a level with industry

hY SycKel, Tyepwrotter

The Agricultural Outlook

What Can be Seen on the Horizon of 1928

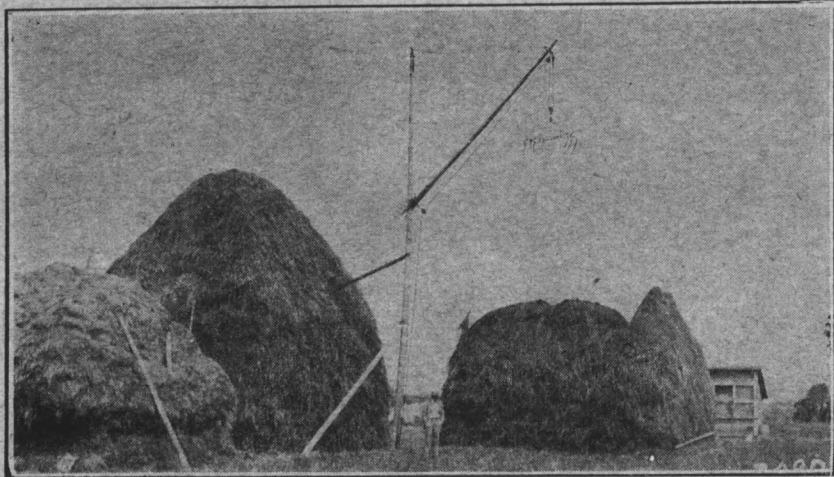
By Gilbert Gusler

THE outlook for 1928 appears favorable. Agricultural income should continue the recovery which started in 1922. Unless there should be some windfall, however, such as good crops in this country with poor crops in other countries, the increase will be a modest one. It would take a bold man, indeed, to forecast an agricultural boom in the early future, or a return to the conditions of 1917 to 1919 without another great war to bring it about. While it is probable that the next few years will see gradual increase in farm income, the changes from year to year are likely to fall under 5 per cent.

Belief that 1928 will see agriculture a little farther along in its recovery

of the live stock outlook must leave room for fluctuations in output due to weather.

While the weather is a big factor, acreage in the long run is the most important influence in deciding the yield of farm crops. Perhaps the statement that farmers will not plant an excessive area in 1928 was too hopefully expressed. Last spring, for example, the planting intentions report indicated that farmers were preparing to seed the largest area of the twelve principal spring sown crops since 1918. They had increased winter wheat acreage 5 per cent in the preceding fall. Counting cotton, there was a prospect of practically the largest acreage on record in these



Labor Saving Equipment, Like This Unloading Outfit, Helps Many Farmers to Finish the Year's Accounts with Black Ink

to complete health is based on these indications:

1. That farmers will not plant an excessive acreage in the leading crops.
2. That domestic demand for foods and for cotton and woolen goods will be well sustained.
3. That there will be no marked loss in our foreign markets compared with 1927.

It is not extremely difficult to determine that volume of output of various farm products would be desirable in order to place prices on a profitable basis. Predictions as to what the production actually will be, however, must be given considerable latitude. This is chiefly because of the caprices of the weather. Frequently, the outstanding market developments of the year are due to climatic events which could not possibly have been foreseen on January 1. Corn belt weather this year was a shining example of its vagaries. With a countrywide observation staff, a wealth of apparatus and much experience, fairly reliable weather forecasts can be made for a few hours ahead. Long distance weather forecasts, and, particularly, the influence of the kind of weather indicated on agricultural production, have not been much more reliable than attempts to predict when a blow-out would occur.

Weather has less influence on animal production than on crops, but it may cause more change than all other factors combined. In 1927, for example, the mild weather of last winter flooded the egg market. The severe storm in April on the range caused an 8 per cent decrease in the lamb crop, in spite of an increase of 600,000 ewes. The cold spring kept the poultry crop down to small size. Breeding hogs and shotes were rushed to market when delayed planting indicated a small corn crop and they were held back when fall weather favored maturity. Dairy production was increased by flush pastures. Dry weather "down under" caused a 12 per cent reduction in wool in the world's chief producer. Certainly, predictions

crops, which represented about 90 per cent of the total area in all crops. Bad weather during the planting season did the good service of preventing many of the intended increases in acreage from being made.

Certainly, there was no economic justification for such expansion. What the industry needed and still needs is pinching down of acreage in order to eliminate or reduce troublesome surpluses. The practice of farmers is still dominated by the thought that abundance of crops is a blessing, as it was in the old days of the self-sufficient farm. Thanksgiving Day was established under that regime. Today it is hard to show why farmers should give thanks for a surplus, although it is a good thing for consumers.

The inferences are plain enough. There should be no general expansion of acreage in 1928. Winter wheat acreage undoubtedly was increased last fall. The rise in cotton prices probably is a reliable barometer of a gain in cotton acreage. These changes will not be so bad, if other crops are reduced correspondingly. But, if the tendency is to expand all along the line and, if nature does not neutralize the folly, then there will be chastisement in the form of low prices next summer and fall. In this respect, nature is an unreliable guardian. She may augment any tendency to overplanting by providing an unusually favorable season.

Fluctuations in demand exercise much less influence on price levels for farm products and farm income than do variations in supply. Nevertheless, neither domestic nor foreign demand is entirely uniform. Virtually all of the leading business forecasters and bankers indicate that general business will improve in 1928. A moderate recession occurred in 1927, but it is believed to be near the lowest point and the tendency will be toward increased activity, more complete employment and bigger industrial payrolls. Basic conditions appear healthy. Commo-

(Continued to page 11)

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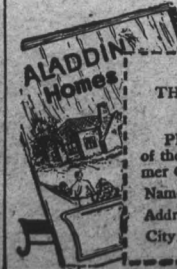
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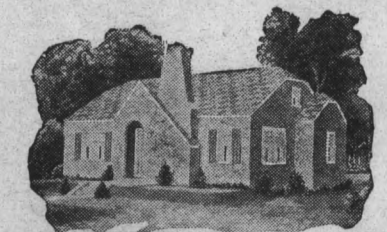
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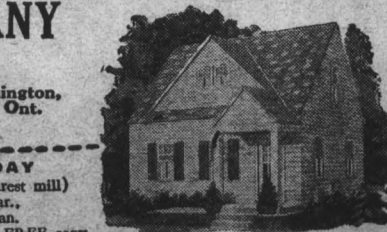
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Under the 4-H Flag

By JOHN FRANCIS CASE

Author of "Tom of Peace Valley"

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CHAPTER 1

GRAY clouds scudded over a wind-swept sky. Although it was the first day of March and farms of the corn belt should have been humming with the activity of spring work, fields were a morass of mud. Mud so sticky that it adhered to the wheels of a slow-moving flivver, impeded the progress of a bony team which drew a creaking wagon and kept at home all but those farmers compelled to be about. With an army of other tenants who annually obey the mandate to "move on," Bradley Barton and his family were enroute to a new home. It was the fourth day of their journey and the tired horses stood with drooping heads. The flivver had stopped that the wagon might draw abreast, and a tall, well-built lad stood upon the running-board.

"Hi, dad," called the boy, pointing down the road toward a dilapidated

time and we are glad to have neighbors."

"I'm Robert Barton," announced the visitor, "but nobody ever calls me anything but 'Bob.' I know mother and dad will appreciate your offer. We had good neighbors where we lived; it was hard for us to leave."

"Of course, I'm 'Katie' to all my friends," answered the girl as Bob Barton turned away. "I hope you like your new home. Good luck."

"That's the place, dad," announced Bob as he rejoined the family. "Looks as if we've been 'stung' again, but reckon we'll have to make the best of it. Goin' to have good neighbors, anyway. That's a lot. Giddap, Lizzie." The flivver's engine broke into a chattering roar; the little caravan started on and soon turned in where a gate sagged on rusted hinges. Bradley Barton climbed stiffly down and joined the other members of his family. A man of middle age, stoop-shouldered, poorly clad, he seemed ill-fitted to battle against adverse circumstance. Old and dilapidated, the house was most uninviting; no living thing about the place enlivened its unkempt, deserted appearance. There were tears in the eyes of Mother Barton as, with her two small daughters huddling close, she surveyed the farm which for a year at least must be "home."

"Oh, Brad," broke out Mrs. Barton, "this is the worst in all the years. Why did you take the word of that rascally agent? This is no such farm as you were promised, and you've paid half the rent money in advance. What will we do?"

"Make the best of it, mother," answered Father Barton. "It does look tough for a fact. But we are here—and that's something after all these miles of mud. 'Every dark cloud has a silver lining,' concluded Barton, uttering his philosophy of life, "and it might be worse. See, there's a big chimney which means a fireplace. Get out the axe, Bob, and cut some wood. We'll all feel more cheerful with a fire, and we can't haul our goods from the station until tomorrow. Lucky I had the key sent. Now, let's have a look inside." So into the new home trooped the wanderers.

Old, indeed, and showing the ravages of innumerable and careless tenants, the interior of the old home at one time had been a thing of beauty. A great living-room, an immense fireplace reminiscent of bygone days, a winding stairway which invited exploration of rooms above. Built before the Civil War, when labor and lumber cost little in comparison with modern times, the Jones home had been a show place in its time. The house would quarter a small army. As Mother Barton and the girls exclaimed over its vastness and Bob, with the true instinct of boyhood, raced up the stairway for exploration above, Bradley Barton stood gazing dreamily at charred embers of what once had been leaping flame. Softly his foot began pat, patting, and the lilting notes of a bird in song issued from his lips. "A big fire," murmured Bradley Barton, "and an easy chair. The old pipe and the violin. I'll call 'em back again from the old days. It's going to be great here."

CHAPTER II Dreamers and Doers

ALL his life Bradley Barton had been a dreamer of dreams. Warm-hearted, lovable, but impractical and given to idleness when work made most insistent demand, the head of the House of Barton was a

(Continued to page 12)

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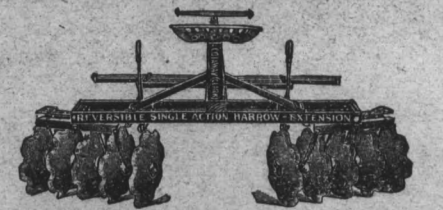
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house, "you don't suppose that shack is the Jones place, do you?"

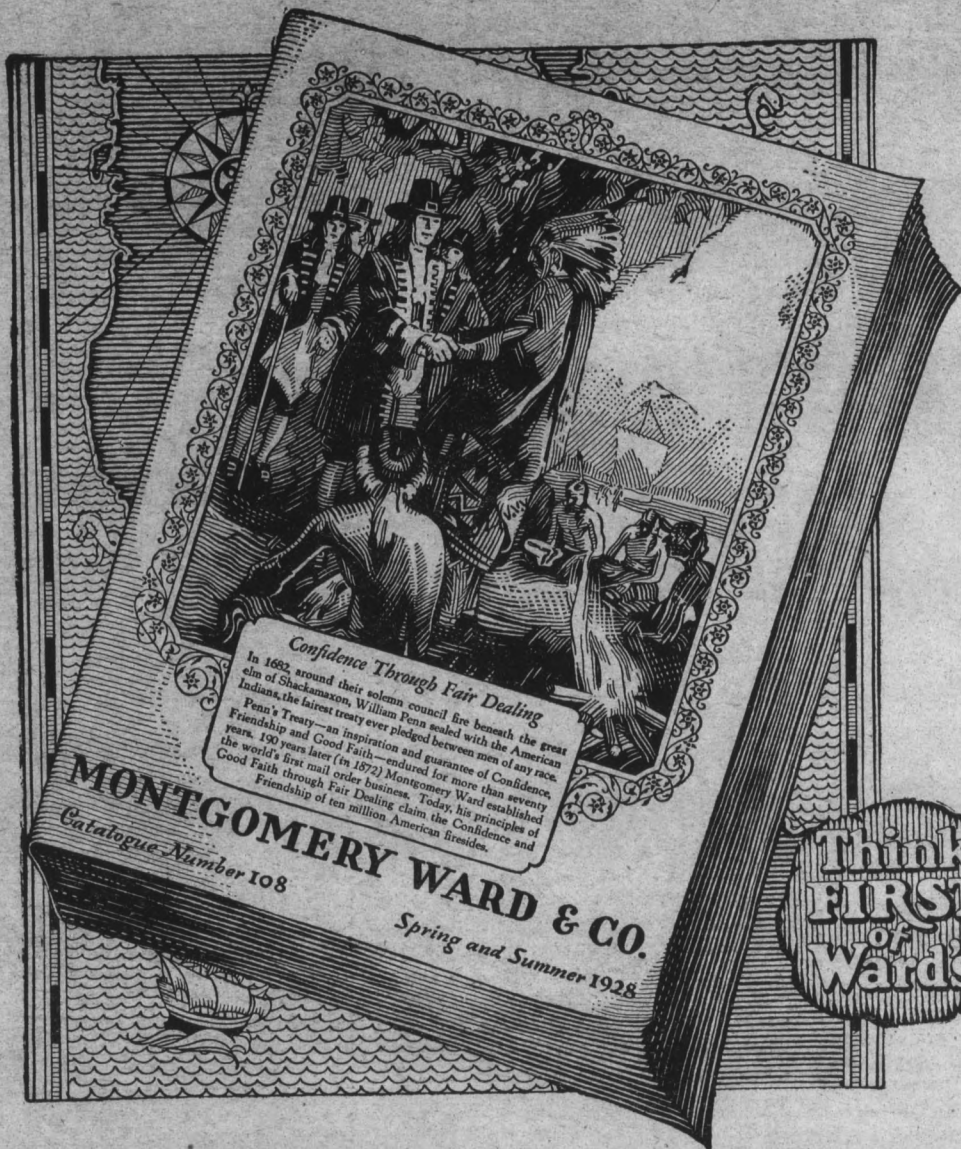
Bradley Barton removed an ever-present pipe from between his teeth and gestured toward a home nearby. "Don't look much like the place described to us, Bob," he called back, "but, according to the directions given we should be about there. Suppose you run in, son, and ask these folks. If it is the right place, they'll be our neighbors, you know."

Down into the mud stepped the flivver's driver, and curious eyes, watching from behind a curtained window, noted that the stranger paused to scrape his shoes as he approached the door. At the knock, a girl with long curling hair and merry blue eyes stood framed in the opened doorway. Off came the stranger's cap. "May I trouble you for a little information?" queried the visitor. "We are strangers, looking for a place known as the Jones farm. From our directions we should be about there, but we are not sure."

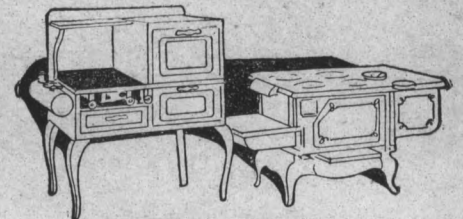
"It's the next farm down the road," answered the girl. "We heard the place had been rented. I suppose you folks are to be our new neighbors."

"Thank you very much," replied the boy. "Yes, we rented the place from an agent and never have seen it. It is hard to rent land where we came from. I'll say this," and a twinkle appeared in the boy's brown eyes, "we are taking a lot of good dirt on the farm with us. You folks certainly have the muddiest mud we've found on the whole trip. If corn will grow like this mud sticks, you should be world beaters."

"It is muddy," admitted the girl, and her smile matched the boy's grin, "but you'll get used to it. And this soil does grow corn. As we are to be neighbors, my name is Katherine O'Neal. Father and mother are away, but I know they will be glad to do anything they can for your folks. The Jones place has been vacant for some

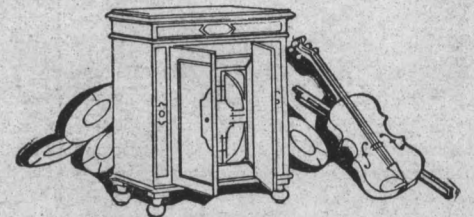


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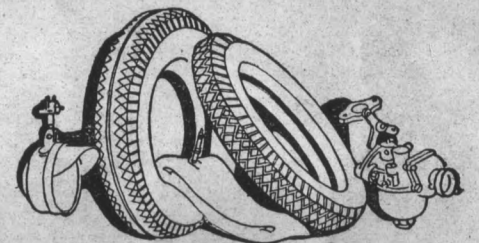
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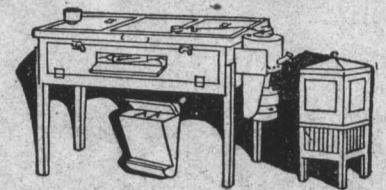
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News and Views

From INGLESIDE FARM—By Stanley Powell

A FEW weeks ago we had a lot of trouble with our furnace. It is an old style hot water heating device having five small flue doors above the fuel door. These flue doors had become warped and wouldn't stay quite shut and the old furnace persisted in belching forth soot-laden and ill-smelling smoke through these cracks. To remedy this situation we ordered new flue doors. For some unaccountable reason just as soon as we placed this order the furnace stopped smoking.

You know we are always bragging that we are not superstitious, but last summer we had another strange experience. The rubber ball in the float device which controls the water level in the tank from which our cattle and horses drink had been sticking frequently so that the water would not come in when the level went down. We purchased a new ball and straightway the old one began to function perfectly and we have not had any more trouble with it since.

Conveniences Pro and Con

When I was talking to our local furnace dealer about my troubles, he tried to sell me an oil heater. According to his story, this would have kept our home constantly at practically any degree of temperature we might have set it with almost no attention on our part. An oil company would have seen that there was always fuel in the tank and there would have been no ashes to carry, no smoke, and no dust. The only fly in the ointment was that this little device would have separated me from about enough to buy a new model four-cylinder car. Farm life would hardly seem na-

tural or genuine without some of the old accustomed chores. I know city people whose principal chores consist of turning valves and paying a whole flock of bills the first of every month. They have no worry about furnaces, pumps, wells, pressure tanks, gas engines, electric motors, ashes, coal bins, or wood piles. Their gas is metered, their electricity is metered, their water is metered and their city heat is metered.

Possibly one of the reasons why farm homes have produced more than their proportionate share of American leadership is because of the manifold chores which have provided responsibilities for every member of the family and thus have inculcated habits of industry and diligence.

Electricity on the Farm

I have already referred to our electric motors and probably some of you are wondering where we get our current. We are fortunate in being located within less than a mile from a rural power plant which harnesses a small stream and has an auxiliary gasoline engine for furnishing light and power to a village and several farms. This provides us with 110 volt current. Besides the motor for pumping the well water when the wind is lazy, we have another motor which automatically keeps a certain pressure in our soft water system. We have lights in our home and one barn and use an electric washing machine, iron and sweeper and smaller appliances.

I was interested in reading in the Quarterly Bulletin issued by the Agricultural Experiment Station at M. S. C. that they have been conducting experiments as to the feasibility of operating the ensilage cutter with an electric motor instead of a tractor or other engine. As a result of these experiments, the College investigators concluded that this was a very economical method. However, the tables accompanying the article show that they figured the current at three cents per kilowatt hour. This may be the rate for patrons of the Mason-Danville Experimental Line where the tests were made, but we have to pay more than that here at Ingleside.

In commenting on the decrease in horseshoeing, I remarked in a previous article that I was letting our bays go barefoot behind for the first time since they were broken a half dozen years ago. As the doctor said, "The operation was successful, but the patient died." We go along all right for a month or so and then Charlie began to go lame in one of his hind feet and by the end of six weeks I had the team back to the shop once more getting them shod all around. The next time that I want to try weaning them to barefoot habits, I'll do it in the spring when the ground is soft and moist and not in the early winter when the ground is hard and rough.

Why Groom Horses?

Speaking of horses, I am reminded of a remark that a good friend and neighbor made the other day. He said that his horses hadn't been cleaned off since fall. I couldn't help but think of how much time I have put in on that job during the same period. Among the two hours of chores that I do every morning to develop an appetite for breakfast there are about twenty minutes devoted to the use of the brush and curry comb on our horses. They all get the same attention whether they are to be used or not.

How can this help but make my production costs higher than those of some farmers who spends those twenty minutes a day at some more

profitable employment? But, anyway, I'm not contemplating changing my daily schedule.

I sometimes think that it might be a good thing if some of us would take a little of the time we spend currying horses and devote it to cleaning off our dairy cows. I would like to see some figures as to the percentage of Michigan horses and Michigan dairy cows which are groomed regularly. I suppose that it is natural for most of us to devote more time to the appearance of our horses because we spend more hours in their company and have them with us when we are out in public. However, from the standpoint of the health of our families and that of the general public, there can be no question but that the grooming of our dairy cows is of far more importance.

MICHIGAN STATE POTATO SHOW

THE next big event for Michigan potato enthusiasts is the State Potato Show to be held Farmers' Week, January 30th to February 4th at the Michigan State College.

It is believed that the 1928 Potato Show will surpass previous State Shows both in quality of exhibits and number of entries. The six district potato shows held in Michigan during November qualified an unusual number of entries for the State Show. The quality of the potatoes exhibited at the district shows was exceptionally good. The champions of the district shows will compete for the State championship at the State Show.

Approximately \$600.00 will be awarded in cash prizes and several manufacturing concerns of potato machinery, fertilizer, spray materials, etc., will offer their products as premiums. The premium list will include:

1. Individual Exhibits of 32 potatoes of Russet Rural; White Rural; Green Mountain; Irish Cobbler and any other variety of merit.
2. County Exhibits which will include 10 samples of 32 potatoes each.
3. Beginners' Special Class for growers who have never won a prize at any district or State Potato Show.
4. Best Potato Exhibit. Premiums will be offered growers who select the most ideal type of one of the following varieties: Russet Rural; White Rural; Irish Cobbler; Green Mountain; Bliss Triumph; Early Ohio and Russet Burbank.
5. Boys' and Girls' Club Exhibits. For the clubs showing the five best samples of 32 potatoes each.
6. Smith-Hughes-Agricultural High School Exhibits.
7. Best Bushel of Baking Potatoes.
8. Standard Grading Exhibit. Prizes will be awarded those who can best interpret the U. S. Standard Potato Grades.

Premium lists and other information on the State Potato Show may be obtained from the Farm Crops Department, Michigan State College, East Lansing, Michigan.

SOIL PROGRESS IN VAN BUREN COUNTY

VAN BUREN county farmers are getting down to bedrock in a study of the soil problems of their respective farms. During the past year, a series of four studies were made which encompassed drainage, liming, green manures and organic matter, and commercial fertilizers. Lectures on these subjects were given by members of the college staff to representative farmers and these in turn, gave the information to groups of neighbors in their home communities. Each member of these classes kept a notebook of the most important points brought up.

Pursuing the same line of procedure in six different projects, last year Van Buren county had 92 local leaders with 1,262 members in their classes, according to Wm. F. Johnson, county agricultural agent of Van Buren county.

This year advanced work in soils will be given. The work has already been mapped out by John W. Sims, soils extension specialist co-operating with Mr. Johnston.

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

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Even children know that at the first sign of throat irritation, the use of Listerine as a gargle will often ward off colds—or worse.

Sore throat is a natural warning that should always be heeded. It is Nature's way of telling you that disease germs are fighting for the upper hand, and that prompt measures are necessary.

Listerine, as you know, has been the standard family first aid in these matters for more than a half century.

Being antiseptic, it immediately attacks the countless disease-producing bacteria that lodge in the oral cavity. Time and time again, it has nipped a serious complication in the bud.

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take this pleasant morning-and-night precaution every day during the cold weather, when so many people are laid up? Lambert Pharmacal Company, St. Louis, Mo., U. S. A.

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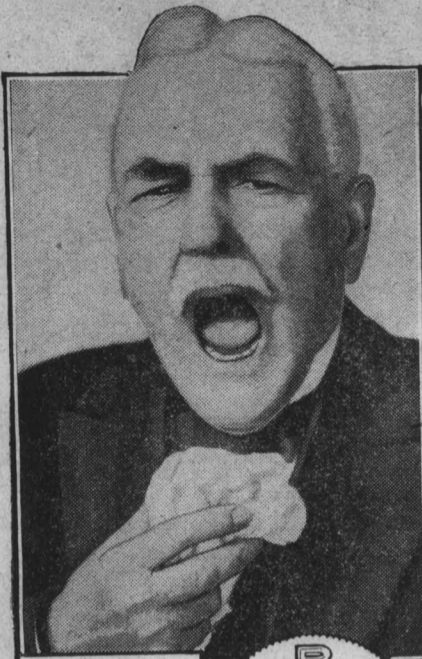


**In the THROAT
and nose more than
50 diseases**
 have their beginning or development. Some, of mild character, yield to an antiseptic. Others, more serious, do not. At the first sign of an irritated throat, gargle frequently with Listerine, and if no improvement is shown, consult a physician.
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 the best paste that
 scientific knowledge
 could achieve.
 Large tube—25c

L I S T E R I N E

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PROTECTING PIPES AT FLOORS AND WALLS

ONE of the greatest dangers to pipes freezing is where they come through a concrete or other masonry floor or wall. Often a pipe will freeze clear inside a reasonably warm stable where it comes through a concrete floor, since the floor may carry the freezing temperature two or three feet when in contact with a foundation wall that is several degrees below zero. In the first place, the floor should never be directly in contact with the foundation wall, but should be separated by at least a half-inch joint filled with asphalt, creosoted wood, pitch-coated insulation, or other non-conducting material. Second, the pipe should never be set directly into the concrete floor, but the opening in the floor should be considerably larger than the pipe and the space between filled with hot asphalt, stiff roofing cement, or a strip or pitch-coated insulation bent around the pipe and forced down around it. The same general treatment should be used where a pipe comes through a wall which may carry the frost from an outside wall.—I. D.

WATER POWER FOR ELECTRICITY

I have a constantly flowing stream about 40 rods from the house. Would it be practical to try and produce an electric current by the power of it? Is there such a thing as a small water turbin that could be used by damming this stream? This stream is not large (about 3 feet across and 1 1/2 feet deep on average) but it has a rapid fall over the most of its length. It is fed by spring holes covering about 2 acres and the flow is very nearly uniform the year around and it never freezes. I am wondering if there is a device on the market such as a turbin and generator that would give a constant flow of current making batteries unnecessary, thus making it more economical in the long run.—M. M. A.

A stream, as given in the inquiry, three feet across and 1 1/2 feet deep flowing 100 feet per minute with a 10 foot fall would give a flow of 450 cubic feet per minute, which with a fall of 10 feet would be equal to about 8 1/2 horse power. Assuming that fifty per cent of this would be lost in the turbin and generator, there would still be available for use more than 4 H. P., which would be a practical amount. However, if a 2 foot fall could be obtained in the stream only about 2 H. P. would be available and if fifty per cent of this or more is lost in the generating equipment, it would be questionable whether it would be possible to transmit this a distance of 40 rods, as given in the letter, and make it of any relative value.

A certain per cent of loss will also occur in transmitting the current over the distance of 40 rods; if a 110 volt system were used, it would perhaps

not exceed 5 or 10 per cent of current which leaves the generator, providing a sufficiently large wire is used for this purpose.

DOES SHORT ANTENNA TAKE MORE B-BATTERY CURRENT?

I have heard it said that using an indoor aerial on a radio or a short wire for an antenna uses more flow of current from the B-batteries than with a long aerial. We are using an indoor aerial and are having lots of trouble with the B-batteries wearing out sooner than they should. What are the facts?—H. D.

No and yes. The short aerial does not directly increase the B-battery current, and still indirectly it does to a considerable extent. The amount of B-battery current depends largely on the amount of ions given off by the hot filament. With a long aerial we get a strong signal and do not need to burn the filaments very hot to get the proper loud speaker volume. With a short antenna we get a comparatively weak signal and to get loud speaker volume must burn the filaments hotter, which throw more ions and these in turn carry more B-battery current.

You do not tell us anything about your set, but if you could use a C-battery and are not, this would account for part of your B-battery running down. Write to the manufacturer of your set or see the local dealer and tell them just how you are using your set and see if they cannot help you.—Dickerson.

HOW TO BEND WOOD SAFELY

Please explain how I can curve oak flooring boards 1 13-16ths inches wide by about one-fourth inch thick enough to form the front end of a taboggan. No doubt this will be of interest to other readers, since there are many places in making and repairing rustic furniture, making sleds, and so on, where farmers could use such knowledge.—P. B.

About the only satisfactory method of bending wood so that it will hold its shape afterwards is to give the wood a thorough steaming with steam considerably hotter than boiling water. You will have to get a boiler or something by which you can get the steam under pressure so as to increase its temperature. After the piece is thoroughly steamed it should then be bent into the desired shape and clamped there, then allowed to dry thoroughly. With this kind of treatment the wood is not likely to crack and will hold its shape pretty well. Of course, anything bent in this way should be given a protective coat of shellac or paint or varnish to prevent water from soaking into it. Where the pieces are light and of wood that naturally bends easily, simply a good soaking in hot water may be all that is required.—I. D.

T.B. Work Suffers in Michigan
Lack of Funds Stops Testing

ALL tuberculosis eradication work in Michigan is to be discontinued immediately unless Governor Green authorizes the use of an emergency fund or calls a special session of the legislature to provide an appropriation of \$150,000 to carry on the work until the next fiscal year, July 1st, 1928. It is a regrettable situation. Michigan up to this time has been a leader in the eradication of tuberculosis from its cattle herds. All of the cattle in forty-nine out of the eighty-three counties in the state have been tuberculin tested, the reactors slaughtered, and the premises disinfected. These counties are now

practically free from tuberculosis, and are designated by the State and Federal government as modified accredited areas. Only one other state, North Carolina, has more accredited counties and there is very little tuberculosis in North Carolina, some counties showing no reactors whatever. Only four counties in the entire state of Michigan have failed as yet to provide funds with which to cooperate with the Federal Government and the State in the cleaning up of tuberculosis. The Federal fund and county funds are ample, but neither can be used without state funds which

(Continued to page 27)

BIGGER CROPS FROM FIELD AND ORCHARD

MYERS PNEUMATIC COMPRESSED AIR SPRAYER



NO 1297 NO 1296
MYERS COG GEAR DOUBLE ACTING COMPLETE SPRAY OUTFIT



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THE AGRICULTURAL OUTLOOK

(Continued from page 5)

dity prices are low, inventories are small, and credit is cheap. The resumption of activity in the Ford plants is expected to stimulate industry. The railroads have been holding back equipment orders. Building is expected to come up to the 1927 volume. Public utilities and electrical companies are engaged in expansion programs. Highway construction probably will proceed rapidly. A conscious effort to fill the dinner pails by active industry may be made for political reasons.

There are a few Cassandras discoursing on the business situation, however. Some of the \$4,400,000,000 of gold in this country is now going abroad. This gold has been the basis of easy credit for the last several years and the recapitalization of America, as represented by the phenomenal rise in urban real estate and in stock market quotations. Over \$100,000,000 have been shipped recently and \$74,000,000 "ear-marked" for foreign owners in Federal Reserve

Prices for these grains in the next five months probably will be higher than in the same period of 1927.

The dairy outlook is as good as last year, although it seems rash to predict a further gain in dairy income in 1928. Poultry and eggs are starting the new year in a stronger position than last year and some gain in income from these products seems probable.

Potato prices in the first half of 1928 probably will remain lower than in 1927. Thereafter, the new crop will control. Little change in acreage is probable which leaves any fluctuation in the size of the crop largely to providence. A larger apple crop and lower prices are probable next year, but total income may be greater.

The 400 members of the Ottawa Egg and Poultry Association own 125,000 chickens. The organization will be used to market eggs and poultry.

Michigan certified seed potato growers produced approximately 227,000 bushels of certified seed of unusually good quality during the past season.

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 will the new Ferguson Plow for Fordsons save its cost in fuel and oil?

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

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The tractor with the answer built in it. Moderately priced. Terms fair. Ask us. You are welcome at our factory. The purchase price of a Baker is not an indebtedness—only an investment.

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Swanton, Ohio



Business and Home Life Meet on the Farmer's Back Steps

vaults. Most observers believe that the quantity taken will not be enough to seriously disturb credit conditions, but there is rather wide divergence of opinion as to how much could be spared before disturbance would occur.

Changes in demand for American farm products is harder to discern than the fluctuations at home. Both our competitors, such as other exporters of wheat, and importers must be considered. The economic tendency is toward decreasing dependence on the United States through expanding production in both importing and other exporting countries. The change in any one year usually is not very large and the normal tendencies may be overshadowed by variations in production caused by the weather.

Some comment on individual farm products is pertinent. Beef cattle prices are likely to stay on a rather lofty plane through the year, although the full upturn in the latter part of 1927 may not be maintained. Export demand for hog products probably will broaden by summer and hog prices are likely to recover somewhat from the low point reached late in 1927, especially if the pig survey shows a tendency to curtail production. The 1928 wool clip should bring more than the last one, but the lamb crop may sell for less.

Wheat prices in the last three years have been high enough to stimulate both domestic and world acreage. A generally favorable season would lead to a huge world crop and a price depression. This year, the partial failure in Australia and Russia and the field damage to the crop of western and central Europe saved the situation. Corn and oats production will be larger next year unless there is another unfavorable season or growers voluntarily reduce acreage to avoid lower prices. No increase is needed to cover feeding requirements.

FOR THIS DISCOVERY—
He Can Well Afford To Pay The Judge.

1 CASHIER
PAYS FEED BILL ON 1ST OF MONTH AND COMPLAINS IT'S TOO MUCH

2 FEED STORE
BUYS UNICORN WHEN DEALER TELLS HIM THAT IT WILL CUT HIS FEED BILL.

3 CASHIER
ON FIRST OF NEXT MONTH FINDS HIS FEED BILL IS \$20.00 LESS.

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WONDERS WHY! WEIGHS HALF-PECK OF FORMER FEED; FINDS IT WEIGHS 4 1/2 POUNDS

5 UNICORN FEEDS
WEIGHS HALF-PECK OF UNICORN; FINDS IT WEIGHS 3 1/2 POUNDS.

6
FINDS THAT 100LB. SACK OF UNICORN HOLDS 28 1/2 HALF-PECKS FORMER FEED ONLY 23 HALF-PECKS

7 MILK STATION
AND HIS MILK CHECK IS THE SAME AS BEFORE FROM HIS 14 COWS.

8
CHASES SPEED-COP OFF ROAD GETTING TO STORE FOR MORE UNICORN.

MANY A TRUE WORD IS SPOKEN IN JEST. ANY TIME YOU WANT TO START MAKING MILK FOR LESS FEED—MONEY UNICORN WILL DO IT FOR YOU. WHY NOT START NOW?

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MADE BY
CHAPIN & COMPANY
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\$50 to \$250 A WEEK Your Share Of The Profits

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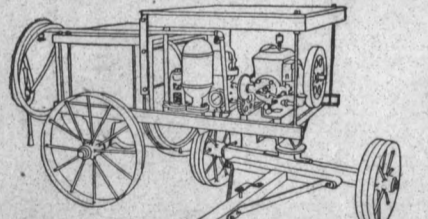
Write Quick Don't wait if you want this chance. Opportunities like this can't wait. My organization for this year must be completed at once. If at the start you can devote only your spare time to this business, I can arrange that. Just say, "I am interested in your proposition" in a letter or on a postcard.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

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Under the 4-H Flag

(Continued from page 6)

farmer from necessity, not from choice. A round peg in a square hole, Barton farmed because he had been bred to it, while in his heart he believed that had opportunity been afforded his name would have been blazoned as one of the great musicians. But there had been no money for training in boyhood, and Barton the man had done well to feed and clothe himself and those he loved. Yet when he sat before an open fire and drew bow across strings there was strength and virility in face and fingers. Barton was always composing something new. Now it was a militant march which presaged victory, now a crooning lullaby which soothed one to restful slumber. But the composition never reached the stage of paper and ink. Barton's violin was a call to new adventure, to new fields of musical exploration. The sordid business of getting a living from the soil was mere necessity, the job one repugnant from planting to harvest time.

Grace Barton, younger by ten years than her husband, was his direct opposite. Not that she could not thrill to the violin, which, as much as its owner, had wooed him, for it was a



part of her home life, but Mother Barton faced the stern reality of hungry mouths, of needed comforts, of an education for those dear to her if they were to prosper beyond the achievements of their own kin. Moreover, she loved the soil with an abiding affection which was her heritage from land-owning ancestors. The great grief of Grace Barton's life was that in the twenty years she had borne that name no roof had covered her which she could call "my own." Despite her energy and industry the years had been hard indeed until Robert, the eldest child, had grown into sturdy, willing helpfulness. Yet young Bob was a strange mixture of paternal and maternal blood. There were days when he, too, seemed a carefree idler, content to adopt his father's scheme of life; days when he was a dynamo of energy doing far more than allotted tasks. Shy and sweet, Bob's little sisters were the joy of their father, their mother's comfort. Stamped upon the entire family was that intangible something which betokens good breeding. Except for their poverty, the Barton family was not as other roving tenants who make annual pilgrimage.

Impractical and unbusinesslike, Bradley Barton always had asserted himself as the head of the house and Mother Barton never had rebelled. When, in answer to an advertisement, Father Barton had entered into correspondence with an agent and finally had paid half of the five hundred dollars rental demanded in advance, she had not protested. Vivid had been the portrayal of the great house with its attractive surroundings, the hundred acres of rich land which would yield large crops of corn. Now they were here to find the house old and forsaken, the fields unfenced, the barn a flimsy structure which swayed in the March wind. Little wonder that bitterness crept into the heart of Grace Barton and that she wept for the comfortable though unpretentious home and the good neighbors they had left. "If ever you have any dealings with an agent of any kind again, Brad," Mother Barton announced, "I'll—I don't know what it will be,"

she finished, wiping her eyes, "but it will be something bad. This isn't a house, it's just an old rookery."

"Hi, mother," called Bob from the rooms above. "Come on up! There's a cute little room for Ruth and Bess, a dandy big one for you and dad, and the room I've always wanted and never had. All this old shack needs is a roof and some paint and she won't be so bad. Look around while I start a fire. Who knows, it may not be so bad after all?" Whistling, Bob descended the stairway and soon a blazing fire illuminated the dark rooms. Father Barton had discovered some old chairs tucked away in the basement, and Mother Barton sank into one with a sigh of relief. "Bob," she announced, "you and the girls can do all the exploring you want, but I'm going to rest. It is more cheerful with the fire. We may be happy here and, thank God, we are all together and all well."

An hour later when Bob and his small sisters came in, muddy but enthusiastic, the strains of "Home, Sweet Home" floated out on the darkening air. The wagon and car had been unloaded and Mother Barton was preparing supper over the open fire.

With eyes closed, Bradley Barton cuddled his violin, and now the room seemed peopled with swift and moving shapes. "Dance of the Blacks," he answered at Bob's query. "I'll bet the old master has had many a pickaninny dance before this fireplace. Especially on feast days. Now when I get around to it, I'm going to write down the tune." All the family smiled as with a final flourish the tune ended. "What did you find, son?" Father Barton inquired as he put the violin away. "Think there's any chance of making that five hundred dollars rent and some besides?"

"There's some great land on this place, dad," Bob replied, "better than any we've ever farmed. But a lot of it is creek bottom, which may overflow. There's a fine blue-grass pasture, although it has no fences to speak of, and the wheat which seems just as described to us is showing up fine. Twenty acres of that, I reckon. Back in the far corner of one field there seems to be some mighty rough land with heavy timber. We'll see Mr. Jones and get permission to cut posts and firewood there. How's your muscle, dad?" concluded Bob with twinkling eyes.

"Oh, all right, I reckon," was Father Barton's reply. "But you know, son, I never was much of a hand with an axe. It will take a lot of choring around home here until we get fixed up. Suspect you'll have to get up the wood." There was an amused giggle from Ruth, and Bob chuckled tolerantly. No, father never had been "much of a hand with an axe" or with any other implement calling for hard labor since his stalwart son had approached manhood. Soon the evening meal had been disposed of and again the Barton family sat before a leaping fire while the violin sang songs of olden days, for this was the mood in which Barton found himself. The girls were nodding sleepily when a knock came and Mother Barton threw wide the door.

"Howdy, neighbors; I'm John O'Neal. And this is Mrs. O'Neal and Kate. We live next farm, where you stopped to-day. Came over to bid you

Always look for the Red Brand (top wire)

SHEEP and SOY BEANS

J. L. Fleshner, Allenville, Illinois, plants 2 or 3 soy beans in each hill of corn. A carload of Fall lambs get fat on the beans, lower blades of corn and stray weeds.

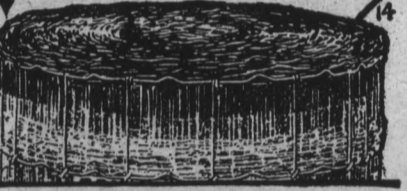
Soy beans planted with corn and rye drilled between the corn rows gives R. V. Disharoon, Villa Ridge, Mo., a live stock profit out of his corn field.

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A Call on the County Agent

(Continued from page 3)

the farm with me, but I got a good soil. It used to produce some of the best crops in the county."

"Yes, your farm has a good reputation, but soils get tired and sort of run down at the heel like the rest of us. We'll be out right after dinner."

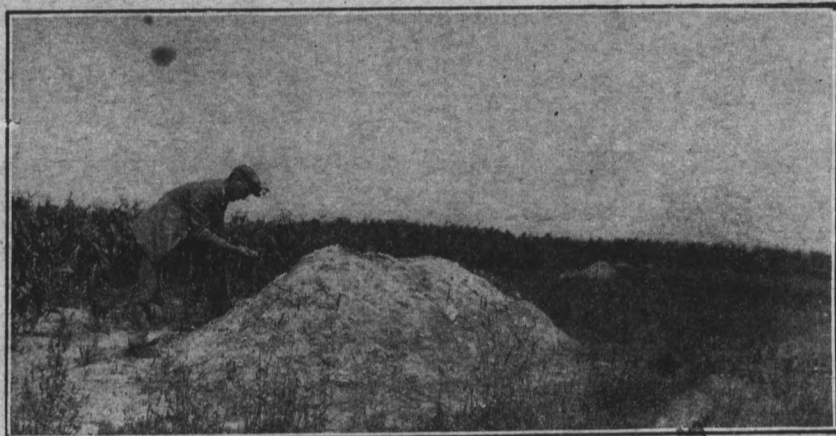
"All right, good-bye."

Shortly after dinner I was on the way with my friend to visit the Hansen farm, for I was anxious to see what an examination of the place would reveal. We found Mr. Hansen waiting for us and as we passed through the barn lot I noticed some attractive cows and commented on their good quality.

"Yes, sir, we are real proud of our cows. We have the papers for two of them and the rest are good grades.

in the state are using it to find out if their soil needs lime. The main point is to have the stuff go through the soil and not over it or around it. And don't get impatient and stir the soil or you will get muddy soup which hides the color. Now let's see you make a test here."

"Don't put in too much soil; you don't leave any room to pull out the liquid. That's the idea, now tilt the paper a little and touch the edge of the liquid with the point of your knife where it has soaked through the soil and you can pull it right out. See how simple it is? You can test as well as anybody. Now we will dig down here and see how it tests at a depth of five or six inches. I always like to test the surface and near the



The Agent Examines a Pile of Marl Secured from a Nearby Lake to Correct the Acidity of Soil on this farm

We plan to gradually work the herd over into all pure-breds."

"About how much milk are you getting?" I inquired.

"Not so much as we ought to. We buy considerable mixed feed and give the cows a liberal amount of silage and all the hay they will eat too."

As we entered the barn Dick pulled a handful of hay from the mow. "Timothy!" he exclaimed. "You don't expect your cows to give milk on that."

"Yes, we feed mixed hay. I would like to have all clover or alfalfa, but the clover catches so poorly that we have to mix in considerable timothy in order to be sure of a catch, and we can't afford to buy alfalfa."

"Let's have a look at that hay field of yours. In my opinion the place to start in the dairy business is to get the soil into condition for growing alfalfa or clover. Better bring along a sharp spade, the ground is frozen a little even though the surface has thawed, and we want to see what kind of a foundation your soil has."

In the hay field Dick produced a small testing outfit from his pocket and scraping up a little soil from the surface placed it on a strip of waxed paper folded into a trough. On the soil at one end of the trough he dropped a green liquid from a Soiltest tube until the soil was saturated. After waiting a minute he touched the liquid at the edge of the soil with the point of his knife blade and drew out on the paper a bright yellow drop. "Sour." He commented and explained that if the soil contained sufficient lime the liquid would be blue.

"I imagine the chief trouble with your clover catches is soil acidity. Fred Anderson, west of town, had the same trouble with his clover. A test showed his soil to be acid like yours so he applied lime and now he has a fine catch. But let's go over the field thoroughly before we reach any conclusions."

"That looks simple, do you suppose I could work it?" inquired Hansen as he watched the agent make another test.

"Sure thing! Thousands of farmers

bottom of the plow soil too. And while we are at it suppose we dig down a couple of feet and find out if the soil is sour down there."

"What's the big idea? I seed clover in the surface soil, not two feet down."

"Well, you see if there is lime down there you do not need to supply so much to the surface even if it is pretty acid, because as soon as the roots get down into the lime rich layer they get all the lime they need. This is especially true of alfalfa and sweet clover. By the way, since you are getting into the dairy business you can't afford to get along without alfalfa. When you get a stand of that, you are going to have some hay every year regardless of the season."

"This high ground in the field seems to be all acid, both the top soil and the subsoil. We have made a dozen or more tests and it runs pretty uniform. Now let's see what we find in this low strip."

"Well, if this high ground is sour that down there ought to be more so for it is a lot wetter. It's funny though clover seems to catch there better than any place in the field, just look how thick it is."

"Now test it carefully, Chris, and we'll see what it is like."

"By George! Look at that, it's as blue as indigo. I don't understand that at all. Give me the 'low down' on this liming business. How do soils get acid? Where do you get lime? How much do you put on and when? How much does it cost and is there more than one kind?"

"One at a time there and I'll tell you. But let's walk over toward this wheat field as we talk."

(Other stories by Prof. Millar of Michigan State College to follow, will show the adverse soil conditions on many Michigan farms and the means being employed to correct them.—Eds.)

Secretary of Agriculture Jardine said that agriculture is better off now than it has been in the last six years. He felt sure that a lot of people would not agree with this statement but it is based on facts. He pointed out that the estimated value of all farm crops for 1927 was \$9,114,845,000 or \$675,000,000 more than in 1926.

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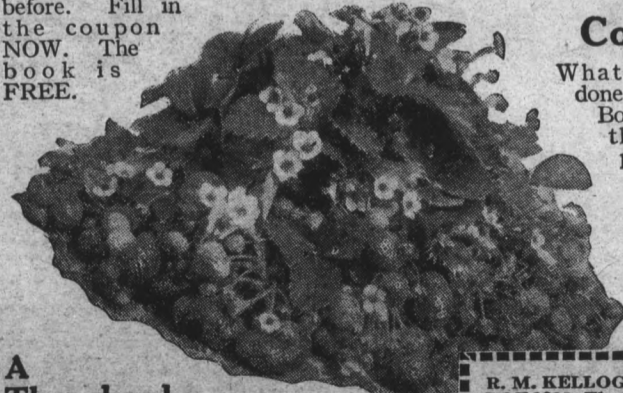
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Just like Registered stock or Pure-bred poultry, these Thorobred Pedigree plants are plants that produce the biggest crops of fancy red berries and bring the highest prices. They are plants that are making \$500 to \$1200 per acre right along for hundreds and hundreds of growers. William Hileman, a Michigan farmer, built a \$4000 barn with the profits from less than two acres. A. H. Reed, a successful poultryman of New York State, made \$594 from only 1/4 acre of them. He now says he is going to use chickens only as a side line to his Thorobred Pedigree Berries.

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\$627 PROFIT From Only 1/4 Acre



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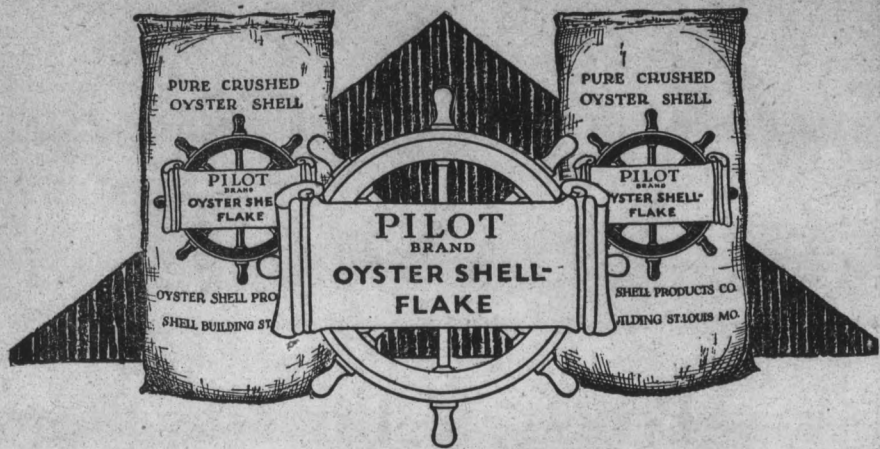
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POULTRY

How I Raised Baby Chicks

From Information Obtained from Mrs. Ivan Schantz

Last summer the Michigan Farmer had a chick contest from which some interesting information on raising baby chicks was obtained. This contest was held with full knowledge that plenty of reliable information can be obtained from authoritative sources, but we wanted to know just what methods the chick raisers themselves used and the results they obtained from them. We believe that these practical hints will be enjoyed by our readers and are therefore writing them up in experience story form. Following are the methods used by Mrs. Ivan Schantz.—The Editors.

DURING the past season we got 251 chicks from a reliable Michigan hatchery on May 25th. The chicks were from one of the good matings of this hatchery, as we believe that well-bred chicks are the most profitable. Of the number received, 232 lived, 17 died of diarrhea, one was drowned, and another was trampled to death.

The chicks were received in the afternoon, and after examining the shipment for dead chicks we replaced the covers of the boxes. After dark the boxes were carried out to the brooder, which was of the coal stove type and of 300 chick capacity. The chicks were placed under the hover and as it was dark the chicks remained there and thus found the source of warmth.

Previous to placing the chicks in the brooder house, it was thoroughly cleaned and disinfected for lice. An inch layer of coarse sand was spread on the floor. Then the brooder stove, which had been thoroughly gone over and given necessary repairs, was set in place. Two days before the chicks were expected, a fire was started in the stove and the thermostat adjusted. Fine mesh chicken wire was placed around the stove about eighteen inches out from the edge of the hover. This was to keep the chicks from straying far from the hover and still give them plenty of chance to get far away enough from the hover to cool off if they wished.

The chicks were three days old before they were given their first feed. Also, previous to the first feeding, we gave them plenty of sour milk just as it begins to thicken.

The sour milk was really the first feeding on the third day. After that we gave them a home-made mash, consisting of two handfuls rolled oats, one handful bran, one raw fresh egg, one tablespoonful cod liver oil. This was fed five times a day for the first three days of feeding in amounts that the chicks would clean-up in a few minutes. On the fourth day the mash was given twice a day and a scratch grain three times a day. When the chicks were ten days old they were changed from oats and bran to a commercial chick starter mash.

Water and sour milk were kept before the chicks at all times and a disinfectant tablet and crude catechu was used in the water for sanitary purposes. Fine clean straw was used on the floor for litter, and grit and sand were always available.

During the third week, the mash was put into feed hoppers and the scratch grain was fed three times a day as usual. When the chicks were eight weeks old, we put them on a commercial growing mash to which I added one part of bran and one part middlings to two parts of the mash by measure. I have had very good results from this.

With reference to sanitary methods, the watering of the chicks presented the greatest problem and the hardest

job. So I bought a three gallon thermo-drink. In this the water was always clean and cool and the fountain seldom empty. The sour milk was put in a wooden trough with slats across the top to prevent the chicks getting their feet in. The coop was disinfected with a creosote preparation and the chick run covered with ashes.

About the only disease we had to contend with was diarrhea which appeared when the chicks were about two weeks old. The affected ones would stand around with wings almost touching the floor and cries of distress accompanied the passage of droppings which were streaked with blood. At first I used some tablets but without results. After consulting my poultry book, I gave them three doses of crude catechu powder. I do not know whether that helped or not but I lost only three chicks after that. I always kept the coop clean and as soon as a chick showed a sign of disease it was caught, killed, and buried. I believe that this helped greatly in keeping the disease in check.

As soon as the sexes could be distinguished, I separated them. When the roosters weighed one and one-quarter pounds, they were penned in a fattening crate and fed a wet mash consisting of one part bran, one part middlings mixed sloppy with sour milk. In ten days or two weeks they were ready for the market. So far I have sold them all to the local hotel as dressed poultry, as I find that I can make more from selling them that way than by shipping through the regular channels of trade.

AVIAN TUBERCULOSIS

I discovered an ailing six month old cockerel in my coop and killed him and discovered that the liver was spotted and large enough to completely fill the interior. It weighed one pound. Is that an unusually large liver for a TB chicken as I believe that to be the cause. Although the cockerel showed no sickness whatsoever twenty-four hours before, I killed him.—H. W.

The diseased and spotted liver is an indication of tuberculosis although a laboratory examination is considered necessary by scientists to definitely determine that disease.

Although the bird did not show outward signs of sickness before he was killed, the conditions of the liver would undoubtedly have brought on the death of the bird within a short time. If you have a large and valuable flock and suspect the presence of tuberculosis, it pays to have a veterinarian inspect the flock and make recommendations. That is about as far as a long distance letter of advice can go in discussing a poultry disease like tuberculosis.

STUDENTS' POULTRY FLOCK

AGRICULTURAL students in the Paw Paw High School have the management of a 200 hen White Leghorn flock, the property of the school. An up-to-date poultry house, just across the road from the school house, shelters this flock. This flock pays for its feed, care, and management, and besides makes a net profit of about a hundred dollars a year, according to R. G. Oas, agricultural teacher in the Paw Paw High School.—I. J. M.

Don't miss the first installment of that gripping story "Under the 4-H Flag." It begins in this issue.

HENS NEED VITAMINS

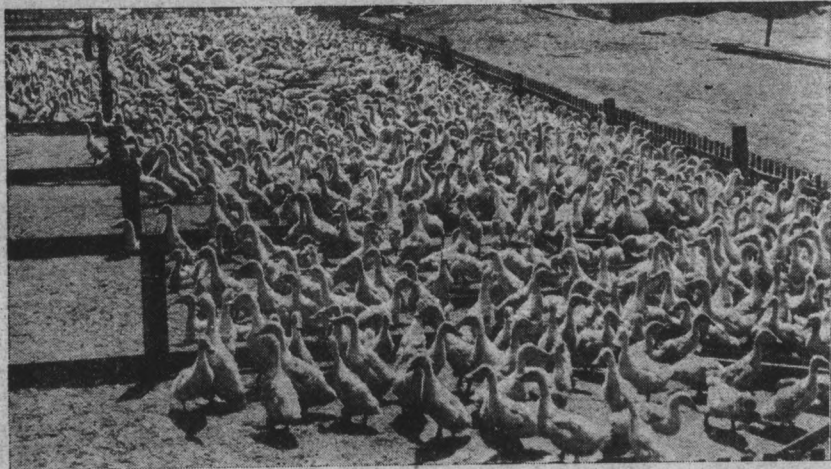
THE first thing to greet my eyes in the poultry department of a recent Michigan Farmer was an article entitled "Soft-Shelled Eggs." The writer recommends keeping oyster shell before the hens at all times. Now, this is very good advice for summers, when they get lots of sunshine, but in winter it is hardly enough.

A few years ago when we were just learning how to get lots of winter eggs, we put 2% of ground limestone in the mash and fed all the oyster-shell the hens would eat. We could get the eggs all right, but the hens soon began to look the worse for wear. There always seemed to be something lacking in the ration but we did not know what it was. In spite of all this lime, before spring they would begin laying soft-shelled eggs and many of them would acquire the egg-eating habit. In a little while some of the hens would seem weak

the windows open, and let the hens run out whenever the weather is fit. Vitamins will not take the place of fresh air and exercise, but are just as necessary. They will not take the place of feed, but on the other hand, feed can not displace them. We would not expect a mason to lay a strong wall without using either lime or cement in his mortar, and we should not expect biddy to lay a perfect egg without furnishing all the necessary elements. In summer she can get many of them for herself from sunshine, the green grass, and the bugs and worms she picks up, but in winter, these sources are cut off and she is dependent upon us for her supply.—Ray Normington.

WINTER EGGS

IT is not unusual for the careless farmer to get more eggs during the winter and from scrub hens than the breeder who should know all



One of the World's Largest Goose Farm Is at Alma. It Is Run by a Chicago Packing Company

in the legs and would sit around hardly able to walk.

The reason for this was that hens cannot digest the lime without the vitamin they get from sunshine. In the winter when they get very little of the violet rays from the sun, the hen (if she is a heavy layer) soon puts all the vitamins she has stored up in her system into the eggs and then the trouble begins.

We now use bone meal instead of ground limestone in the mash and feed a good grade of poultry cod liver oil, a pint to each hundred hens, which we feed twice a week. A good way is to give this in semi-solid buttermilk. We stir the oil in a little sour milk and then mix in enough of the laying mash to make it crumbly and feed as a wet mash. The hens are crazy for the mixture and it is some task to scatter it along the troughs with all of them under foot at once. In about five minutes, the last of it is entirely cleaned up and we put away the troughs again. The hens not only lay more eggs but the shells are hard and smooth and we have no more trouble with leg weakness or with hens eating eggs. But this is not all the benefit.

Our Eggs Hatch

We formerly got about 50% hatches (sometimes not even that), now the eggs hatch good and chicks have lots of vitality. A few years ago, no one expected pullets to lay well in winter and their eggs to hatch well in spring. The reason for this is that after laying heavily all winter, she had not enough vitamins left to put in the egg for the young chick.

What she needs all winter is lots of yellow corn, sprouted oats, and cod liver oil. These will give her the needed vitamins. She will then come through the winter without needing a spring tonic and the eggs will also hatch well.

We should remember, however, that "bottled sunshine" is only a substitute, and give her all the real sunshine we can. Have the front of house covered with glass substitute,

about the poultry business. This fact has been upheld by the farmer as a cause for the lack of faith in the merits of pure-breds. The difficulty in most cases is lack of knowledge of proper management, for frequently the supposed experienced breeder is more ignorant of poultry management than the careless farmer.

Perhaps one-half of those who endeavor to give their flock the best of care make a practice of feeding their hens at noon. Nothing is more injurious or more harmful to good laying than giving three meals a day. It is simply a forced feeding process that sooner or later brings in its train every ill that can befall the flock. For a while the hens will lay a greater number of eggs. Their combs will be bright and they will enjoy excellent health, but the forced feeding causes the hens to store fat on their bodies faster than the production of eggs can take up the supply.

Two feedings a day with a light breakfast in the morning and a liberal feeding before going on the roost at night, with plenty of warm drinking water during the day, is sufficient. Give a plentiful supply of grit, such as oyster shell, also charcoal siftings with meat scrap a couple times a week in proportion of ten pounds of scraps or tankage to every fifty hens. Feed corn on the cob so that they may get exercise, but avoid the feeding of frozen or mouldy corn. Keep a good supply of gravel in the hen house and keep the floor covered with any dry chaff that may gather in the barn and above all keep their quarters and perches clean. If this is done, even the careless farmer will be repaid for his feed and extra labor.—D. H.

A big load of turkeys was delivered to the Grand Rapids market by Mrs. John Carrigan, of Kent County. There were 436 turkeys in the load and they weighed 4,937 pounds. These were not all produced on Mrs. Carrigan's farm but, as she had gained a reputation in the Grand Rapids market, neighbors pooled their turkeys with hers.

"VITAMINS A AND D" mean Poultry Profits

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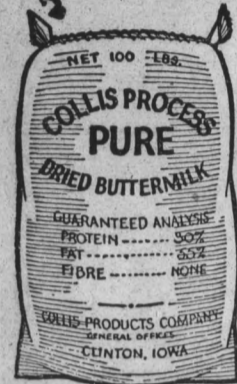
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County..... State.....
I buy my poultry supplies from.....

Why not GIVE YOUR CHICKS A CHANCE TO LIVE!

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Get enough from your dealer or direct from us to add 10% to your feed. You will then understand why Mrs. Freitag wants her friend to use Collis Process Pure Dried Buttermilk. Write for prices and our free book.



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Monroeville (O.) Hatchery writes—"Raised 97 per cent."
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Brooding chicks in a Martin is safer, easier, surer, FIRE-PROOF, rat and weasel proof, sanitary, dry, warm—even in zero weather, stove in center, no corners—prevents crowding.
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Send for this 1928 Incubator and Brooder Book—see the dollars our New Cut Prices save you. Two big well-known firms—Wisconsin and Ironclad—have consolidated—to cut costs and sell at lower prices. Don't buy until you get this money saving book. 17 Incubators—14 Brooders to select from. **WRITE FOR CATALOG TODAY**. Tells how to get eggs in winter; how to stop chick losses, 30 day trial offer. **WISCONSIN-IRONCLAD COMPANY** Box 227 Racine, Wis.

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How Far Did LINDY Fly?
FROM NEW YORK TO PARIS
Solve this Puzzle
The letters on the wing of this plane show the number of miles Lindbergh flew from New York to Paris. The letters in the alphabet are numbered—A is 1, B is 2, etc. Put down the number represented by each letter (C F A I) in the order they appear and you will have the number of miles Lindbergh flew from New York to Paris. Can you work it out? Send your answer today—no obligation or cost to you now, later, or ever. Be wise
AND WIN BUICK or \$1800 Cash
I am going to give this beautiful new 1928 four door Buick Sedan, also a 1928 Nash Sedan also a 1928 Essex Sedan, also a 1928 Chevrolet Sedan—four cars and a large list of additional costly prizes—over \$5000.00. Cars will be delivered free to winners by nearest auto dealers. I have already given over fifty new automobiles to advertise our business and now YOU can get this new Buick Sedan or cash if you wish. You can win it. It costs nothing to try. First prize winner can have Buick or cash value of car (\$1295.00) and
***\$505.00 EXTRA For Promptness!**
Be prompt—just figure out what number each letter on the wing of the plane represents. Put them down in order shown. Mail me your answer with your name and address. That's all. Send no money. No obligation. All who answer can share in cash and prizes. In case of ties duplicate prizes given. Everybody rewarded. Hurry! \$505.00 cash extra for promptness.
T. W. Kelly, Mgr., Dept. 326 500 No. Dearborn St., Chicago, Ill.

POSSIBLY RANGE PARALYSIS

There seems to be something wrong with my hens. They seem pretty well and then act dizzy and fall on their side. Then in a few days it is almost impossible for them to get on their feet—then they die. I feed corn in the morning; about 3:30 I give them oats and wheat and always have before them a laying mash and plenty of water. They get rather yellow around their necks and I picked one up and found that I could pick the feathers out easily. Kindly advise what's the cause.—Mrs. H. B.

The symptoms described might indicate range paralysis which seems to be a nerve paralysis attacking different nerves of the body. As yet the experiment stations have not discovered a cure for birds with that disease. Some poultrymen consider it a hold-over from coccidiosis and find little loss when the chicks are ranged on clean soil. A postmortem examination of the organs of the sick chickens may give some further clue to the cause of the trouble.

OATS AND SPROUTED OATS FOR POULTRY

As a feed for poultry, oats probably rank next to corn and wheat. Owing to the extensive demand for oats in the preparation of foodstuffs for man, the price is rather high when based on true feeding value. Oats vary widely in weight per bushel and in quality. The proportion of husk to kernel for poultry feeding should be low, since the sharp fiber shell is objectionable. The oat grain possesses a higher proportion of protein than is found in corn, while the fat content is greater than that found in wheat and nearly equals that found in corn. Oatmeal is a commercial preparation designed primarily for human food, but valuable for poultry. The price is high but a slightly inferior grade can usually be purchased relatively cheap in bulk. Oatmeal is very digestible and a good feed for baby chicks, supplying nutrients in small bulk and in a form that the birds can readily see. It is used extensively in fattening poultry for market, and is suitable in wet mashes during the finishing period. Rolled or crushed oats with hulls may take its place, but if hulls are present, the advantage is entirely with the purer oats. Oat meal should be used in chick rations in small quantities.

The feeding of sprouted oats when they are from four to six inches high is a very economical method of supplying green feed to all classes of poultry. The cost is slight, the time required for growth short, and the amount of succulent green feed large. The following method is generally followed in the sprouting of grain, the

idea being to incorporate as much water in them as possible during the sprouting period. Only the best grade of plump heavy feed oats should be used, and handled in such a manner that they will reach maximum growth quickly. Six quarts of clean oats are placed in a ten quart galvanized pail, which is then filled with water at a temperature of not over 100 degrees F., to which are added ten drops of formalin to prevent mold. The oats are allowed to soak in this in a warm room for forty-eight hours. Next they are poured on a tray of the sprouting rack to a thickness of one inch. The sprouting rack used can be home made. It is built seven feet high and two feet square, with seven trays each being about two feet square. The rack is kept in a room where the temperature is not less than sixty degrees F., and the sprouting oats are thoroughly sprinkled with water twice daily.

In from seven to ten days, depending on the temperature of the room, the sprouts reach their best development which is from four to six inches. After this if they are not fed quickly, they go backward, owing to lack of nourishment in the seed. It is found on the seventh day, with the temperature at 75 degrees F., the oats are in the best condition to feed, having taken up during the sprouting period three and two-thirds their original weight of water. The best way to feed them is in open, flat troughs, placing as much of the green feed in the troughs as the birds will clean up immediately, leaving none to be scratched out or wasted. Under average flock conditions one square inch of feeding surface per bird per day is sufficient to satisfy their appetites and supply the succulence necessary without causing diarrhoea. The sprouted oats are very palatable, being relished by every bird in the flock. It has been tried in some cases with sick birds which would not eat grain, and in nearly every instance was eaten freely. Sprouting oats for feeding is a simple process, requiring little time and attention, and in every case results are certain.—E. A. Williams.

HOUSE FOR 500 CHICKS

I want to build a brooder house to accommodate 500 chicks. I have 3 dimensions in which I wish to choose. One is 12 by 14 feet; another 10 by 12 feet, and the other 8 by 14. Which would you choose? Is it better to set the brooder in the center of building or in one end? Canopy on brooder is 52 inches.—H. S.

It is a general rule in planning colony houses for brooding baby chicks to allow one-third of a square foot of floor space per chick. Most portable colony houses are 8 by 10 or 10 by 10 as they are easily moved although not large enough to properly care for 500 chicks.

Your 12 by 14 house will contain 168 square feet of floor space and allowing 3 chicks to a square foot, the house should be large enough for 504 chicks. If the cockerels are marketed as soon as they reach broiler age, the house can be entirely filled with roosts and should give the pullets ample roosting space until they are ready for removal to the laying house.

In a house as large as 12 by 14 it will probably be best to place the brooder a little to one side toward the rear of the house. Then the front and other side of the house will be a little cool and serve for an exercise place. Confine the chicks near the brooder for a few days until they learn the source of the heat. This can be done by placing a roll of fine wire or roofing paper about 18 inches high about three feet from the outer edge of the deflector. I think this answers your question, but according to my experience I have the best results when my chicks are in flocks of from 200 to 300 each. Larger flocks may result in a much larger mortality rate.

EGGS

All Winter when prices are high



You can make your hens lay 2, 3 or 4 times as many high-priced winter eggs by feeding EGG a DAY. Just mix it with the feed. We absolutely guarantee it will bring you MORE EGGS. Usually increases the yield 3 or 4 times. Try it this winter.

EGG a DAY MAKES Hens Lay

Made Mrs. Ripp's 80 pullets average 64 eggs a day during January. Others do even better. 65c pkg. often produces EXTRA winter profits of \$100 a month. EGG a DAY will make YOU big egg profits, too. Try this remarkable egg-maker. BUILDS—does not force. Improves hen health. 12-lb. pkg., \$1.25, supplies 250 hens 2 months. 5-lb. pkg., 65c. Buy from your dealer (see the EGG a DAY sign on his window), or write direct.

STANDARD CHEMICAL Mfg. Co.
Dept. 25 John W. Gamble, Pres. Omaha, Nebr.
Makers of Reliable Live Stock and Poultry Preparations Since 1886

Incubators

1928 Champion Belle City
We celebrate our 28th year by bringing out a line of new-type incubators, with six of the greatest improvements made in 50 years. All controlled by patents pending. Belcite walls, ten times stronger than wood. Moisture or heat cannot shrink, swell or crack it. New triple-walled doors which forever fit. Copper heating tank, self-regulating safety lamp. New egg tray, new egg turner, deep nursery, egg tester. Send for my free book, "The New Day in Hatching." It shows the new inventions, the incubators, 80 to 2400 Egg sizes, Hot-Water and Electric heated, as low as \$12.95. Hot-Water, Oil, Coal and Electric heated Brooders, 80 to 1000 chick sizes—as low as \$6.95. Belcite built Chicken Houses, 500 to 5000 capacity at half the cost to build. You cannot afford to continue in old ways. Hatch every fertile egg. Write me today. J. V. Rohan, Pres. Belle City Incubator Co., Box 14 Racine, Wis.

DOWN S BABY CHICKS

DOWN S LEGHORNS LEAD STATE CONTEST
Last report (Dec. 14) shows our leg-horns leading Michigan International Egg Laying Contest. 1,000 pullets now being trap-nested in R. O. P. To insure delivery when wanted—order your Michigan Accredited chicks NOW! Free circular and prices on request.

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ROMEO, MICH. R. F. D. No. 1
DOWN S WHITE LEGHORNS

More Egg Money
Make \$1,000 a year from 300 hens. Get eggs when prices are high. Raise chickens the Poultry Tribune way. New methods of feeding, housing, marketing, etc., that you can use. Practical articles every month by successful poultrymen. Free breed pictures in natural colors. 3 yrs., \$1. 1 yr., 50c; 3 month trial 10c.
POULTRY TRIBUNE
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40 BREEDS WONDERFUL POULTRY BOOK
The Nation's Great Poultry Manual. 132 Pages. Beautiful Pictures. Mrs. Berry's success with Hatchery, Blood-Tested, Pure-Bred Poultry and pullets that lay at 4 months; feeding, housing, curing, diseases and remedy information. Makes LOW PRICES on Pure Quality Fowls, Eggs, Chicks, Brooders, Supplies, etc. Send only 5 cents to help mail.
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BABY CHICKS WHITE LEGHORNS ONLY SHIPPED C.O.D. ANYWHERE
Egg contest winners for years. Guaranteed and insured. Also cockerels, pullets, hens. Catalog and special price bulletin free.
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64 BREEDS Most Profitable pure bred ducks, geese, turkeys, Fowls, eggs, chicks, incubators at low prices. 35th year. Largest plant. Valuable 100-page book and catalog free.
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Shows and describes 68 varieties Old Reliable Blood-Tested Flocks SHOEMAKER STRAINS—best for 38 years. Gives facts about handling, feeding, housing, diseases and remedies. LOW PRICES on Turkeys, Eggs, CHICKS, Brooder Stoves and Supplies. BOOK FREE.
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BABY CHICKS
From Michigan Accredited flocks. Three leading breeds, B. P. Rocks, B. I. Reds, and S. C. White Leghorns. Write for 1928 catalog, it tells all about our chicks. Place your orders early. 100% live delivery guaranteed.
CARLETON HATCHERY, Carleton, Michigan

ORCHARD AND GARDEN

STRAWBERRY MULCH SERVES MANY PURPOSES

MULCHING the strawberry bed, preferably with clean wheat straw, not only gives protection against alternate freezing and thawing in the winter, but tends to keep the plants from starting growth during unseasonable warm spring weather. It also keeps down weeds and conserves moisture, thus taking the place of cultivation, and helps to keep the fruit clean during the fruiting season. Serving all these purposes, mulching thoroughly justifies itself as a strawberry producing practice, in the opinion of the specialists.

Wheat or rye straw, clean, are perhaps the most satisfactory materials for mulching. Oat straw packs tightly and sometimes contains unthreshed grains. Manure, mixed with straw, while sometimes used, is likely to harbor weed seeds and insect pests, and is not always good for the soil upon which the strawberries are grown. In small home beds, rakings from the lawn will serve.

The mulch may be applied either before or after the ground is well frozen, since its purpose is to prevent freezing, thawing, and freezing again.

THE BALDWIN APPLE UNCHANGED BY ENVIRONMENT

THE Baldwin apple is probably more generally distributed throughout the United States than is any other one variety of apple, and it has been grown for a great number of years under a wide range of soil and climatic conditions.

Many fruit growers contend that when Baldwin is grown for long periods of time under different conditions new strains of this variety are developed.

In 1911, horticulturists at the Experiment Station at Geneva decided to test this theory. Eighty-four Baldwin apples trees were purchased from forty different locations in the United States and were set out on the Station grounds at Geneva to determine whether distinct strains of this variety had developed under widely different environments.

The trees are now in full bearing, and all eighty-four produce fruit similar in size, color, season, and quality, say the Station fruit specialists in a report on the progress of this experiment.

"While there may be strains of the Baldwin apple in different part of the United States," says the report, "it seems fairly certain from this experiment that they have not originated necessarily because of differences in environment."

DO PRUNING BEFORE SPRING

NUMB fingers, tingling ears, and cold feet are unavoidable features of the job of pruning fruit trees in winter. But the orchardist who goes ahead with the job anyhow will reap his reward in increased yield of better fruit next year. Horticultural specialists recommend that the pruning begin as soon as apples are harvested, and continue until the job is done. But if it has been interrupted or postponed, it should be done in the winter and not put off until the milder weather of spring. Before the orchardist realizes it, time for the dormant spray will arrive, and the pruning will be abandoned for that.

Pruning is necessary on several counts. Trees which are too dense cannot be well sprayed; production is increased by proper pruning, as is the quality of the fruit; picking is easier and cheaper in a well pruned orchard. Winter pruning, while all right for

the apple trees, is somewhat dangerous for the grapes and peaches, so it is recommended that the grower of grapes and peaches wait until after the severe portion of the winter has passed, before beginning on them. Damage to the trees may occur if they are pruned during very cold weather.

The main idea, in any case, is to get the pruning done before spring work interferes and leaves the orchard shaggy, unkempt, inconvenient and with lowered production.

MANURE GARDEN SOIL NOW

A DARK colored soil is generally desired for home gardens. Such a soil contains more organic matter than one with red, yellow, blue, or gray color.

The black or brown color should be uniform throughout the soil. Any mottling or uneven appearance is an indication of poor aeration and poor drainage in the garden soil.

Best results in a garden are obtained when the soil is well drained and well supplied with organic matter. This is true because such a soil dries out early in the spring and yet retains the optimum amount of water for use by plant life throughout the growing season.

All garden soils may not possess these ideal organic and drainage conditions. A generous application of barnyard manures every fall or during the winter will tend to improve the garden soil in both these points. Apply manure at the rate of five tons per acre. A good big load spread on a 50 by 100 foot garden every fall for five or six years will usually more than double its yielding powers.

The decayed particles of manures act as a sponge. They hold water and at the same time improve the physical condition of both clay and sandy soils. The small particles of organic matter are larger than the smallest particles of a clay soil and so when the two are mixed together the organic matter prevents the clay soil from becoming as compact as it was before the mixing took place.

Sandy soils are made less porous by organic matter. This is because the small particles of decayed organic matter are smaller than those of sandy soil. The large air spaces are filled up and the soil greatly improved.

EGG BOUND PULLET

Pullets and hens that are overfat are most apt to be egg bound. The condition sometimes occurs when a pullet is laying her first egg and later causes no trouble. Nothing can be done for such cases except to give the birds exercise and normal care and try to keep them in the best of physical condition. It will probably not bother the pullets after the weather is better and they can exercise on the range.

LOOK AT ROOTS OF FROZEN HOUSEPLANTS

IF you have the misfortune to lose some of your cherished houseplants by freezing, do not throw them away but do as I did last winter when several of my "pet" geraniums and a very special fuschia froze while the family were away during an extra cold snap.

I set them back intending to carry them out into the wood house and store the pots until spring, but neglected to do so for at least a week. One of the children accidentally pulled a geranium root up and I discovered several little tender live shoots on the roots. I examined several of the others and most of them had live shoots. The old dead tops were carefully trimmed off and the roots placed

WOLVERINE S. C. WHITE LEGHORN BABY CHICKS

BLOOD WILL TELL
100% SAFE ARRIVAL GUARANTEED

MICHIGAN ACCREDITED



FOR WINTER EGG PRODUCERS

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

Send for Our 1928 Catalog

Tells all about our chicks and breeding stock
EGG BRED SINCE 1910

For 18 years we have specialized in the production of S. C. White Leghorns, and breed no other variety. All our time, thought, and energy in selecting and mating has been devoted to our Leghorns. You are assured of very desirable stock.

100% LIVE ARRIVAL GUARANTEED

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

SILVER WARD SELECT CHICKS



You can save money by ordering your Silver Ward Michigan Accredited Chicks now. We give a special discount that means a substantial saving in the cost of your chicks. Furthermore you are sure of your chicks exactly when you want them. The big free catalog gives complete details.

GET THESE FACTS

You owe it to yourself to get all the facts as to sources of well bred stock. It means your success or failure. Silver Ward has long been recognized as one of the leaders. This catalog is yours for the asking.

Get the catalog. It's free and it tells all about us.

Michigan Accredited Silver Ward Chicks are chicks bred from foundations of such blood lines as Barron and Tanager Leghorns, Sheppards, Anconas, etc. They are fine chicks, moderately priced. Try some this year. The catalog is free.

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Box 29, Zeeland, Mich.



Eagle Nest OHIO ACCREDITED BABY CHICKS



Every Eagle Nest Chick is produced from Pure Bred Accredited Flocks. Order Now for Early and Future Delivery.

VARIETIES PRICES ON 25 50 100 300 500 1000

White, Brown and Buff Leghorns \$4.00 7.50 14.00 41.00 67.00 130.00

Barred, White and Buff Rocks, 4.50 8.50 16.00 46.50 77.00 150.00

Black Minorcas, S.C. & R.C. Reds 4.75 9.00 17.00 50.00 85.00 160.00

White Wyandottes 4.75 9.00 17.00 50.00 85.00 160.00

Mixed Chicks (not accredited)—Light 10c, Heavy 12c. TERMS CASH. Future Orders 10% down. Balance 10 days before shipment. Postage Paid. 100% Live Delivery. Big Catalogue Free. Order from this Advertisement. Bank Reference.

THE EAGLE NEST HATCHERY DEPT. 19 UPPER SANDUSKY, OHIO, U. S. A.



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

GET OUR BIG 64 PAGE CATALOG—IT'S FREE

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

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



8 Varieties Record of Performance Male Matings

Our Pure Blood —SELECTED CHICKS —BIG EARLY ORDER —DISCOUNTS—15 VARIETIES

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

Beckman Hatchery, Box 57, Grand Rapids, Mich.

HOLLAND HATCHERY

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



in the soil again. We set them into a warm dark corner and in two weeks they were tender new slips. So if your flowers freeze do not throw them out until you have given them time to sprout from the roots. Remember, however, these new sprouts must be carefully protected against drafts or cold as they are very tender.—Mrs. Fern Berry.

The pre-spring meeting of the Michigan State Horticultural Society will be held at Pontiac on Feb. 28-29. It will be held in the auditorium of the Hotel Roosevelt and the problems of the fruit growers supplying the Detroit market will receive chief consideration.

A story for boys and girls and grown-ups, that's full of suspense, action, and the zest of rivalry is "Under the 4-H Flag." First installment begins in this issue.

COMMERCIAL VEGETABLE GROWERS' SHORT COURSE

AN intensive course of instruction lasting a week is offered market gardeners, truck gardeners, and all those engaged in the raising of vegetables for sale. The program includes a discussion of such topics as: supplementing barnyard manure with commercial fertilizers, hot beds, cold frames, and glass substitutes; recent developments in insect and disease control; transplanting, cultivating, irrigating, grading, marketing; varieties and seed strains.

Emphasis will be placed on recent investigations in vegetable crop production.

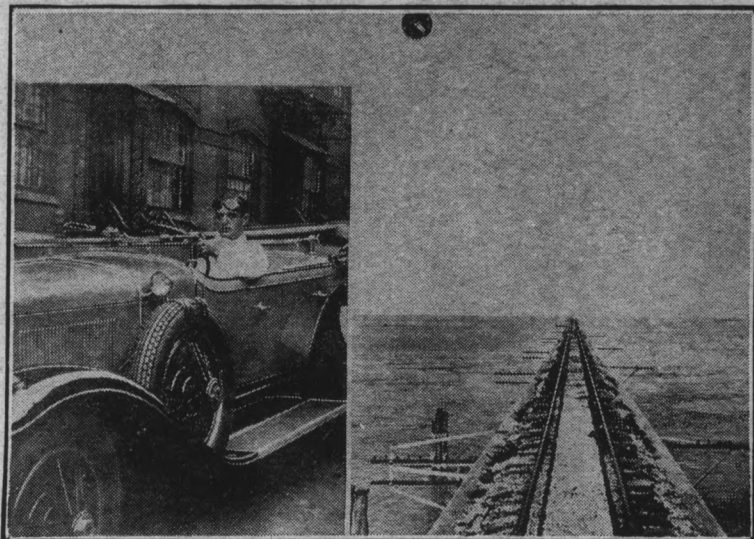
Registration begins Monday forenoon, February 6. Classes will begin in the Horticultural Building at 1:30 P. M. Monday. The course will end February 11th.

The total living expenses during the course need not exceed \$15.00. Accommodations may be obtained by writing to J. B. Edmond, Department of Horticulture, East Lansing, Mich.

WORLD EVENTS IN PICTURES



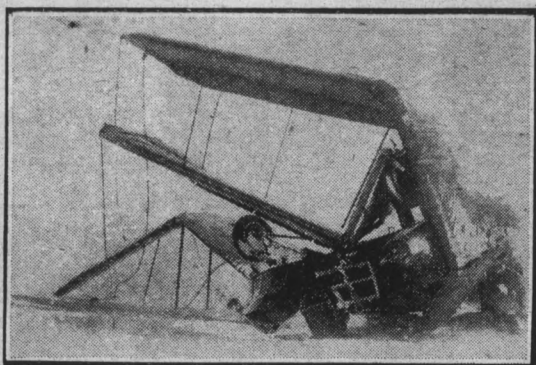
Lucky lad—son of Sir and Hon. Lady Grigg is godson of Prince of Wales.



Kenneth Goodson, auto racer, will drive this car 42 miles an hour over the famous 125-mile railway viaduct between Miami and Key West. A blow-out might hurdle the car into the deep blue sea.



Mrs. Frances W. Grayson with her navigator and co-pilot plan fourth transatlantic flight.



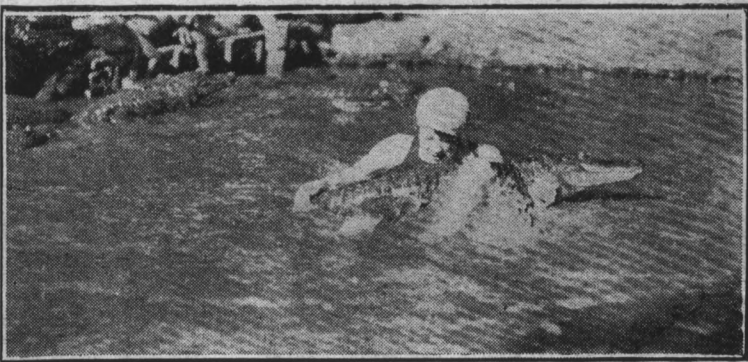
All that remains of the \$30,000 bombing plane, the largest of its type in service, after being wrecked by an 84-mile gale.



Count Volpi who is largely responsible for putting modern Italy on a financial basis.



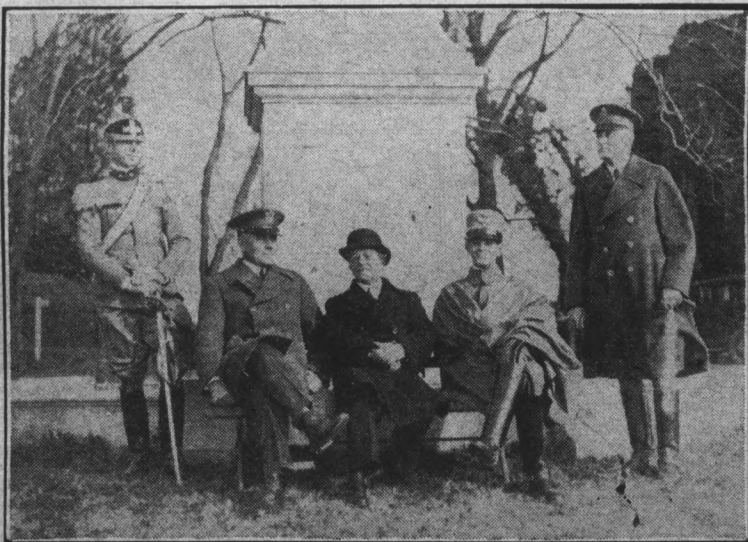
Survivors being brought ashore at Sidney, Australia where the S. S. Tahiti cut a ferry boat in two with a loss of eighty-six lives.



A hazardous past time—Eleanor Link, 16 years old, who has studied the habits of alligators, finds recreation in wrestling with them.



This is not a scene of the Mississippi Valley but of a section in upper New York state where the overflowing of the Niagara river has caused heavy damage.



Richmond, Virginia, is the first city in the south to honor Christopher Columbus with a monument. The Italian Ambassador to the United States and his party attended the unveiling.



An airview of the business section of Kansas City. The low white building with the wide roof is the Convention Hall where the Republican Convention will open June 12.

Jesus and the Sick

Our Weekly Sermon—By N. A. McCune

WHICH of Jesus' activities called out the loudest exclamations of surprise? When He taught, "They were astonished at His teaching: for He taught them as having authority." When He healed, "They were all amazed, insomuch that they questioned among themselves, saying, 'What is this?'" When He put forth His power on the forces of nature, men exclaimed, "What manner of man is this? For He commandeth even the winds and the sea, and they obey Him!"

His teaching was, according to His own thinking, the most vital portion of His work. People needed new ideas, a new view of life, new faith and love. When He gets through in one locality, He says, "Let us go elsewhere into the next towns, that I may preach there also."



The power of teaching is greater than we imagine. Looking back, is there not a teacher somewhere along the road, who has meant everything to you? When she kept you after school or shook you up, you were not consumed with affection for her. But you see it differently now. She got you to thinking, opened new paths in your not overcrowded mind, which have made life different. Not long ago, a professor of mine died. I felt as though something vital had gone out of life. Of course it had not, as the impression which he had made on me was mine. But he himself was gone, and the world seemed a bit lonely. Scotch, he was, and tall, with shoulders like a blacksmith. The moment he entered the classroom it was as though a big electric battery had been brought in. He began lecturing the moment he opened the door, and to the end of the hour the words poured out. The class was aghast as he read off a long list of poems to be memorized before the end of the semester, saying as he did so, "I want you to make this par-t and p-a-r-t-cel of your mental equipment." And he did. We didn't dare do otherwise. He was electric, this man. He drew students to him as a lamp draws moths. Would not Jesus do the same, only in far greater degree? Do we wonder that people were amazed? Of a great English schoolmaster it was said by one of his old students, "It was not so much admiration for his genius or learning which stirred us—it was a sympathetic thrill, caught from a spirit that was earnestly at work in the world." "A sympathetic thrill"—that was Jesus, multiplied a thousand fold.

He healed a demoniac there that day. We may as well admit we do not know what demon possession is, or was. Much of it was probably insanity or epilepsy, but perhaps not all. The idea of the ancients was that a demon—perhaps many demons—might enter a person and affect him in distressing ways. Jesus apparently shared this view. Modern missionaries have had similar experiences, now and then. When the late Bishop Charles H. Fowler was in China in 1886, he found many instances of what seemed to be demon possession. He spent two days examining the native preachers concerning these strange phenomena. Here is one case, as described by Bishop Fowler. A woman, whose husband was an earnest Christian, came with him into the church as a seeker. Her mother died, and she wanted a heathen funeral. Her husband wanted a Christian funeral. She became violent and smash-

ed up the furniture. The man sent for a cousin of his wife. This cousin was a professional wrestler, a man of huge size and strength. She said to her husband: "I know what you have done! you have sent for my cousin; I can see him, coming over the mountain. You will see what I will do to him." She was small, not weighing over ninety pounds; the wrestler was a giant and trained in rough-and-tumble wrestling. When he came in, she seized him and doubled him up, threw him out of the house and over the wall. The pastor came and brought some of the official members with him, and they prayed over her, ordering the evil spirit out of her, in the name of Jesus. She was quiet from that hour. The bishop's description of the little woman's strength reminds us of the demoniac who lived in the tombs, "when no man could bind, no, not with a chain."

The New Testament speaks of Jesus making people whole. That is precisely what He did. Salvation is wholesome. Holiness is wholesome. A man of strong body but with a vile

UNDER THE 4-H FLAG

MOVE or die!" wasn't a nice threat for a fellow to find written in blood on his barn door. But that wasn't the worst—there were bullets and bear tracks where no bear had been seen for years.

But Bob Barton wasn't the boy to be driven away by threats even though his parents were willing to go for the sake of safety. With Stonewall Jackson to be raised into a prize pig and his own position as first baseman on the 4-H team to be secured, he had too much at stake. Besides there was Katie O'Neal and to really know her you must not miss an installment of "Under the 4-H Flag" by John Case that begins in this issue.

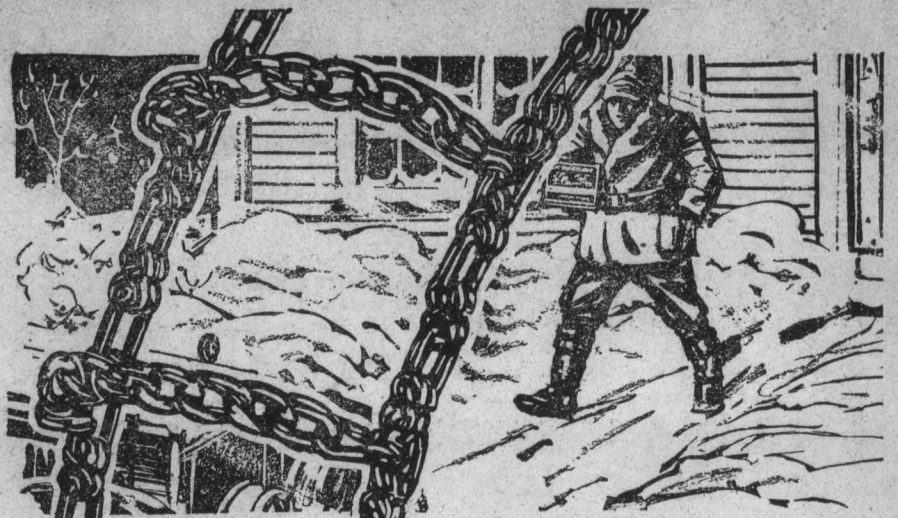
mind is not a whole man, but a cripple. Jesus taught the minds of men, healed their bodies, and aroused their souls to faith. That is salvation. Salvation is all-around wholeness. The church is engaged in the biggest business in the world, that of making people whole. If our teaching of religion is one-sided, we ought to ask forgiveness, then ask for minds that are alert to get the truth. To be saved means more than many good folks think it does. It means more than a through ticket to heaven, as valuable as that is.

Early in the morning, the Teacher went out to a solitary place and prayed. He did not pray for forgiveness, because He had not sinned. He must have gone for the purpose of taking on new power and energy for the exhausting program that lay ahead. He knew how to tap the great Source of Supply. Prayer to Him was not a form. It was a way to energy. Says England's foremost authority on diseases of the nervous system, "The way to power is not to harbor our resources and store up our strength by inactivity, but to find a way to tap the resources of power at our disposal, so that they may flood our life and fill us with energy." "They that wait upon the Lord shall renew their strength."

SUNDAY SCHOOL LESSON FOR JANUARY 8

SUBJECT:—Jesus and the Sick. Mark 1:21-45.

GOLDEN TEXT:—Mark 1:37.



You Dread No Road with Dreadnaughts

THIS big husky tire chain of case hardened steel penetrates and holds and gives you sure, safe wheel-grip on any road in any weather.

Dreadnaughts are the tire chains that are Easy to put on—just a few minutes and you're ready to go! Look for the fastener painted blue—it's the Blue Boy fastener, patented, a time saver for you.



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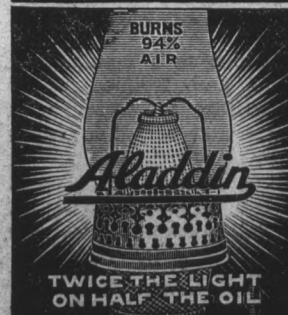
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Kerosene Light 10 DAYS TRIAL FREE

BEATS GAS OR ELECTRICITY



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Make your home bright and cheerful, saving one-half on oil. Government and leading University tests prove this wonderful new Aladdin nearly five times as efficient as best round wick open-flame lamps. Burns 50 hours on one gallon common kerosene (coal oil.) No odor, smoke or noise, no pumping up, easy to operate, won't explode. WON GOLD MEDAL. GUARANTEED. Prove for yourself, without risk, by

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GET YOURS FREE We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the fortunate one to write first for 10 DAY FREE TRIAL OFFER and learn how to get one FREE.

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LARGEST KEROSENE (coal oil) MANTLE LAMP HOUSE IN THE WORLD

Make big money spare or full time. Our easy selling plan makes experience unnecessary. We start you without money. Sample sent for 10 days trial and GIVEN FREE when you become a distributor.

How Family Trees Grow in West Africa

Where a Good Young Wife Costs Five to Fifteen Pounds

By Francis Flood

THE poor captain will worry himself sea sick about us if we're not back on board the 'West Humhaw' by six o'clock this evening," I cautioned Jim. "The last surf boat leaves for the ship about five and we can't possibly walk clear out to the river and up to the waterworks and back by that time. You know he warned us there's no place here in Winnebah to stay all night, except in the bush, and that we'd die there."

But Jim has been worrying people all his life so that meant nothing to him. He was advocating an eight or ten mile hike back into the bush. This in the heat of the day in the African tropics, and we'd had nothing to eat since breakfast.

"Where in the world can we stay tonight if we don't get back to the ship?" I pursued. "And when do we eat?" We had been warned that the English are an offish lot and would

shaded a sandy beach a few yards below the path a black matron in a yellow skirt and earrings was stirring a pot of slippery-looking yellow chop stenching over a fire. Beside her on the beach two or three more wives of this wealthy old polygamist were washing clothes. A little farther out, up to their knees in water and clad only in the sunshine of that September morn, two of the older girls were bathing in the river. Sleek little pickins," as the African babies are called, stared out from over the folds of the sweaty girdles that held them straddle of their mothers' backs as these madonnas of the bush labored for their lord and master. And they were all laboring.

A good young wife costs a west coast negro from five to fifteen pounds

ers" and "sisters" not only to her children by the second husband but to all the children of all her second husband's other wives as well.

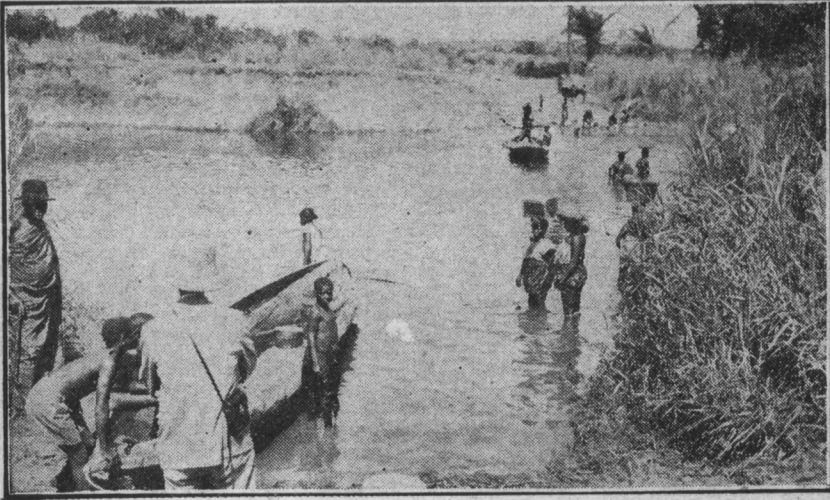
A missionary told me of the personnel of one family which he knew well. There was the husband, and the wife, and their children, and his children, and her children, by former marriages. Then there were the children of her former husband by a former wife who had run away. And there were also the children of the husband's former wife by a former husband who had died. Altogether there were about fifteen of these mongrel children in the compound, many of whom bore no actual blood relationship to each other or their "parents" at all, and yet they all called themselves "brothers" and "sisters" and children of the same "father" and "mother."

So common is this practice of polygamy that it is sometimes difficult for the natives to understand why the white man with all his wealth and power has only one wife. Three lady missionaries arrived on a ship from England and landed in a west coast port. The local bishop took them in his automobile to the school, a few miles inland, where they were to teach. He left the ladies at the home of the principal of the school and then drove back to his own home on the coast. That evening the principal heard his native cook explaining it all to the native gardener: "The white mastah bishop he be rich man. He bring three wives, dash 'em all to our mastah, and den he go back for more for himself. He be rich man."

We snapped some pictures, there on the river bank, of the wealthy old herd sire, monarch of all his tribe, and then began our weary trek back to Winnebah. There were miles of bush and millions of rays of sun and finally we came, on what we thought was a short cut back to town, to the foot of a long, long hill with a wooden semaphore beckoning like a cross, mounted on the very top. Years passed. We toiled and boiled up that heartless hill and just as we gained the crest, a friendly old flivver driven by an astonished white man met us and sputtered to a stop. Two overflowing water tanks and a long house with a wide, shady verandah an a

My name's Dalglish—in charge of the waterworks here. Where've you been walking from anyway? The town's over there on the other side." We had already walked about ten miles, according to our host's reckoning, and that is a very respectable achievement for a white man in the heat of a tropical day in Africa.

OUR hospitable English friend fed and refreshed us and then took us down to his pumping station where he was campaigning against a crocodile as diligently as he used to spend his time "Turking" in Transjordan during the war. He had caught a crocodile there a week or so before but its mate had proved too wary so far. We baited a tremendous hook with a wickedly fashioned barb, anchored it to a tree and went away confident. "If



This Old Patriarch Is Monarch of All He Surveys

not welcome us or extend any hospitality.

With all the worry he causes other people, my curly-headed partner never worries himself. "Oh, we'll find some place." And we started out.

It was hot that day, the fierce tropical sun shooting down ultra violet and all other ultra rays by the helmet full, and what little breeze there may have been almost entirely shut off by the solid walls of jungle which the Africoasters call the "bush." We plodded along a surfaced highway for a mile or two until we found another road, little more than a trail, leading off into a land of modified bush. We followed that and toiled through two straggling native villages stretched out along the road and sound asleep, even to the dogs, goats, and chickens, as haphazard and purposeless in appearance as the bare, mud villages themselves.

Then we passed some huge white ant hills, towering ten to fifteen feet into the air, each a substantial and complete community in itself. We decided that the industry and thrift of these big ants, their systematized manner of living, the definite organization of their personnel into workers, soldiers, homemakers, and leaders, their punishment of the lazy, and the precision with which they accomplish their prescribed purpose in life could well be an object lesson for the native villages and the careless, happy-go-lucky attitude of the interior blacks.

ON and on we walked in that muggy, sultry heat until our path finally dipped down through the bush and ended at a river's edge. There was no bridge and no ferry, only a grand old colored patriarch with his company of wives, and his regiment of children, camped beside the stream. Under a giant mahogany tree that

and so she has to work hard most of her life for her husband in order to make the investment a paying proposition for him. A negro's wealth depends principally on the number of wives he owns, since each wife represents earning power, just like acres of land in America. If a man can only get a "start" and buy three or four good hardworking wives early in life his future is assured. His women will easily earn him enough money so that he can add to his holdings every year or so and finally fill his compound with wives—and children. The first few wives are the hardest to get.



Dalglish Has This "Bush House" to Himself with a Couple of House Boys

The girls are usually contracted for early in life and frequently never know the man they are to marry until they're bought and paid for. Then if the wife proves unfaithful or runs away and the husband can prove the fault was with the wife he may go to her father and demand his money back. (And try and get it).

IF the husband dies, the wife will probably marry another man and take her children to her new home, in which case the children are all "broth-

neat garden in the background graced the top of the hill.

"Who in the blankety-blank are you and what are you doing on foot away out here in the sun?" greeted a personification of John Bull himself, done in shorts and sun helmet. He jumped off the auto and held out his hand.

"We're off the 'West Humhaw' and just having a look around," I explained. "We—"

"Boy," he yelled, "fix up a spot of chop in there for two. Come in and have a jolly good rest and a drink.



The Bearded Blacks Are Mohammedans

we catch him tonight, I'll dash you his hide," said Dalglish.

To make a long story short, and to discredit the false stories of English offishness, we were offered more beds in Winnebah than we could possibly sleep in and more chop than we could eat. Dalglish invited us back for a crocodile skinning and lunch next day. We left him and, in town that night, attended an "open house" festivity so common among the English Africoasters. There was much drinking and jollying, too much for teetotalers like Jim and me, but our host explained it in this way: "Whenever a dozen or so of us get together this way here on the west coast we know that one, or maybe more, will be gone next year. So we make merry while we may."

The next day when we thanked our host for his splendid hospitality he modestly waved it aside and said "Well, boys, you came here to see something of the west coast of Africa and how we live, and if we've been able to show you anything representative of our life here, why—just try to forget it. That's what we do."

Our experience in a negro police court will be described next week.

Some people's idea of a second thought are those that come sixty seconds too late to be of any use.

Oily to bed
And oily to rise
Is the fate of the man
When a motor he buys.

Our Readers' Corner

Facts and Opinions by Michigan Farm Folks

LET US ALL BE GOOD SPORTSMEN

WE would like to ask the farmers who write about the pheasants and other game being so destructive "Why they don't want the city sportsman to hunt this destructive game?" If they let every city sportsman hunt on their farms and get the amount of game the law allows them, it certainly would decrease the amount of birds and other game.

It looks to us that it is the people who have no regard for the game laws and shoot game all seasons of the year that is putting up the biggest howl in this section of the country.

We want to say that we have a farm, and pheasants and other game are plentiful on and around it and we all hunt considerably.

We each got our limit of pheasants and through careful inspection of their crops this year found their food consisted of more than half of rag weed seeds and the remainder of grasshoppers and other bugs, but we found no corn at all.

But perhaps they do eat a little corn and other grain when the ground is covered with snow, but we are willing to feed that waste corn and other grain to them in order to have a few days' sport, which the law allows us, to hunt them.

We sincerely hope that the game law department at Lansing will continue its protection of the game.

But we do think that everybody ought to have the right to hunt and not be ordered off of any farms as long as they have a hunting license and they are respectable and fair hunters.

We have the first time as yet to order any hunters off of our farm or to post signs on it. But we can say we certainly do hate the dishonest hunter.—Gachter Bros.

THE TAX SITUATION

THE tax situation is an increasing topic of conversation in every gathering of farmers, be it a social, or a business gathering. An eight hundred per cent increase in taxes is agriculture's penalty for growing modern in this section of the state. This is revealed in a comparison of taxes paid on the farm of Thomas and Edward Cahill in years running from 1878 to 1926. In 1878 the taxes amounted to \$9.75; in 1881, 12.60; in 1891 to \$13.06; in 1895, \$14.03; in 1900, \$18.75; in 1915, \$48.35; and in 1926 the amount has climbed to \$79.00.

Of course, in 1878 there were no gravel roads; now we have the gravelled township road and the state highway pavements. Rural delivery came in about twenty-five years ago and in 1926, the electric lights. Last year farm valuations were raised. On one 120-acre farm the valuation was increased \$500; on another forty acre farm \$500. On a 130-acre farm where no improvements were made the increase in valuation amounted to \$1,600, despite the fact that the buildings had noticeably depreciated.

Farmers need the improvements in roads; they need electric lights and telephones, but their incomes do not keep pace to provide the necessary funds for these improvements. So far the farmer has been unable to govern the price of what he sells; when he buys he must pay the price set, which in comparison is almost double. His life's earnings are tied up in equipment and land. A new coat of paint on his buildings, a better foundation for his house or barn means a consequent raise in valuation. Farmers

are human beings and like the niceties of life as well as the city dwellers, but for all his hard work his expenses will over-run his income despite frugal ways of living, because taxes, insurance, etc., mount whether the crop is a success or a failure. The only way out is crop insurance, which on account of its cost is prohibitive.—G. Pearl Darr.

ON PROHIBITION

IN the current issue of M. F., I notice an editorial on prohibition. It is splendid, but not long enough, so I am offering my bit along the same line.

I have never seen a "dope fiend" to recognize him, but I have helped to keep "Milwaukee famous" and have left St. Louis, several times, with a belly full of souvenirs, and claim to be posted in accordance with a more than speaking acquaintance with John Barleycorn.

The Volstead Act suits me all right, but what does not suit me is the dry element half confessing that prohibition does not work. Where is the record of any change, small or simple as it may be, ever happening in the twinkling of an eye, so to speak? Why are any of us so foolish as to expect the 18th amendment to function 100%, for at least three generations. Witness the opposition to the whiskey tax. At that time, no one was forbidden the use of it, but what an awful howl because Uncle Sam decided he ought to have a rake-off. Moonshine was invented then, and a good many revenue collectors sacrificed their lives, not in trying to keep men from drinking whiskey, but just because a certain element thought the tax on whiskey unfair, and it took just about three generations to make the whiskey tax 100% effective. Now, if it takes three generations to accomplish just that much, why are we alarmed, when we fail to stop even the drinking of whiskey, in one day? Borah said give it 25 years, but that is not long enough. It will take 75. We are bullheaded set, as a whole, and it takes a long time to turn our heads even a little bit, be it for our benefit, or not.


Witness the opposition to our dog laws and the new Horton law. No fair minded person can deny the fairness of either law, but to make everyone conform to it, is another thing.

Personally, I believe fines and jail sentences, only add coals to a fire. I am in favor of more primitive punishment. Don't you believe that if a man was drunk and menacing the public, with an automobile, it would be more effective if his car was confiscated and the offender placed in stocks, in a public place, with an appropriate sign, telling what he had done? Fear of publicity is our inherent nature, and publicity is a great barrier.—O. D. Ritter.

RADIO BRIEFS

Phantom music in three Winnipeg restaurants has caused a great deal of speculation among the diners. The "phantom" is a concrete quality gramophone which furnishes the same music simultaneously to the three restaurants through a hook up based on radio principles. It is so arranged that there is no visible source of music, not even a phonograph or radio receiver.

The prospect of the production of records for phonographs which will give visual reproduction of the performers as well as audible is held out by J. L. Baird, inventor of television.



Double Wheat Yields

TOP dress your wheat and other small grains, oats, etc., with nitrogenous fertilizers. The importance of lime as plant food is well understood.

The profit on a crop of grain may be entirely represented in the increase made over the farmer's usual or average yield.

Calcium Nitrate (Nitrate of Lime)

GUARANTEED to contain 15% Nitrogen (equal to 18.2% Ammonia) combined with 28% Lime. Gives plants a quick start. A ton of Calcium Nitrate contains more lime than 1,000 pounds of ground limestone, but the lime adds nothing to the cost of the fertilizer. Both water soluble, quickly available for assimilation by plants. It is the only form in which nitrate and lime can be applied advantageously at one time.

Send for new interesting and instructive booklet. Consult your Experiment Station or County Agent regarding this and other new nitrogen fertilizers.

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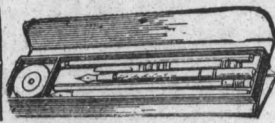
Peaches	\$9.85 per 100	Apples	\$18.00 per 100
Cherries	28.00 per 100	Grapes	4.00 per 100

Specials: Mastodon Everbearer Strawberries, Washington Asparagus, Latham Red Raspberries. Fruits of all kinds—also shrubbery, Roses, Evergreens and every thing that a first-class nursery handles. Send today for beautiful catalog, sixteen pages of color—full of Big Bargains, free for the asking.

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SCHOOL BOX GIVEN

with Self-filling Fountain Pen, Pencils, Knife, Pen Holder, Eraser, for selling 12 pkgs. Bluine at 10 cts. a pkg. Bluine Mfg. Co., 111 Mill St., Concord Jct., Mass.



\$10 Auction Course Free

Postal will bring it this week. This ad will appear but once. American Auction College, Kansas City, Mo.

Try a Michigan Farmer Liner

WIN \$3000.00!

To advertise our product we are going to give over \$6000.00 in prizes. Have already given away thousands of dollars. Virginia Umberger won \$1445.00, Effie Swearingen, \$1500.00. Louis Siltberg, \$2000.00, and others. Addresses on request. Now you can win \$3000.00.

Can You Find the Twins?

No, it's not as easy as it looks because two, and only two of the hats on the girls pictured to the right are exactly alike. Find them—mark them—send your answer today. 350 big costly prizes will be given and duplicate prizes will be paid in case of ties to those tying. Costs you nothing, now, later, or ever. All who answer can share in cash prizes. Everybody rewarded. Send answer—learn how to get this prize.



New Ford Sedan (Model A) Given for Promptness

or \$500.00 in cash if you prefer, making total first prize you can win \$3000.00. Send no money—just find the twin heads. Answer today!

We'll Get Prompt Delivery for You!



The new Model A Ford Sedan that the world has been waiting for. A speed of 55 to 65 miles an hour. Standard gear shift, four wheel brakes, shock absorbers. Ford's crowning achievement! This is your opportunity to be among the first to drive this new Model A Ford Sedan.

G. A. CULVER,
500 No. Dearborn St., Room 118 Chicago, Ill.



Where Cheese Adds a Change

And Also Needed Vitamins For Promoting Growth and Health

WITH butter, cream, and cheese, you may keep away disease." Thus do the sturdy Swiss herdsmen whose life in the remote upper reaches of the Alps forces them to subsist almost entirely on these simple foods, paraphrase our Anglo-Saxon "apple a day." Cheese is their principal food and quite naturally they thrive on it, since it is rich in Vitamin A and contains twice as much protein as eggs. Only nuts, oil, and very fat meats are richer in calory content.

Yet despite its high nutritional value and piquant flavor, it has been a much neglected food in this country until recently. The American per capita consumption is still only just above four pounds a year as compared with eleven pounds in England and 27 pounds in Switzerland. It now is being used very largely in combination with other foods, invariably with resulting improvement in their savoriness, but it is still overlooked as a main dish, or as a natural part of the sweet or fruit dessert just before coffee.

Zealous housewives anxious to experiment with their menus without sacrifice of either economy or nutritional value may find inspiration in the following suggestions for cheese dishes:

Pigs in Blankets

Cut cheese in strips one-fourth inch square and two inches long. Brush lightly with mustard and wrap each in a wafer thin slice of bacon. Place on a hot griddle or under the broiler and grill until the bacon is crisp. Serve on strips of freshly made toast, garnishing each strip with a sprig of watercress.

Cheese Stuffed Peppers

Select six green peppers or pimientos of regular size. Clip the tops from them and remove all seeds and fibers. Place in boiling water to which a pinch of soda has been added. For the filling melt $1\frac{1}{2}$ tablespoonsful butter, add 2 tablespoonsful of flour, stir to a paste, then add one-half cupful milk and cook to a thick sauce. Fold in $\frac{1}{2}$ cupful of cheese cut in small pieces, one well beaten egg, and one cupful of soft bread crumbs. Season with salt and paprika, drain the peppers and fill. Top with dry bread crumbs and a wafer

thin slice of cheese. Place in a dripping pan, pour one-half cupful of water or tomato juice about the peppers and bake one-half hour. Serve at once.

Switzerland Toastwich

Toast three slices of bread, butter two slices on both sides. Lay crisp lettuce leaves on one slice of toast and cover with stiff mayonnaise. Arrange crisply cooked bacon on the lettuce with slices of cheese over the bacon. Cover with a second piece of toast. Repeat and top with the last piece of toast buttered side down. Garnish with quartered tomatoes and sliced dill pickles.

Southern Gingerbread

Mix together one-half cupful of sugar and one cupful of molasses. Add half a cupful of softened butter or lard and mix well. Then add one teaspoonful each of cinnamon and ginger, a teaspoonful of soda dissolved in half a cupful of hot water, half a cupful of sour milk or cream, and two and one-half cupfuls of sifted flour. Beat all hard, then add two well beaten eggs. Bake in a moderate oven and cut in squares. Serve warm with cheese.

Stuffed Eggs

Boil the required number of eggs twenty minutes. Then drop them into cold water. When cool, remove the shells. Halve the eggs lengthwise, and remove yolks. Mash these well, adding a little melted butter, salt and paprika. Then for each egg add a teaspoonful of grated Swiss cheese and enough mayonnaise to moisten; add also a few shreds of green pepper or parsley. Fill the eggs with the mixture and put the halves together.

Impromptu Salad

Quarter large dill pickles lengthwise, and cut strips of genuine cheese to correspond. Arrange on watercress or lettuce leaves and garnish with strips of canned pimento. Serve with French dressing.

Swiss Puffs

Roll pie pastry thin and cut in circles with cookie cutter. Place a round of cheese on each and bake until nicely browned. Garnish with a preserved or Maraschino cherry on top.

Cheese Fingers

Roll biscuit dough $\frac{1}{4}$ inch thick. Cut in finger lengths and place a thin strip of cheese between two layers of biscuit dough, sandwich fashion. Bake

in quick oven, serve with plum marmalade.

Date, Nut, and Cheese Sandwich

Make a filling of ground dates and nut meats, moistened with lemon juice. Place this filling on a slice of whole wheat bread. Over the dark bread, place a slice of cheese and top with a slice of buttered white bread. Serve in triangular shapes.

Manchester Sandwich

On buttered slices of rye bread, place layers of tongue, genuine cheese and slice of tomato. Finish with mayonnaise and a slice of rye bread buttered side down.

MAKES PARLOR PAY

MY old-fashioned parlor had for years had been a bugbear to me. With our large living room we did not need it so it was closed up every winter to catch dust and make more work at housecleaning time. But last winter two of my friends asked me to quilt them some quilts and it was then that I began to really use the parlor. I set up the quilt frames in that room and could run in and do a few minutes quilting at odd times. Since then I have left the quilt frames up all of the time. A small liner in our home paper has kept me busy quilting all of my spare time and I am realizing a neat profit from it.—Mrs. S. H., Newaygo County.

SICK KIDDIES LIKE DRINKS FROM TEAPOT

SICK children who need to drink hot milk or hot broth can often be induced to take this needed nourishment when it is served in a small individual teapot. In drinking from

the spout of a teapot there is less danger of spilling the liquid than when it takes its perilous journey in a spoon.

An added advantage of teapot serving is that the little invalid does not need to sit up in bed to eat but can take his "teapot drink" with this head propped up with an additional pillow. Cold milk, chocolate, or orange ade, as well as broths and hot milk, may be served in this way.—Mrs. B. F.

BEST NOT TO CORRECT LEFT-HANDED CHILDREN

ATTEMPTS to correct left-handedness in children may result tragically, is the warning of child specialists. Among the results of such attempts, one of the most common and most difficult to overcome is stuttering.

A certain degree of equally free use of the left and right hands is not uncommon among children and it is quite safe in such cases to induce the child to use the right hand. With writing and the handling of table implements, this is particularly desirable. However, if attempts to use the right hand produce fatigue, irritability, or nervousness, they should be discontinued at once.

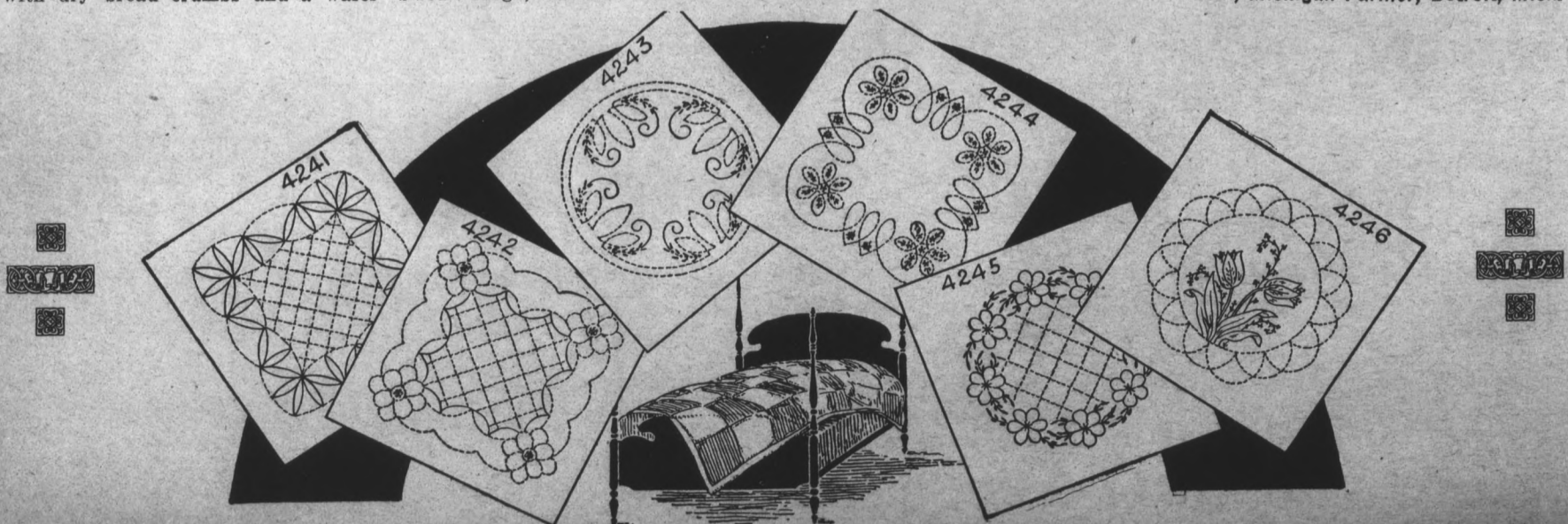
FROM A HOUSEWIFE'S BAG OF TRICKS

WHEN baking an everyday cake, try baking it in a loaf and just before it goes in the oven spread a mixture made of half a teaspoon cinnamon, one-third cup sugar, and two tablespoons cream, over it. This makes a nice frosting with much less work than usual.

Art of Quilting Revived

ALONG with the revival of interest in things old-fashioned, the art of quilting is receiving its just share of attention. Those who are not fortunate enough to possess a treasured heirloom in the form of one of these pieces of patchwork art, are spending hours, as did our grandmothers, to make a quilt, spread, or pillow after the new patterns to which this old-fashioned art is adapted.

The quilt blocks illustrated here are suited either for a quilt or spread or the individual blocks can be used for pillows. The blocks are eighteen inches square and come stamped on either Indian head at twenty cents per block or on white embroidery material at twelve cents per block. In ordering, be sure to state the number of the block you desire. Address your orders to the Stamped Goods Department, Michigan Farmer, Detroit, Mich.



New Lines For the New Year



No. 917—Striking Contrast. Designed in sizes 16, 18, 20 years, 36, 38, 40, and 42 inches bust measure. Size 36 requires 2 7/8 yards of 40-inch material with 1 1/2 yards of 18-inch plain material and 3/8 yard of 54-inch figured material.

No. 911—Tailored Lines. Designed in sizes 8, 10, 12, and 14 years. Size 8 requires 1 7/8 yards of 40-inch material with 3/8 yard of 40-inch contrasting.

No. 691—Coat Dress. Designed in sizes 36, 38, 40, 42, 44, and 46 inches bust measure. Size 36 requires 3 1/2 yards of 40-inch material with 1/2 yard of 32-inch contrasting.

No. 919—Fashionable Uneven Hemline. Designed in sizes 16, 18, 20 years, 36, 38, 40, 42, and 44 inches bust measure. Size 36 requires 2 7/8 yards of 40-inch material with 5/8 yard of 27-inch contrasting and 1 3/8 yards of 27-inch lining.

No. 845—Ultra-New. Designed in sizes 16, 18, 20 years, 36, 38, 40, and 42 inches bust measure. Size 36 requires 3 yards of 36-inch material.

No. 688—Company Apron. Designed in sizes small, medium, and large. The medium size requires 1 3/8 yards of 40-inch material with 6 1/4 yards of binding.

No. 613—One-Piece Dress. Designed in sizes 2, 4, and 6 years. Size 4 requires 2 yards of 40-inch material with 3/8 yard of 32-inch contrasting.

Send 13 cents for each pattern to the Pattern Department, Michigan Farmer, Detroit, Michigan.

FARM WOMEN SELL WARES BY ROADSIDE

SUCCESS, crowning a co-operative marketing project by farm women of Lucas County, Ohio, is likely to prove the incentive for duplication of the project by other groups of women. Beside the "Old Dutch Road," a main

highway leading into Toledo, and seven or eight miles from that city, a group of 16 farm women found, during the past summer, a ready and profitable market for their products, which rewarded them with ready cash in the sum of more than \$40 each.

The women, led and assisted by their home demonstration agent, borrowed \$75 from the county farm bureau to pay for the erection of a roadside market stand which they tended in turn. There they sold fresh vegetables and fruits, fruit drinks, milk, home-baked bread, cookies and cakes, and sandwiches. Their customers were workmen, residents of nearby villages, citizens of Toledo, and tourists.

At the end of the season the proceeds, more than \$900, were counted up, 15 per cent set aside for overhead, and the remainder divided among the women in proportion to the value of the wares they had offered for sale.

One is buying a piano with her profits, another is taking music lessons. All have enrolled to repeat the scheme next year, and other groups in the same territory will do the same thing.

ABC'S OF NUTRITION EASY TO REMEMBER

MANY housewives find it difficult to keep up with the constant research in new vitamins. To some women the array seems as bewildering as if every one of the twenty-six letters in the alphabet represented a vitamin.

Mary Swartz Rose, the well-known authority on nutrition says that the ABC's of nutrition are made quite simple by knowing that milk stands first among food requirements. "There is no way," says Mrs. Rose, "of solving our nutritional problems so well as to build our diet around milk. With

the addition of two or three vegetables, two or three fruits, being careful to select those vegetables and fruits that are high in vitamin C, you have a diet around which you can add other things for heat and energy. You may depend upon it—your wear depends upon your nutritional care."

Five vitamins are now recognized by science, as essential in a diet for proper body maintenance. Vitamin A, commonly known as fat-soluble A, is essential for growth and health. Vitamin B was the first to be discovered, its absence causing beri-beri. It is indispensable for growth and the maintenance of the body's "pep." Vitamin C prevents scurvy. It is found abundantly in citrus fruits and leafy vegetables. The absence of vitamin D causes rickets, hence children need to have an abundance of dairy products, since butter-fat contains considerable amount of this growth-promoting substance. Recent studies have developed that vitamin E is necessary for reproduction. With this convenient system of naming, the ABC's of nutrition are quite easy to remember.

FROM MY KITCHEN TO YOURS

Salmon Mousse

Drain a pound can of salmon and flake with a fork. Then mix one and one-half tablespoons sugar, one-half tablespoon salt, one teaspoon mustard and gradually add three-fourths cup of hot milk. Cook in a double boiler for five minutes and add one and one-half tablespoons melted butter, two beaten egg yolks with two tablespoons cold water, and one-quarter cup of hot vinegar. Cook a few minutes and add three-quarters tablespoons gelatine dissolved in two tablespoons of cold water. Mix thoroughly and add the salmon, and turn into a mould to harden.

Banana Cake

Banana cake is a general favorite at our house, and this is the way I make it:

Cream one cup sugar with one-half cup butter. Add two eggs beaten, one cup mashed banana, four tablespoons sweet milk, one teaspoon soda in enough water to dissolve, one and one-half cups flour, vanilla and salt. Mix well and bake in an angel cake pan. —Mrs. E. B.

Chocolate Fudge

4 cups white sugar 3 tablespoons butter
2 cups cream 3 squares chocolate
Pinch salt

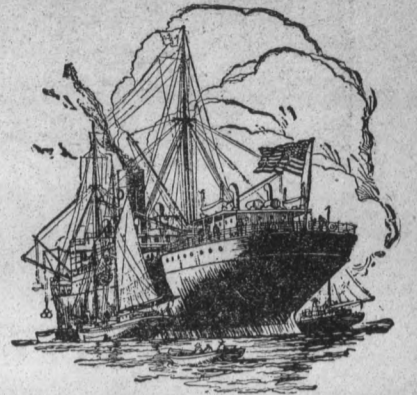
Cook sugar, milk, and chocolate together stirring just enough to prevent burning. Cook until a soft ball forms when mixture is tested in cold water. Remove from fire. Let stand until cold, and beat hard until it becomes thick. Spread on a platter in a sheet one inch thick. Nuts may be added when mixture begins to thicken. Never cook nuts with syrup.—Mrs. W. A.

Peanut Snaps

Cream together one-half cupful shortening, three-fourths cupful brown sugar, and one-half teaspoonful salt. Add one cupful sweet milk, one teaspoonful baking powder, one cupful ground peanuts, and flour to make of consistency of pie crust. Roll thin and bake in a quick oven.—Mrs. I. L.

FIFTY RECIPES TO KEEP LOWLY SPUD POPULAR

JUST because the men folks and the kiddies think they must-have potatoes served at least twice a day, if not three times, is no excuse for the home cook to boil or fry them in the same old way every day. This health-giving, energy-producing vegetable is adaptable to a variety of recipes. They are really quite simple, too. About fifty such recipes are contained in our new bulletin, "Tested Recipes for Michigan Potatoes." For a copy of it, send five cents in stamps or coin to cover cost of mailing to Martha Cole, Desk M, Michigan Farmer, Detroit, Michigan.



World Markets for Farm Products

THE freight services of the United States Shipping Board offer a natural outlet for the export of surplus farm products.

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Section 22

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SEND 25c FOR 25 ASSORTED GLADIOLUS, or 10c for 7. This special advertising offer will convince you.

\$1 BARGAINS
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; BRIDAL WREATH, 4 for \$1.00; PHLOX, mixed, 8 for \$1.00; IRIS, 15 for \$1.00; JACK PINE, Seedlings, 8 year, av. 8 to 8 in. high, 25 for \$1.00. Any six for \$5.00.

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Popular variety 2 year, 4 to 6 inch seedlings, Or 5 each, 3 different varieties, 15 in all for 25c. In accepting this send name of some neighbor who owns home.

4 APPLE TREES
Best varieties, 1-year, well rooted and thrifty growing, for only \$1.

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OUR PAGE

Some Sensible Subjects

Discussed by Merry Circlers

Indecision

It is the next thing to a tragedy to follow a purposeless course in life. The reward encourages, inspires, and exalts that man who knows he can gain it by his faithfulness and integrity. Opportunity comes to him who waits, not with folded hands and a dreamy expression in those languid



Harold Mahler, No Doubt, Is a Very Popular Boy

eyes, but to him with a fixed goal to lead him on.

Oh, the blessedness that comes to the one who knows what he will receive for his labors. There is no hesitation, no faltering, no discouraging thoughts to torment his brain at the time when delays are costly and hesitation may mean missing the right thing.

But not all of us are so inclined. To get started in the right track is the first thing to do, the quicker, the better. When you discover what your ambition is, there will be a sparkle in your eye, vitality in your system and determination in your movements. Determination to win, combined with the great help of God's word, will bring its just reward.—Earl Bowen, M. C.

Hope

Many of us wish that we might be given insight so that we might be able to see what tomorrow holds for us. But when it comes right down to brass-tacks, we wouldn't want to be able to discern what the future holds. We want the adventures of tomorrow yet to come holding what it may—happiness or sorrow. We want to be able to look forward to tomorrow, always having the adventure of the unknown tomorrow before us. For in that way we shall always, even in the darkest hours, have hope and faith. A mother hopes for her baby. She pictures it as a great statesman or president. Even the murderer, sentenced to death by the electric chair, hopes. He has a faint hope that he may be pardoned. Even when he is being conveyed to the chair, he hopes. For is there not a possibility that there may be a defect in the electric wiring or that even at that late moment he may be pardoned? So remember, all of you, that even though today is not as it should be, tomorrow may bring happiness and joy.—Grace Cramer, Comstock, Mich., Box 2.

Education

Education is what the people of America need today. It is a known fact that a large amount of the crimes today are committed by the uneducated. In a certain penitentiary in the United States there are seven hundred young men under the age of twenty-five years. Out of these seven hundred young men, four of them have

had a college education, nineteen a high school education, and the remaining six hundred and seventy-seven never finished high school. Do we need education? I would say, "yes."

Below is an article I copied out of our Sunday School paper about education. It was written for young men but is good advice to young women. The title of the article is:

Ain't It So?

"Harken. O young man, and I will speak for you the parable of the fish hooks. For when the lazy days of summer draw nigh, then thou sayest, 'Behold, I go fishing.' And peradventure thou takest with thee but a very small hook and a tender line unto it. Then it cometh to pass that as thou sittest in the bow of the boat that the cork bobbeth a little and thou pullest it out, even a tiny fish, the size of thy finger.

"And so doest thou, likewise, several times 'till thou art all disgusted with the smallness of them all. But

by and by, when thou art almost nodding, thou wakest with a yank, the cork bobbeth with a great bob; and goeth clear under. The line spinneth, the reel hummeth, and thou sayest, 'Oh, joy, for now I have hooked a "regular" fish!' And then thou reelst it in, very carefully, 'till the head and tail appear, even a jim dandy, as long as thine arm. But just when it cometh nigh unto thee, oh, horrors! The tail floppeth, the line snappeth, the fish goeth, and all those has left is a 'fish tale' that no one believeth, for thy line was too weak and they hook too small.

"Even so is every one that fisheth in the ocean of life, with a pin hook education and a twine string preparation, for if he, by chance, catcheth an honest-to-goodness job, he cannot hold it down, for his line is too small and all the days of his life shall he dig but get nowhere.

"Yea, verily, in the days of thy youth, then make strong thy tackle with a good education; first the high school and then the college of your denomination, where character also is a member of the faculty. Then it shall come to pass that if thou even hook a whale, the whale will know that thou art there present also at the hooking."

Ain't it so?—Paula, M. C.

OUR LETTER BOX

Dear Uncle Frank:

We have three dogs and five cats. I've had many different pets besides cats that I like just as well; a coon, (not a black one), baby woodchucks, wild rabbits, crows, red squirrels, and once my brother and I nearly had snakes for pets. Daddy plowed up six snake eggs and brought them up for us to see. Of course, we put them in the sun thinking no more of them. In a day or two we noticed the eggs

Hello Everybody:

I'm fifteen years old. I've just three years to be a Merry Circler. I go to school nearly every day. I just love to go to school and to become a real person with some sense, not to be a bum like some girls. I'm against flappers that smoke, drink, run out at night, and go to the worst places on the earth. These things don't belong to girls. This stuff belongs to people who have no sense, pride nor shame.

Annual Parents' Parley

WE have just finished with our Home-Coming letters which I believe interested everybody. Another feature which always has made interesting reading has been the special issues devoted to comments from grown folks on the activities of Our Page. During the next few weeks we want to hold our Annual Parents' Parley, so urge some comments, favorable or unfavorable, from the grown-ups. Even though you may not be a parent we will welcome your expression of opinion on any subject discussed in our columns or your criticism of our work.

Merry Circlers, if your parents have not read this, call it to their attention and urge them to "say something" for Our Page or about it. Ask them to do it soon, please.—Uncle Frank.

had started to "peck," as chickens do. We broke them open and found tiny snakes curled up in them, which we killed.

I wish some other cousins would write about different pets too, I think it is interesting.—"Susan."

You certainly have had an interesting variety of pets. Why did you not keep the snakes and try to train them? Then you would have had some novel pets.

Dear Uncle Frank:

In the bygone days, the women didn't drink in saloons, probably a few did but they weren't considered as real people, but young men and women didn't drink in the saloons. Now the drinks are made at home and then they go out driving with cars even when intoxicated, and injure themselves and others. Anyway on this road, many of the accidents are caused by the drivers having some other liquid besides gasoline and, as a rule, moonshine and gasoline don't go well together.

I suppose I shouldn't write like this as the clean part should always be on top and the dirt and filth covered and not anything said or written about it. Of course, none of us are perfect and if we were, we wouldn't be here.—Lily of the Valley.

The only proper place for alcohol in automobiling is in the radiator. I don't think the old saloon days and the present popularity of the auto

would work together very well.

I don't want to hear my mother crying about me for being such a person so I would rather stay out. Wouldn't you, uncle? Some mothers weep from morning 'till night about their children being out with the world's bums. So all girls and boys that belong to the Merry Circle, don't make your mother's heart unhappy. Keep it happy. She kept it happy for us when we were young. So long, everybody.—Mary.

I'm glad that you think of the suffering caused others when we stray from the straight path. In our thoughts of those whom we think have done wrong, we must remember that there is good in everybody.

Dear Uncle Frank:

There seems to be many views and opinions in regard to the habits of our boys and girls. Because one does something another does not care to do or does not believe to be right, does not make that one a bad person. The world is made up of different individuals, each with his or her habits. In each of them there is something good and likeable. Our own habits may not please everybody, yet we are not bad. All of us leave our footprints on the "sands of time" so let us be sure that those footprints are worth looking at by those who must come behind us in life's journey.—Effa M. Somers.

Your letter brings to mind the quotation:

"In men whom men condemn as ill I find so much of goodness still, That I hesitate to draw the line Where God has not."

But there is one thing to remember, there are good habits and bad ones to which one can make no exception. Bad habits can do no one any good.

THE CHRISTMAS CHEST

OUR first Christmas Chest proved a success, especially for a starter. The packages came a little late, perhaps because of the rush in the mail and the somewhat late announcement we gave the Chest. But packages with a rather fine assortment of clothing came from the following: Shirley Palmer, Vera Diffell, Vinnie and Virgie Baer, Virgil Low, Mrs. Bert Faber, Lynn Golden, Ruby and Clara French, Zona Amos, Rena Pater, Alma and Albert Peterson, Mrs. Alfred Wilson, Mrs. Emil Klopfenstein, Elizabeth Olthouse, Ethel Sundin.

Money for the Chest was received from Dorothy Shoemaker, Mrs. John A. Smith, Carl Ahlin, Virginia Skinner, Doris Francis, Elsie Mae Farmer, Milton Shoultz, Alice Buist, Naomi Comfort, and Mr. Herman Lipstraw. The amount of money sent was \$7.76 of which Mr. Lipstraw sent \$5.00.

The following are some of the articles sent: boys' waists, 3 pr. boys' trousers, 4 boys' coats, 2 vests, one woman's coat, 5 ladies' dresses, 1 apron, 1 pr. ladies' shoes, 3 pr. slippers, 1 ladies' suit coat, 1 ladies' skirt, 2 girls' coats, 7 girls' dresses, 3 girls' dresses and bloomers, 6 slips, 1 knitted cap, 1 muffler, 1 baby's dress, 2 pr. baby's stockings, 1 nightie, 5 pr. rompers, 2 girls' skirts, 2 skirts and jackets, 1 bonnet, 1 cap, 2 large pieces flannel, 1 wool petticoat, 1 piece gingham, 1 piece print for apron, 2 reefers, 2 suit coats, 3 ladies' hats, 2 pr. boys' shoes, games, toys, beads, can of dried corn and can of jam.

This was received up to Christmas and was delivered to the Children's Hospital of Michigan Social Service Department which will distribute according to the needs of the cases that department has personal knowledge of.

We will have more about this Christmas Chest later on.—Uncle Frank.

A SMALL BUT TASTY TIDBIT

IT seems strange to think that nuts but little larger than a kernel of buckwheat should form a staple and favorite article of diet for an animal as large as a bear. Beechnuts are just such small morsels, however, and bruin is inveterately fond of them.

The beech tree which bears these tasty tidbits is a common tree in many sections of this country, well-known for its smooth, gray bark. It reaches a height of 75 feet or more, growing tall and slender in the forest, and spreading out to form a broad rounded crown if growing in the



Leaves of the Beech

open. It is said to live as long as 250 years.

The nuts are triangular, borne three in a prickly burr after the fashion of chestnuts. Bears are not the only creatures that are exceedingly fond of these tasty morsels. Deer, grouse, wild turkeys, squirrels, and other wilderness dwellers regularly feed on them, and they were an important and relished part of the mast on which early settlers in the forested sections of this country fattened their forest-pastured hogs.

The leaves of the beech are used by the poor classes of Europe for stuffing pillows and beds, in place of feathers or straw. The wood of the tree is hard, tough, reddish in color and not durable, so it has little use

Chase Pain Away with Musterole

Just Rub It On

When winds blow raw and chill and rheumatism tingles in your joints and muscles, rub on good old Musterole. As Musterole penetrates the skin and goes down to the seat of trouble, you feel a gentle, healing warmth; then cooling, welcome relief.

For croupy colds, sore throat, rheumatism, aches and pains in back and joints, rub on Musterole. Don't wait for trouble; keep a jar or tube handy.

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



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INDIANA BOTANIC GARDENS BOX 5 HAMMOND, IND.

If I were a farmer

and had to be on the job at the squeak of dawn, I'd own a good flashlight, you can bet your boots. It would light my way through the yard to the barn and out-buildings. I wouldn't stumble over anything, no matter how sleepy I might be.

And I'd keep that flashlight fit as a fiddle with Eveready Batteries—the brightest-burning, longest-lasting batteries that ever poked their head in a flashlight.

The Eveready Radio Battery people make these flashlight batteries. That ought to be recommendation enough. This guarantees light without blight.

Get the flashlight habit. It's part of modern farming.

as a lumber. However, it does have remarkable water-resisting properties, for which reason it is commonly used in France in the making of sabots or wooden shoes.

READ AND WIN CONTEST

FOR two weeks we have not had contests because of the holidays. So, we will start the year with one of the old time Read and Win Contests.

You will find the answers to the questions below in the pages of this issue. Do not rewrite the questions but number your answers the same as the questions. Please make your answers as short as possible. Write neatly and put your name and address in the upper left hand corner of your paper. If you are a Merry Circler, put M. C. after your name.

The prizes will be fountain pens, loose-leaf note books, and pocket knives. There will be ten prizes in all. All who have correct papers and are not M. C.'s will get M. C. pins and cards.

The questions are:

1. Who thinks it a waste to use bedding freely?
 2. How much decrease did the storm in April cause to the lamb crop?
 3. How many members are there in the Ottawa Egg and Poultry Association?
 4. What feeds in the winter help furnish hens with needed vitamins?
 5. When should heaviest feeding be given hens?
 6. What did Mrs. Emil Klopfenstein and Herman Lipstraw contribute to the M. C. Chest?
 7. How many pounds of cheese do the Swiss eat each year per capita?
- This contest will close January 13th. Please send your contest papers to Uncle Frank, Michigan Farmers, Detroit, before that time.

Rural Health

SPRING TONICS NOT NEEDED IF DIET IS WELL BALANCED

FEWER spring tonics will be needed and fewer cases of spring fever noted if plenty of fruits and green leafy vegetables are eaten throughout the winter and early spring months," said Miss Flora Miller, of the Purdue home economics extension staff. "Meat dishes are always popular during the winter months," continued Miss Miller, "but most of us will agree that heavy meat dishes are served too much for good health, and that they should be accompanied by a large amount of green vegetables and fresh or canned fruits.

"A good substitute for the heavy meat dishes would be the so-called one dish meal type, such as tamili pie, scalloped ham and eggs, Spanish rice, and shepards pie. These dishes include a large portion of other foods along with the meat and provide a meat diet that is more easily digested than the commonly used fried ham, pork, and pork sausages.

"The winter months are the best time for using cheaper cuts of meat since they require longer cooking. The meat bills which are usually larger during the winter months can be materially reduced by using the cheaper cuts, when the housewife need not mind the longer cooking periods required. Some favorite dishes from the cheaper cuts are rolled flank steak, stuffed meat loaf, swiss steak, Spanish steak, pot roast, and the like.

"Farm housewives particularly should not overlook the school lunch in planning their winter meals. At the present time the school child leaves home early and in many cases has not had time to eat an adequate breakfast. Dullness on the part of the child in the afternoon may usually be traced to cold food at noon. The hot dish at noon is not a luxury but a necessity for the average school child. Patrons, teachers, township trustees, and other school officials should co-operate to establish a hot dish at the noon hour in every school."

T. B. OF THE BONES

I have had a bone trouble that my

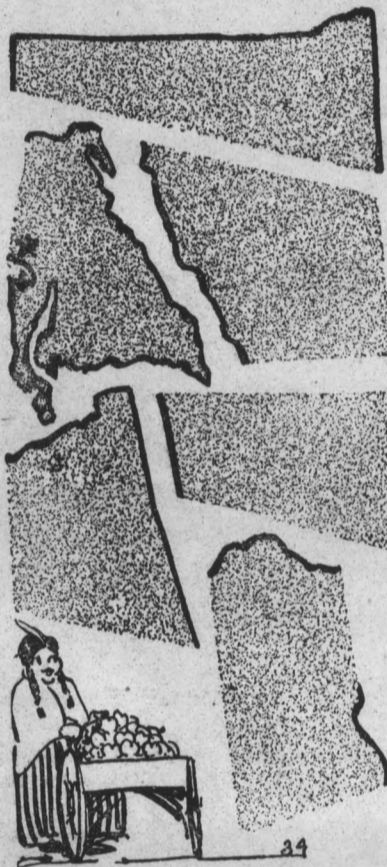
doctor says may be tuberculosis. Does the treatment by rest and open air do good in such case just the same as if the trouble was lung trouble?—Anxious.

Exactly the same. Tuberculosis of the bone may often be cured, if taken in the early stages, without other treatment than rest, fresh air, and plenty of nourishing food. Sometimes the bony part can only be placed at rest by the application of a plaster case or a brace, but the principal is just the same and the results are very encouraging. Of late years, it has been demonstrated that sun treatment (heliotherapy) greatly hastens the cure of bone tuberculosis. Such treatment is applied to the whole body, not merely to the affected bone.

Our Little Folks

STATE SECRETS

This state is like little Jack Horner, It's situated clear in the corner; You'll guess when I tell you its name And our Capitol (D. C.'s) the same.



The pieces of this puzzle when correctly put together, make a map of the state which this verse describes. The star indicates the capitol. Can you guess the state when you have the parts pasted together? The small black star represents the capitol. Name it too, and tell all you can about the state and the city.

The answer to last week's secret was Vermont and its capitol is Montpelier.

BLACKBOARD SOLDIERS

If Santa was reminded to bring you a little blackboard for Christmas or perhaps a new slate, here is a game you can play. It is called Blackboard Soldiers. First each player draws a line of ten soldiers with chalk on opposite sides of the board or slate. The soldiers should be about an inch long and half an inch apart.

Each player then places his piece of chalk on one of his own soldiers, closes his eyes and attempts with one quickly drawn stroke to cut through the middle of some soldier or soldiers on the opposite side of the board. A mark that bisects a soldier is supposed to be fatal and that soldier can no longer be counted. The players take turns and the one who first succeeds in crossing off each of the enemy soldiers wins the game. The strokes must be made rapidly and the player cannot open his eyes until after he has taken his crayon from the board.

—Aunt Martha.



Wood cutting tools

You can save a lot of time and energy in the job of getting in the winter wood supply if you have a few good tools of the right kind to use. In order to be sure you get the right kind go to your local "Farm Service" Hardware Store where you will find a selection of saws, axes and other things that will exactly suit your needs. Go there for extra buck saw blades, cross cut saw handles, filing clamps, vises, the different kinds of files that are especially made for saw sharpening and extra ax and maul handles.

If you have heavy timber or knotty wood, get a couple of good steel wedges—they save lots of backbreaking splitting.

It is an easy matter to rig up a power saw and drive it from your tractor or a gasoline engine. You can get a circular saw and a mandrel at a "tag" store and with them construct your own frame or buy one ready to run, if you want to.

It is important to find the "tag" store because you can absolutely depend upon the quality of merchandise offered you. You will find the price is right, too.

Your **Farm Service HARDWARE STORES**



Heavy feeding is dangerous if assimilation lags



It costs but a few cents a month per cow to play safe

Think what an extra burden your cows take on when they come into the barn for winter! A sudden shift to dry hard-to-digest food. Little exercise; limited fresh air and sunlight. To keep up a milk flow that seems to tend downward some outside help—besides good food—is demanded or a breakdown is certain.

Kow-Kare is designed to supply what winter-fed cows need to keep the milk-flow at top notch. Gradually, but surely, this great regulator and conditioner builds up the vigor of the digestion and assimilation, a liberal, rich milk-making ration is now safe because the cow is capable of turning it into milk. She is responsive, profitable, able to ward off disease.

The Kow-Kare conditioning treatment is so simple, so inexpensive. A tablespoonful to the feeding, one to two weeks each month is all

the average cow requires. Use Kow-Kare on the whole herd this winter and you will never go back to the old way.

Freshening Cows Need Kow-Kare

At calving, no feed, be it ever so well balanced, supplies all the elements needed to withstand the terrific shock of producing and bearing a healthy offspring. A tablespoonful of Kow-Kare in the feedings for three weeks before and after will save hundreds of dollars in the disorders it prevents. Don't allow cows to freshen without this valuable aid.

Feed dealers, general stores and druggists have Kow-Kare. Large size, \$1.25; 6 cans for \$6.25. Small size, 65c. Each can shows how to use Kow-Kare in successfully treating—at home—such disorders as Barrenness, Retained Afterbirth, Abortion, Bunches, Scours, Lost Appetite, etc. If your dealer is not supplied we will mail, post-paid.



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LIVE STOCK AND DAIRYING

BEARS DAMAGE STOCK

BLACK bears have become an agricultural problem in Presque Isle County, according to reports by Jack Brown, county agricultural agent. Mr. Brown, after investigating reports of damages done to live stock owned in the county, estimates that the bears have cost farmers six or seven thousand dollars during the present year.

BLACK LEG IN ANTRIM

FARMERS of Antrim County are combating an outbreak of black leg in cattle by vaccinating their cattle. The disease has apparently

sleep. Comfort for all animals or poultry always means profit.

There is great improvement in the care of dairy stock over the conditions of fifteen or twenty years ago, and why? Because the board of health in the large cities compelled the dairy farmers and milk-shippers to fix up and clean up the barns and stables and put them in a sanitary condition, and in doing this the stock was made more comfortable.

There is improvement all along the line in handling live stock, but cruelty is still practiced in many instances. The automobile has been a great boon to horse flesh, hogs and sheep are better sheltered and cared for on most



Belgian Colts on the Farm of Alfred Ingersoll of Gratiot County

been brought under control. This is the second appearance of the disease within the county recently.

ONE MAN DRENCHES SHEEP

DEMONSTRATIONS of methods of drenching sheep for the control of worms drew an attendance of 100 farmers in Washtenaw County. The meetings were arranged by the county agricultural agent, and Verne Freeman, live stock specialist, showed how one man can administer a drench. Mr. Freeman says that internal parasites of sheep are the most important factor that influences the profits obtained from Michigan flocks.

CRUELTY AMONG LIVE STOCK

BEING kind to animals is an act that every farmer and others who come in contact and handle live stock, both large and small, should give careful consideration. Our agricultural papers, as a rule, do not touch on this subject or make as much importance of it as they should. When we think and know of the cruelty imposed upon our domestic animals, it causes one to feel the importance of saying and doing something to lessen the hardship of them.

Animals suffer cruelty from owners and caretakers in many ways, some by not having proper shelter, and by not providing farm stock with the necessary amount of bedding to keep them comfortable in severe cold weather. Cows, especially, not only suffer for the want of bedding to keep them comfortable and warm, but a floor without plenty of straw or other material is a poor place for a cow to lie during the night, particularly so for a cow confined in a stanchion. Some farmers seem to think it a waste to use bedding freely, but I always felt that I got a profit from it, surely I had the satisfaction of knowing that my cows and hogs were comfortable and that I was not practicing cruelty. Of all, I believe in giving farm animals a dry and comfortable place to

farms than they were a few years ago. But poultry, except where special attention is given to the work, still comes in for more than its share of rough treatment.

Owners of stock seem to forget that a hen, horse, or cow is confined and helpless to choose a warm and comfortable place to stand or lie during a severe cold night, and the same is true in extreme hot weather during summer. Place yourself in this position if you don't believe it. Go out to the poultry house or other buildings where hogs, hens, or cows are kept and stand around for an hour or so on a severe cold night and see how you like it.

Any farm animal, dog, cat, or poultry is what you make it, the same in a way as with a child. If you handle them in a rough and cruel manner they will be wild and nervous and never as profitable as when cared for in a gentle manner.—V. M. C.

HOLSTEIN BULL COMMITS SUICIDE

A YEARLING Holstein bull, owned by F. B. McKibbin of Lansing, checked out of the bovine world by electrocuting himself. He was found dead in his stall by J. H. Chamberlain, who manages the farm. Indications were that the bull stood with his front feet on a cement stall partition and tore down two electric lighting wires with his tongue. The deadly current carried such a wallop that the copper ring in the bull's nose was melted!

Certainly it could not have been shame of ancestors that led the bull to commit suicide. His sire is an unusually well-bred bull in service in the Traverse City State Hospital herd. His dam is a daughter of Traverse Colantha Walker, the cow that holds the lifetime butter-fat record for the Holstein breed. Neither could the bull have been disgusted with his children, as his calves are remarkably good individuals. "Just got tired of it all," probably.—J. G. Hays.

TB WORK SUFFERS IN MICHIGAN

(Continued from page 10)

are exhausted. If adequate funds had been provided by the last Michigan legislature, the entire state would be practically free from this disease by 1930.

During the past few years Michigan has been spending \$250,000 a year out of the state funds on this project. Legislative hearings attended by farmers and others from all parts of the state were held in Lansing last winter to show how \$100,000 per year additional would be needed this biennium because of the demands from Detroit and other cities for pure milk, from herds tested for tuberculosis and known to be free. Governor Green not only refused the additional \$100,000 per year, but he cut the regular appropriation \$37,500.

Heretofore when the regular appropriation was used up in the payment of indemnities and other necessary expenses incident to the application of the tuberculin test in the various counties, the predecessors of Governor Green have authorized the use of a limited amount of money from so-called emergency funds to carry the work along until the regular appropriations would be available. Apparently Governor Green refused to do this. Unless the situation is met, all the Federal and State men engaged in tuberculosis eradication will be withdrawn from the State of Michigan. This is a calamitous situation to the live stock owners of the state, because up to this time Michigan has been in a position to supply the eastern states with clean cattle at very satisfactory prices to the farmers of the state. This stopping of the work is not only a blow to the farmers but it is a misfortune to every consumer of milk in the state.

Medical investigations show that milk from tuberculous cows is an important factor in causing the disease among children in particular. On this subject Dr. C. H. Mayo of the Mayo Brothers Clinic, Rochester, Minnesota, writes under date of October 24th, 1927, as follows:

"Tuberculosis in cattle spreads to humans, usually by means of milk in which the germs have not been killed by proper pasteurization. How frequently this occurs is a question; but a conservative estimate is that 25% of tuberculosis among children and 5% of all tuberculosis is from bovine sources. Owing to the frailties of human nature and the limitations of pasteurizing machinery, safety cannot always be guaranteed by pasteurization. The tubercular cow should be removed from the milk supply. Removal from the herd of all reactors is necessary otherwise tuberculosis will surely continue to spread to other animals. Expense should not be the determining consideration. In fact money spent for such things is not expense, it is an investment which will return dividends."

Dr. Hugh Cabot, Dean of the Medical Department of the University of Michigan says:

"There are two sources of tuberculosis in human beings. In one group the infection comes from other human beings, and in the other group from cattle. In the latter type the infection is almost exclusively transmitted by milk, and those exposed are, therefore, more commonly children and young people than adults.

"This source of infection can be controlled only by careful inspection of cattle constituting the milk supply. In states or countries where such inspection is lax or absent very striking results appear. For instance, in the hospital in Edinburgh, Scotland, one sees an enormous amount of the type of tuberculosis produced by the bovine tubercle bacilli. In the clinic of Sir Harold Stiles at Royal Infirmary the incidence is said to be as high as seventy per cent. This should be contrasted with the present condition in the State of Michigan in which inspection has been satisfactorily carried out and the legislature, backed by public opinion, has been willing to appropriate money to compensate the farmers for the cattle that must be killed.

"My experience in the last five years, seeing a large amount of tuberculosis particularly in children, col-

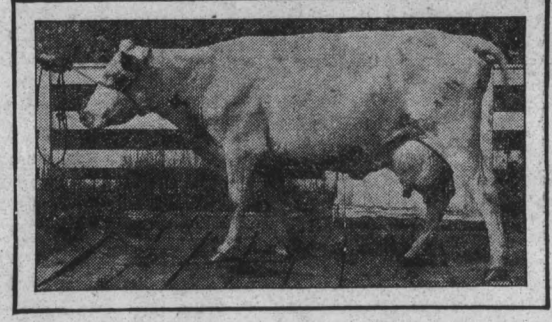
BULLETIN

Profits of Tonic and non-Tonic Cows Compared

Research Farm, Dr. Hess & Clark, Inc., Ashland, Ohio



Here's an ordinary grade cow that freshened in August. She got just ordinary dairy feed—ground oats and corn, bran with oil meal added. She made, in September, a profit of \$18.47. This being the first month after freshening, should be her peak month. By all rules she should fall off steadily each month thereafter. The average cow loses about 10% each month after freshening. But Dr. Hess Improved Stock Tonic was added to her ration beginning October 1st. The effect appears in her record.

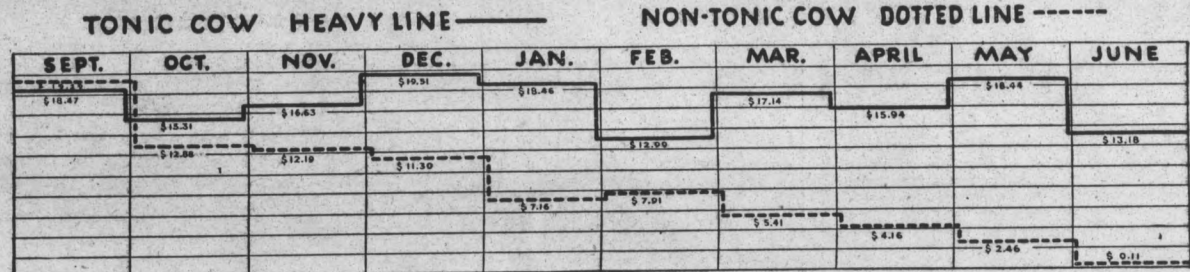


This cow also freshened in August. She is in the same condition and gets the same feed and care as the cow at left. She's a little better milker though, for in September, the first month after freshening, she made a profit of \$19.29, or 82 cents more than the other cow.

But note her profits the next month—and each month afterward. Her record is steadily downward. She did not receive Dr. Hess Improved Stock Tonic at any time.

THESE two cows, equally good milkers and on equal conditions, were placed in a competitive profit test for ten months. Neither cow received Dr. Hess Stock Tonic during September, and for that month the second cow gave a little more milk.

The use of Stock Tonic in the ration of the first cow was begun October 1st and continued to the end of the test. Stock Tonic consumed cost only 50c per month. The profit records of both cows are shown in the graph below.



The effect of Dr. Hess Improved Stock Tonic in the ration is almost startlingly apparent. There was no regular falling off in the Tonic cow, as is the usual course. Her record is one of sustained production. Compare with the non-Tonic cow month by month in the graph.

In the 4th, 5th, and 9th months the Tonic cow's profits were the same or above the first or usual peak month after freshening.

The total profits of the Tonic cow over and above feed

cost were \$166.07—an average of \$16.60 per month. Profits of non-Tonic cow, \$82.87, or an average of \$8.28 per month.

Total milk production for the Tonic cow was 11,695 pounds; average per month, 1,170 pounds. Average butter-fat test, 3.37%.

Total milk production for non-Tonic cow 8607 pounds; average per month, 860 pounds. Average butter-fat test, 2.95%.

Dr. Hess Improved Stock Tonic

APPETIZER—REGULATOR—MINERAL BALANCE—all combined in one product

PRICES: 100-lb. drum, 10c per lb.; 500 lbs. 9½c per lb.; 1000 lbs. 9c per lb.

Ton lots 8½c per lb. (Except in extreme West and Canada.)

lected at the University Hospital, has convinced me that the bovine type of tuberculosis constitutes with us not more than ten per cent. This shows, I think satisfactorily, that inspection and slaughtering of cattle can be expected to reduce the incidence from the very high level seen, for instance, in Scotland of seventy per cent to the low level of less than ten per cent.

"It is, therefore, of first importance that we impress continuously upon the thinking portion of the community the essential importance of inspection and slaughtering of tuberculous cattle."

What better authorities could be quoted on the subject? No problem confronting Michigan or any other state is of greater importance from an economic as well as public health standpoint as the eradication of tuberculosis from cattle. Governor Blaine of Wisconsin recognized this a year ago last April when he called a special session of the Wisconsin legislature at the time when the tuberculosis eradication fund became exhausted. The Wisconsin legislature was in session just one day and it was called for no other purpose but to appropriate an emergency fund of \$450,000 to carry the work in that state until the next appropriation became available. This is a matter of as much importance to the people of Michigan as to the people of Wisconsin, and action of some kind is greatly to be desired.

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EVERY bushel of corn you save on your 1928 pig crop boosts your hog profits! You will save 1/2 your feed, and get more than double the pigs from the same number of sows or more pigs from only 1/2 the sows you ordinarily breed, with the **ECONOMY HOG HOUSE**

The Hog House with the Patented, Exclusive "PIG INCUBATOR"

Enables you to farrow your first litter in February or March. Saves up to 100% of your pigs even at 10 degrees below zero. This early farrowing helps you make the EARLY fall markets and get HIGHEST PRICES. You can then get another litter in early fall and the "Pig Incubator" will take your pigs through the winter for big cheap gains. This Means 16 to 20 Pigs Per Year Per Sow

No wonder hog raisers everywhere are deserting old time hog houses for this modern, up-to-the-minute perfect farrowing house which ten minutes work changes into a year 'round hog house. "Pig Incubator" Saves the Pigs Economy Hog House has six separate pens for sows. Each pen connects with six separate little pig pens into which only the little pigs can go. Central brooder stove with canopy forces heat into these little pens, heating them to 72-degrees even at ten below. Heats sow pens to 40 degrees. Little pigs stay in their own pens except at feeding time. Sows can't injure them. This is a patented feature and the biggest improvement ever made in hog raising equipment

Perfects the McLean System Mounted on heavy, weather proofed skids, easily moved; best for owners or renters. Sanitary. Well ventilated with roof ventilator and top ventilating cello-glass windows that let in the "growth" rays of sun.

Costs Less Than You Can Build It Fully equipped with stove. Comes in sections; two men can put it up in half a day. Built of clear fir and No. 1 dimension lumber. Plan now to double your hog profits in 1928. Send coupon for catalog of Economy Hog House, self feeders, hog waterers, cattle waterers, poultry houses. SEND COUPON SAVE MONEY

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The Best is the Most Economical

It costs the same per pound to ship average beef animals to market as it does prime beef animals, yet the latter dress 10% more.

WILD WOOD FARMS
ORION, MICHIGAN
W. E. SCRIPPS, Prop. SIDNEY SMITH, Sup

GUERNSEYS either sex, whose sires' dams have official records of 15,000.10 milk, 778.80 fat, 19,460.50 milk, 909.05 fat. T. V. HICKS, Battle Creek, Mich., R. 1.

Guernsey Dairy Heifer Calves, practically pure bred \$25.00 each. We ship C. O. D. Write L. Terwilliger, Wauwatosa, Wis.

For Sale -Reg. Guernsey cows and a few bull calves, sire by Imp. Coro Honor. JOHN EBELS, Holland, Mich., R. 2.

FOR practically pure-bred GUERNSEY or HOLSTEIN calves, from heavy, rich milkers, write EDGEWOOD DAIRY FARMS, Whitewater, Wis.

SHORT COURSE MAN MAKES GOOD

WINNING ton litter honors one's self, is one thing, while the breeding and selling of stock that will win similar honors for the buyer, is quite another. This, however, was very successfully accomplished the past year by Sidney Phillips, Charlotte, President of the State Short Course Club and President of the State Duroc Jersey Breeders' Association.

Sidney sold a gilt to his grandfather, Walter Phillips, who is a seventy-five year old farmer. This gilt produced a litter that weighed 2,420 lbs. at six months. Another gilt sold to Laban Williams, Eaton Rapids, produced a litter that weighed 2,340 lbs. at the end of the 180 day period. Sidney also qualified for ton litter honors with a litter (raised with some thirty other shotes under ordinary herd conditions) which reached the 2,049 lb. mark.

Mr. Phillips' Duroc Jersey experience dates back to 1918 when he joined the Brookfield Duroc Jersey Pig Club. He has steadfastly clung to his early plans, continuing to develop his breeding program through his Club work, through his Agricultural High School work, and through his Short Course work at the College. He now stands out as one of the progressive Duroc Breeders of the state, and an agricultural leader in his community, county and state, as may be gleaned from the fact that while he is yet a young man in his early twenties, he has been elected as President of two State Associations. Mr. Phillips is a strong backer of the College Short Courses and feels that young men interested in agriculture should receive the inspiration and training the College has to offer through these courses.

CORN OR OATS FOR PIGS

What should be fed to young pigs, corn or ground oats?—A. S.

Oat meal containing more protein than corn is a better feed for growing pigs than corn, but oat meal does not furnish sufficient protein to make a balanced ration for pigs. A good mixture for young growing pigs is: 100 lbs. yellow corn meal; 100 lbs. wheat middlings; 50 lbs. digested tankage. This can be fed as a thick slop or dry in a self feeder, in which case the pigs should have free access to water and salt, and hard wood ashes should be placed where the pigs can eat what they want.

If it is desired, 100 lbs. of oil meal can be substituted for the 50 lbs. of tankage. Ground oats are a better feed for cows and horses than for pigs because the pigs will not eat the oat hulls; but if it is desired to feed oats add 100 lbs. to the above mixture.

GROUND PEAS FOR PIGS AND COWS

Is ground peas as good and as economical a feed for pigs as barley, pound for pound? I believe peas contains much protein. Is it, therefore, good for cows and chickens? Will it take the place of wheat in the chicken ration?—F. P.

Peas and barley are supplemental foods; that is, they give better results when fed together than when fed separately. The reason is that peas are too rich in protein and barley too rich in carbohydrates to give economical results when fed alone; but if mixed then there will be more economical digestion and assimilation. Besides a variety of foods is usually more appetizing.

Pea meal is a good food for any kind of live stock. It is extravagant to feed it alone, because there is a waste of protein. If cows were fed alfalfa hay for roughage, pea meal would not be a good grain ration alone as the ration would be out of balance,

containing too great a per cent of protein; but if the roughage was timothy hay or corn stalks, or silage, then pea meal would be just the kind of feed to balance them and make an economical ration.

A pound of pea meal will furnish twice as much protein as a pound of wheat, so if your ration is already balanced it would not be the proper thing to substitute pea meal for wheat in the chicken ration.

ALLEGAN BREEDERS MEET

TWENTY-ONE breeders of Holstein cattle met at the Court House, Allegan, on Dec. 23rd to talk over the new Holstein Herd Test. J. G. Hays, secretary of the Michigan Holstein-Friesian Assn., was on deck to explain rules and regulations that will govern this test.

Interest in the plan steamed up the breeders so that they decided to organize a County Holstein Assn. A steering committee of four, men—Richard Brower and Willis Parmelee, of Hopkins; Henry R. Scholten, of Holand, and B. F. Foster, of Allegan—was elected to lay plans for a meeting in the near future at which a formal organization will be affected.

COD LIVER OIL FOR PIGS

AT the Ames' experiment station it was found that the feeding of steam-rendered cod liver oil to pigs proved a profitable investment. The average amount of food consumed daily by each pig receiving this oil was 5.4 pounds, consisting of 4.62 pounds of corn, .74 pounds of tankage,



Cod Liver Oil Helped This Pig

.023 pounds of cod liver oil, and .015 pounds of minerals. The lot of pigs fed this ration made a hundred pounds gain upon 354 pounds of feed as compared with 384 pounds required by the check lot fed a similar ration but without the cod liver oil. The margin of returns for each pig over the feed costs was \$7.29 in case of these fed the steam-rendered cod liver oil and \$6.75 for the check pigs. In other words, cod liver oil, which costs \$1.60 per gallon was actually worth \$2.93 per gallon according to the results of this experiment.

HIGH PRICES MAY ATTRACT FOREIGN SUPPLIES

ASIDE from the protest of consumers against the rise in retail prices for beef and the tendency to turn to pork, high cattle prices may also increase the difficulty of excluding Argentina beef. Argentina could ship to this country profitably at present prices in spite of the tariff if the quarantine law against countries with foot and mouth disease did not prevent. With Argentina cleaning up and with our prices high, efforts to have the quarantine relaxed may become strenuous.

In experiments to study the rates of gain, costs, and general results from pigs pastured on rape, alfalfa, and sudan grass, the results would warrant the recommending of these pastures for hogs in the order mentioned.

It was observed in a recent test at the Pennsylvania station that corn supplemented with tankage makes one of the best rations for fattening pigs. The using of large quantities of molasses seemed to be unpalatable for swine.

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30 days FREE TRIAL



NOW—for the first time, the farmers of America have a chance—if they act quick!—to see and USE on 30 Days FREE Trial the NEW Low Model Belgian Melotte Cream Separator. In the NEW Melotte you NOW have a greater convenience and all-round satisfaction than was ever known before.

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We are now in position to offer bulls of the popular Ormsby-Bess-Burke-Fobes combination of blood lines. These calves are sired by Marathon Bess Burke 32nd, a son of the famous cow Wisconsin Fobes 6th, or Sir Bess Ormsby Fobes 50th, a son of her illustrious full brother, Sir Bess Ormsby Fobes. These two young sires are in service in the Traverse City State Hospital herd and their calves show excellent quality.

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Bureau of Animal Industry
Department C,
Lansing, Michigan



SERVICEABLE AGE

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Bull Calves at prices the owner of a small herd can afford to pay. The sire of many of these calves is a Son of the highest record (30 lb.) two-year-old daughter of Creator. His sire is King Segis Alcartra Prilly, an undefeated Show bull with 70 A. R. daughters. Others sired by a 5 times 1200 lb. Champion Bull, the famous K. P. O. P. breeding.

Bred cows and heifers served by these sires are available for foundation stock.

RED ROSE FARMS DAIRY

Northville, Michigan

Telephone: 344
Reference: Northville State Savings Bank

FOR SALE Two Reg. Holstein Bulls, rich in Ormsby's Sensation breeding, from very high record dams. Also a three yr. old cow and her yearling heifer. WHITNEY BROS., Onondaga, Mich.

BUTTER BRED JERSEY BULLS FOR SALE
CRYSTAL SPRING STOCK FARM,
Silver Creek, Allegan County, Michigan

For Sale Choice Jersey Bulls, grandsons of Sybil's Gamboge of Whitehall. SMITH & PARKER, Howell, Mich. R. No. 4.

For Sale Registered Jersey Bull 10 months old. Albert Ainsworth, Carsonville, Mich.

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Calves, Yearling & Twos; Hereford Steers & Heifers. Beef Type, dark reds, good grass flesh, most all bunches dehorned, each bunch even in size and show good breeding. Choice Herefords are usually market toppers when finished. Few bunches T. B. tested. Will sell your choice from any bunch. State number and weight you prefer 450 to 1000 lbs.

Van D. Baldwin, Eldon, Wapello Co., Iowa.

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SPECIAL prices on Shorthorn bulls, cows and heifers. These will please the most careful buyers. GOTTFREDSON FARMS, Ypsilanti, Mich.

HOGS

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FOR SALE—Duroc Gilts of type and quality, bred to High Orion No. 205227. Also a few spring boars at right prices. Shipped C. O. D. on approval. W. E. BARTLEY, Alma, Mich.

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For Sale—Reg. O. I. C. April & May Pigs best of breeding. Shipped on approval. FRED W. KENNEDY & SONS, R. 1, Chelsea, Mich.

O. I. C's. Good last spring pigs, not akin also fall pigs, reared free. OTTO SCHULZE & SONS, Nashville, Mich.

Choice Poland China Boars

Real size—great quality. Today's breeding. Ready for immediate service and cholera immuned. Also choice gilts—bred or open. WESLEY HILE, Ionia, Michigan.

ON DRENCHING SHEEP

WHEN you drench a sheep or lamb, ten to one you are thinking entirely of that particular animal between your knees, but that should not be the case. Inside of him doubtless are worms by the hundreds or by the thousands; and worms by the hundreds and by the thousands lay eggs by the millions and by the billions, so you should be drenching the animal to stop the accursed scattering of eggs on the pasture to the damage or death of whatever sheep or lamb takes a bite of grass!

When a sheep is drenched once a month none of the worms inside of him should ever get much age or have time to lay more than just a few hundreds or a few thousands of eggs. To be sure, the general aim of drenching is to kill the worms before they suck much blood; but to clean up the farm and make next year a whole lot safer for sheep is a big result the systematic drencher is bound to get when he goes to slaying worms regularly.

We have all heard of killing the goose that laid the golden egg. Well, with stomach worms, it is a case of killing the rascal worms that lay the accursed eggs. Stomach worm eggs from sheep are rapid hatchers—round worm eggs from hogs can't touch stomach worm eggs from sheep when it comes to cracking the shell and getting out.

There you have him—the snappy, wriggling sinner along with as high as 1,000 more like him in a bit of manure not a half inch in diameter! Once he gets out he goes to whipping around and toughening up so that in 24 hours or so he is pretty much prepared to meet Old Man Winter face to face and come out best the next spring, able to whip up the first wet grass-blades of spring and get into your sheep.

From this it may be seen that drenching kills the worm that is sucking blood inside of your sheep; it also kills the worm that is laying hosts of eggs every day to plaster the farm from fence to fence, soon to hatch and then stick to the grass a whole year waiting for your spring lambs! Two or three months of drenching may improve a flock of sheep or lambs immensely if they have not been wormy so long that they are full of poison besides sucked short of blood.

But after two or three months of efficient drenching there is likely still to be a generous sprinkle of hopeful worm cysts scattered over the farm—worms that have not yet had the good luck to be cropped up by the animals. They may lie as still as a grain of sand for long spells of dry weather, but the first drop of rain will limber them up and they go to whipping about as lively as a chicken with its head cut off.

A few worms on the farm may not visibly affect sheep health, but it takes more than two or three months of drenching to reduce the pests to this happy minority.—G. P. Williams.

UNDER THE 4-H FLAG

(Continued from page 12)

welcome and see if there's anything we can do. No, keep your seats," as Father Barton acknowledged the introduction and presented the members of his family. "We didn't aim to stay but a minute, but neighbors have been so scarce in late years that we wanted to know 'em before they could get away." O'Neal's hearty laugh boomed through the vacant rooms. Big and bluff, he overshadowed his cheery, pleasant wife. "We want you to come over and spend the night with us," chimed in Mrs. O'Neal, "for we know that your things still are at the station. Saw them there to-day. We'd love to have you come."

Into Mother Barton's thoughts flashed a verse: "I was a stranger and ye took me in." Here were real friends.

Yet they could hardly accept this unexpected hospitality. Courteously she explained that they had brought bedding along and had ample for their needs until they could get fixed up properly. Warmly she thanked Mrs. O'Neal, assuring her that the thought meant more than the deed to them. "But you must make us a little visit," Mother Barton insisted, "so that we can get really acquainted. Take these chairs. Bob and the girls can sit on the floor."

"We heard someone playing a violin wonderfully," said Katie as Bob sprawled his awkward length on the floor and John O'Neal, with another booming laugh, sank down beside the fire. "Was it you, Mr. Barton? Won't you play again?"

"Before you go," smiled Bradley Barton, "let's visit now. Smoke, Mr. O'Neal?" Barton held out his pouch and soon the elders were chatting as if they'd been friends for years. Bess and Ruth were quickly won by Katie's friendly advances and snuggled close to her as she, too, sat on the floor before the fire. With the shyness of big boyhood Bob kept in the background, to prick up his ears at John O'Neal's emphatic declaration which stopped the children's chatter and the confidences between the two mothers.

"I don't want to frighten you," O'Neal was saying, "but there's something mysterious about this place. Nobody has lived here for three years. It's been five years since stock began disappearing, and the tenants were forced to leave. Some other mighty strange things happened, too. That's why Jones hasn't been able to rent the farm to anyone who knew conditions and why he had Sims advertise it and demand half cash in advance. Sure, it's good land," O'Neal replied in response to a query, "but nobody will pay \$500 a year for the land alone. Nothing happens unless someone is living on the place. The renters before have been just 'poor white trash,' as the darkeys say, and they didn't have the nerve to try and run down the trouble. Of course, as it's been three years, nothing may happen now, but I wanted you to know. This lad," and O'Neal smiled at Bob, "looks as if he could take care of himself. Well, play us a tune, Mr. Barton, and we'll go home."

The violin sang to the rapt attention and applause of a new audience, but Bob Barton was not listening to its seductive strains. That part of him which was his father thrilled to the thought of a mystery right there on their own land. A mystery ready for the solving which had driven others away. And that part which was Bob's mother, holding fast with grim tenacity until a task was accomplished, whispered "Send 'em on. We'll show 'em if they can drive us away." Bob's "good night" was a very perfunctory affair, and he whirled on his father with a "Do you suppose it's true, dad?" as the door closed behind the visitors.

"True? Of course, O'Neal's telling the truth about what happened three years ago," Father Barton replied, "but that's no sign anything will happen now. Anyway, we haven't any stock to steal. If they take Prince and Dick, they'll be out of luck when they pay the feed bill," and Bob's father chuckled at the joke. But Bob, as he lay before the fire, dreamed dreams of fierce encounters and hard-won victory.

(Continued next week)

Washtenaw county farmers prepared for next year's corn crop by drying their seed corn. Two club boys in the county dried 250 baskets of excellent corn which they grew as a club project.

When the village parson's daughter eloped in her father's clothes, the Times came out next morning with an account of the elopement headed, "Fleas in Father's Pants."



Illustration above shows a group of people attending a De Laval and Dairy Day arranged by a De Laval Agent in Arkansas. One feature of this meeting was a "skimming the skim-milk" demonstration. Hundreds of similar meetings were held by De Laval Agents during the past year.

Tests Prove Many Old Separators Are Losing Valuable Butter-Fat

IN ORDER to show exactly how much money is being lost by poor separators De Laval Agents in 17 states during the past year held hundreds of public tests, in which the skim-milk from some separator in each community was run through a new De Laval and separated again.

In all these tests De Laval Separators never failed to recover butter-fat from such skim-milk. The butter-fat recovered in this way was immediately weighed and tested at the local creamery or cream station, and varied in value from a few cents to over a dollar.

The average results from all the tests showed that the separators from which De Laval's skimmed the skim-milk were losing butter-fat at the rate of \$78.00 a year.

More than 50,000 people attended these demonstrations and many of them were amazed at the separating losses revealed and asked for tests to be made on their own separators.

In view of the fact that no effort was made to secure skim-milk from the poorest separator in each community, and that the tests were conducted

under the observation of disinterested people entirely in the open and above board, they reveal a general condition.

It has been conservatively estimated that 25% of all separators in use today are wasting large amounts of butter-fat—enough to pay for a new De Laval in a short time. Is your separator in this class? To make sure it isn't, try a new De Laval.

Trade In Your Old Separator on A New De Laval

The new De Laval's are the best separators ever made—they skim cleaner, run easier, are more convenient to operate and last longer than any others. They have many new features you will appreciate. Liberal trade allowances on old separators of any age or make made on new De Laval's, which are also sold on easy terms or installments. See your De Laval Agent or send coupon for full information.

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 State..... R.F.D..... No. Cows.....

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

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 Write us dealer's name and we will mail generous package free. At dealers 25c. dozen; 5 dozen \$1.00, or mailed postpaid.
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The final test, in the kind of feeds you use, is the balance on your bank book. Arcady and Wonder feeds have given greater profits to feeders for years. Ask your dealer—if he cannot supply you write us today for FREE illustrated Dairy and Poultry Books, dealer's name, etc. No obligation.

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 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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NEWTON'S Compound
 Heaves, Coughs, Conditioner, Worms. Most for cost. Two cans satisfactory for Heaves or money back. \$1.25 per can. Dealers or by mail. The Newton Remedy Co. Toledo, Ohio.

HOGS
 Registered O.I.C. Gilts bred for April and May farrow. H. W. MANN, Dansville, Mich.

LARGE TYPE POLAND CHINAS Spring Pigs. Either sex for sale. Also Brown Swiss Bulls. A. A. Feldkamp, R. No. 2, Manchester, Mich.

FOR SALE L. T. Poland China boars and bred gilts, also fall pigs. CLAIR I. BROWN, Kalamazoo, Mich., R. No. 10.

Poland Chinas Extra large spring boars and gilts. Also weaning pigs. JAMES G. TAYLOR, Belding, Mich.

A FEW good Hampshire spring boars at a bargain. Place your order for bred gilts. JOHN W. SNYDER, St. Johns, Mich., R. 4.

SHEEP

500 BRED EWES
 For sale—300 choice large black faced ewes, yearlings, 2s, 3s, and 4 year olds mixed. 200 choice large Michigan Delaine ewes yearlings to solid mouths mixed. Prices reasonable. Write or wire us for further information. ALMOND B. CHAPMAN & SONS, So. Rockwood, Mich. Only 25 miles south of Detroit, Mich., on motor bus and car lines.

134 Breeding Ewes Young, vigorous and black faced grades. Write or better yet, come and see them. INGLESIDE FARMS, H. E. Powell & Son, Ionia, Mich.

FOR SALE Oxford rams and ewes. Satisfaction guaranteed. GEO. T. ABOTT, Palms, Mich. Telephone Deckerville 78-3.

For Ten Reg. Shropshire Ewes
 Write or call on Armstrong Bros., Fowlerville, Mich.



THE LATEST MARKET REPORT



GRAIN QUOTATIONS.

Tuesday, January 3, 1928

Wheat.

Detroit—No. 2 red at \$1.41; No. 2 white \$1.38½; No. 2 mixed at \$1.38½.
Chicago—March \$1.30½; May \$1.32; July \$1.27½.
Toledo—Wheat, No. 2 red at \$1.41@ \$1.42.

Corn.

Detroit—No. 2 yellow 93c; No. 3 yellow 91c; No. 4 yellow 89c.
Chicago—March 86½c; May 89½c; July 92½c.

Oats.

Detroit—No. 2 Michigan 59c; No. 3 white 57½c.
Chicago—March 52½c; May 55½c; July 53½c.

Rye.

Detroit—No. 2 \$1.15.
Chicago—March \$1.08½; May \$1.09.
Toledo—\$1.15.

Beans.

Detroit.—Immediate and prompt shipment \$5.60 f. o. b. shipping points.
New York.—Pea domestic at \$6.00@ \$6.50; red kidneys \$7.25@8.00 to the wholesalers.
Chicago.—Spot navy beans, Michigan choice, hand-picked, in sacks at \$6.00; dark red kidneys \$7.60.

Barley.

Detroit—Malting 90c; feeding 86c.

Seeds.

Detroit domestic seeds.—Cash clover \$18.65; February \$18.80; March \$18.75; cash alsike \$16.20; February \$16.45; March \$16.60; timothy at \$2.00; March \$2.15.

Hay.

Detroit—No. 1 timothy at \$13.00@ \$14.00; standard \$12.50@13.50; No. 2 timothy \$10.00@11.00; No. 1 light clover, mixed \$13@14; No. 1 clover \$11.50@12.50; wheat and oat straw \$10.00@11.00; rye straw \$11.00@12.00 alfalfa hay, No. 2 to choice at Chicago, \$14.00@25.00.

Feeds.

Detroit.—Winter wheat bran at \$39; spring wheat bran at \$38; standard middling at \$39; fancy middling at \$42; cracked corn at \$43; coarse corn meal \$41; chop \$40 per ton in carlots.

WHEAT.

Absorption of import wheat, particularly by European countries, continues at a high rate and may prove to be a match for the full supply that will be available from exporting countries during the next month or two. From August 1 to December 24, the apparent world disappearance of wheat has been about 22,000,000 bushels larger than in the same period a year ago. The total for the last crop year was the largest on record. The steady tone at Liverpool recently indicates that no pressure from cash wheat has developed as a result of the large arrivals to date.

RYE.

Exports of rye have been moderate in the last few weeks and the visible supply has increased slightly, but it is still only 3,115,000 bushels, or one-fourth as large as a year ago and one-fifth of the five-year average.

CORN.

Corn prices dropped to the lowest point of the season in the last few days. The winter movement has gained headway and the visible supply has increased for three consecutive weeks. A year ago, it increased over 16 million bushels from this time up to the high point of March. A similar gain may take place this year if the official estimate of the crop is correct. It shows a larger yield than in 1926 and prices are higher, so that the movement out of first hands should be liberal. On the other hand, consuming demand seems to be a little more active than it was a year ago and there is a better prospect of export business than at that time. Clearances for export have increased slightly in the last few weeks, but they remain quite small compared with movement out of first hands.

OATS.

Weakness in corn prices has given oats a downward trend. Basic conditions appear rather strong, however, as the movement from first hands is light and the visible supply, which is already small, is decreasing a little more rapidly than usual at this season of the year.

SEEDS.

Seed markets continue to mark time awaiting the opening of the spring trade. With the actual planting sea-

son still several months ahead, except in the south, dealers are not in any hurry to build up supplies. Prices for clover seed have eased off although some dealers believe an actual shortage of seed may develop during the spring demand. Alsike and timothy seed have held fairly steady under the influence of light receipts.

BEANS.

A more active year-end trade than dealers had expected resulted in a higher market for beans last week with C. H. P. white quoted at \$5.75 to \$5.80 per 100 pounds, sacked, f. o. b. Michigan shipping points. Farmers were not making heavy deliveries and shippers were unwilling to let go of their supplies on hand except at the higher price.

FEEDS.

Wheat feeds declined again last week although hominy and gluten feeds were marked a little higher. Feeding requirements have been increased by the colder weather, but dealers have been reducing their stocks before the year-end inventory and supplies on the market have been plentiful. Trade should improve after the first of the year when a firmer market, particularly on wheat by-products, would result. Cottonseed meal advanced again last week as demand was sufficiently large to absorb the offerings from crushers.

Chicago—Bran, \$32.25; standard middlings, \$31; hominy feed, \$38.50; gluten feed, \$36.20; old process oil meal, \$49; tankage, \$75; cottonseed meal, 43%, \$48.25.

HAY.

Hay is selling at unchanged prices in a firm market. Demand is only fair but receipts are moderate so that there is little accumulation in dealers' hands. Green and leafy alfalfa hay is wanted and good grades command a premium. Colder weather would stimulate the trade in hay, but with such ample supplies still back in the country, prices are not likely to appreciate much.

EGGS.

An active demand during the holidays was chiefly responsible for the steady tone in the fresh egg market

last week when prices held unchanged. First evidence of an increased lay in the central and southwestern states is showing up in receipts at the larger distributing markets. Shipments from the Pacific Coast continue good sized. Supplies at the four leading markets are gradually gaining from week to week although receipts are running about 10 per cent smaller than at the corresponding period a year ago. Prices are expected to resume their downward trend as supplies become more liberal.

The Christmas turkey market was unsatisfactory for dealers although farmers, in most cases, received good prices for their birds. Supplies at the large markets prior to the holiday were in excess of consumptive demand and prices fell rapidly, even below actual cost at country points in some instances, as dealers tried to move their stocks.

Chicago—Eggs: fresh firsts, 41@42c; extras, 49@50c; ordinary firsts, 30@37c; dirties, 22@28c; checks, 20@25c. Live poultry: Hens, 23½c; capons, 28@29c; springers, 27½c roosters, 18c; ducks, 23c; geese, 23c; turkeys, 35c.

Detroit—Eggs: Fresh firsts, 35@46c; storage, 28@32c. Live poultry: Heavy springers, 27@28c; light springers, 25@26c; heavy hens, 26c; light hens, 24@25c; roosters, 16c; geese, 23c; ducks, 27c; turkeys, 40c.

BUTTER.

Production of butter has been curtailed by storms and wintry weather which delayed the delivery of cream in many important dairy sections. The make is holding fairly steady from week to week and should begin to gain during the next month. Consumptive demand is broad and butter is moving freely out of warehouses. The surplus over a year ago has been reduced during December. Prices during the past fortnight have been firmly held, on the average, and not much change is likely until the make definitely begins to increase. The possibility of large imports of foreign butter acts as a check on domestic prices.

Prices on 92 score creamery were: Chicago, 50c; New York, 52c; Detroit, 42@47½c per lb.

POTATOES.

The potato market is having difficulty in maintaining prices around \$1.50 to \$1.65 per 100 pounds, sacked, for northern round whites and Idaho Russet Burbanks, U. S. No. 1, in the Chicago carlot market. Dealers are still well stocked up with supplies bought during the recent cold spell which they have not been able to move. Growers, on the average, are still optimistic about market prospects and are willing to hold on to their supplies a while longer. A prolonged period of wintry weather would undoubtedly give the market renewed strength.

APPLES.

Prices for good apples are firm although supplies generally are liberal and demand has slowed down. A good holiday trade cleared dealers' floors of all fancy apples. Washington extra fancy Jonathans, best stock, medium to small size, bring \$3.25 to \$3.50 a box and Michigan A-2½ inch Jonathans are selling at \$8 to \$9 a barrel at Chicago.

WOOL.

Mills have been buying wool more actively in the last ten days. Apparently, they have held back until their stocks of wool have become depleted, and the continued premium of foreign wools over domestic prices, tariff considered, has made them anxious to increase their supplies. The heavy weight selling season opens in another month and some mills wish to cover part of their requirements in order to quote cloth as low as possible. Small advances in cloth prices have been made by a number of mills in the last two weeks, indicating a healthy status in the cloth trade.

Contracting is still going ahead in the west. The Jericho, Utah, pool was contracted on the sheep's back at 36 cents compared with 30¼ cents for the 1926 clip. Sales are reported in Montana as high as 38¼ cents, in Idaho at 36 cents, and in California at 35 cents. In Nevada, the range is mostly from 31 to 32½ cents. These prices are considered to be fully up to a parity with the Boston market and, in some cases, above it.

Live Stock Market Service

Tuesday, January 3, 1928

DETROIT.

Cattle.

Receipts 185. Market strong; fat handy butchers 25c higher. Good to choice yearlings dry-fed \$11.00@13.75
Best heavy steers, dry-fed 10.25@12.00
Handy weight butchers.. 9.00@10.75
Mixed steers and heifers. 9.00@ 9.75
Handy light butchers 7.50@ 9.50
Light butchers 6.00@ 8.25
Best cows 6.50@ 8.75
Butcher cows 5.50@ 6.25
Cutters 5.00@ 5.25
Canners 4.00@ 5.00
Choice light bulls 6.00@ 8.50
Bologna bulls 7.00@ 7.75
Stock bulls 6.00@ 7.75
Feeders 7.00@ 8.50
Stockers 5.50@ 7.00
Milkers and springers...\$65.00@110.00

Calves.

Receipts 440. Market steady.
Best \$16.50@17.00
Others 8.00@16.00

Sheep and Lambs.

Receipts 1,931. Market steady.
Best lambs \$ 13.75
Fair lambs 11.00@12.00
Light to common lambs.. 6.00@ 9.50
Fair to good sheep 6.00@ 7.00
Buck lambs 7.50@12.25
Culls and common 2.00@ 3.00

Hogs.

Receipts 2,171. Market steady.
Pigs \$ 8.50
Mixed hogs 9.35
Light lights 8.25
Roughs 7.25
Yorkers 9.25@ 9.35
Stags 6.00
Extreme heavies 7.75@ 8.50

CHICAGO.

Hogs

Receipts 35,000. Market generally 10@15c higher than Monday's average; big packers inactive; packing around steady; tops \$9.00, paid for 200-280-lb. weight; bulk good 210-300-

lb. average \$8.85@8.95; 150-200-lb. \$8.60@8.90; pigs \$8.25@8.50; bulk packing sows \$7.85@8.10.

Cattle

Receipts 7,000. Market fairly active on better grade fed steers and yearlings; very active on weighty steers suitable for shipping; unevenly higher; highest at season; medium grade light cows slow but steady; she stock and bulls strong; vealers 25@50c higher; \$18.25 paid for weighty bullocks on shipper account; several loads \$17.50@17.65; less desirable kind \$16.00@17.20; warming up on light offerings \$11.00@12.50; light heifers up to \$13.00; most weighty sausage bulls \$8.50@8.75; shippers and vealers \$16.00; packers \$13.50 down.

Sheep and Lambs

Receipts 22,000. Market fat lambs opening slow, around 25c lower than Monday; early bulk good and choice handy weights to shippers \$13.50; lambs 85-lb. down \$12.75@13.25; good to choice 93-98-lb. \$12.00@12.50; light natives \$10.50@11.50; choice weighty bulk fat ewes \$6.00@6.75; feeding lambs unchanged; good 63-70-lb. \$11.75@12.75.

BUFFALO.

Hogs

Receipts 3,200. Hold over 1,342; market steady to 10c higher; bulk 170-260-lb. \$9.65@9.75; few 160-lb. \$9.60; 150-lb. down mostly \$9.00; packing sows \$7.25@8.00.

Cattle

Receipts 100. Market on cows mostly steady.

Calves

Receipts 250. Market on choice 50c higher at \$17.50; culls and common steady at \$12.50.

Sheep and Lambs

Receipts 1,200. Market strong to 25c higher; good lambs \$14.25; culls and common \$11.00@12.00; fat ewes \$6.00@7.50; few choice yearlings \$11.75.

PIG CROP INCREASES 11 PER CENT

An increase of 11 per cent in the fall pig crop of 1927 over the fall crop of 1926 for the eleven Corn Belt States and also for the United States as a whole, is shown by the December 1, 1927, Pig Survey Report issued by the Department of Agriculture. The survey, covering approximately 150,000 farms, was made in co-operation with the Post Office Department through the rural mail carriers. The number of sows that farrowed this fall increased only 9 per cent for the Corn Belt and 10 per cent for the United States, but there was a small increase in the average size of litters saved this fall.

The number of sows bred or to be bred for farrowing next spring as reported is 1 per cent larger for the Corn Belt and 6 per cent larger for the United States than the number that actually farrowed last spring. These figures indicate that the number of sows that will farrow next spring will be from 6 to 8 per cent less for the Corn Belt States and 3 to 5 per cent less for the United States than the number that farrowed last spring, allowance being made for the average decline between breeding intentions reported in December and actual farrowings, reported the following June, as shown by past surveys.

Increases of about 5 per cent for the Corn Belt States and 6 per cent for the United States in total pigs saved, both spring and fall, this year compared to last, is shown by this year's survey. These increases are equivalent to between 2½ and 3 million pigs in the Corn Belt and about 5 million for the United States. Since cholera losses in the Corn Belt States this fall were below the reported unusual losses of the fall of 1926, an increase in the supply of hogs for slaughter from these States is probably somewhat larger than the above indicated increase in pigs reported saved. The increases in areas outside the Corn Belt this year indicate considerably larger contribution from these areas to commercial hog supplies the coming year than for several years.

SMALL RECEIPTS SUSTAIN CATTLE PRICES

SMALLER country loadings due to the mid-December break in cattle prices and holiday interference with shipments have resulted in light receipts in the last ten days. Finish considered, medium and heavy weight steers are selling as high as, and in some cases higher, than any previous time this season. Light weights are more numerous and they are selling substantially below their 1927 peak. Fat cows and heifers advanced in the last week, but they are 25 to 50 cents below the high point of three weeks ago.

January will probably usher in a little more liberal movement, since cattlemen appear disposed to let go after 60 to 90-day feeds. At the same time, they may continue the habit of cutting down the supply on sharp breaks as this policy has been successful in causing quick recoveries during the last six weeks. It will take some time to mature another crop of weighty steers, so that price for that description are likely to remain on a high level. Cows and heifers usually take an upward trend during the winter and early spring. While they are already on a comparatively high level and may not make much progress for another month, this seasonal tendency will manifest itself sooner or later.

Veal calf prices dropped to a new low point for the season a week ago. This probably marks the bottom of the autumn decline and an upward trend until February or early March is likely.

THE FEEDER TRADE

FIRMNESS in fat cattle prices caused a slight recovery in prices of stocker and feeder steers in the last week. The holidays tended to limit the number of buyers but the available supply remains small. In the three weeks ending December 17, the total number of stocker and feeder cattle shipped from twelve principal markets was about ten per cent larger than a year previous and somewhat about the average for the corresponding season.

MORE FALL PIGS RAISED IN 1927

THE number of fall pigs raised in 1927 was 11 per cent larger than in 1926, according to the United States Department of Agriculture. The combined increase in the spring and fall of 1927 was about 2,500,000 to 3,000,000 pigs in the corn belt and 5,000,000 pigs in the entire United States. The gains were 5 per cent in the corn belt and 6 per cent in the entire United States. This indicates a substantial increase in the market supply up to next October over the corresponding period of 1927. The increase may be made even larger by the fact that cholera losses in 1927 were small. In the fall of 1926, losses from this cause were from 1,250,000 to 1,500,000 head greater than usual.

The report on breeding intentions points to a decrease of 6 to 8 per cent in the number of sows that will farrow next spring in the corn belt and a decrease of 3 to 5 per cent in the entire United States. If these intentions are adhered to, market receipts in the fall of 1928 will begin to reflect curtailment of production and hog prices will start on the upward phase of another price cycle.

The hog market has had a half-dollar rally in the last two weeks as a result of moderate supplies. Receipts undoubtedly will increase again in January and the market is likely to sag. It may or may not make a new low point for the season. After January, a moderate upward trend is probable. The probable increase in receipts over a year previous will be partly counterbalanced by fewer cattle. Hog prices are already considerably below the average level from January to October 1927, so that some gain in supply has been discounted.

TOP LAMBS REACH \$14 AGAIN

THE upturn in lamb prices due to extremely light receipts in the latter part of December carried the Chicago top to \$14 once more, from which point a small setback occurred. Weighty lambs are too numerous and enjoyed only a small part of the advance on light and handy weights. It is probable that current prices already discount the probable increase in the supply in the next five months compared with the same period in 1927 but selling conditions are likely to remain unfavorable because of the large percentage of overweight lambs.

The air is so dry in Chile that lips and hands are chapped continually.

COUNTY CROP REPORTS

Lenawaw County—Farmers are doing chores and getting up wood. Dairy and poultry are increasing in interest. There is plenty of roughage and feed and the stock is doing well. Very little is being marketed. There are no apples for sale or home use in this community.—J. W.

Ingham County—Farmers are just doing their chores. All are buying coal. Most farmers are milking a few cows. There is plenty of hay but grain is high. Milk brings \$2.20 per cwt. at cheese factory and eggs 50c per dozen.—A. W.

Jackson County—Farmers in this locality are now cleaning barnyards, cutting wood. Have plenty of roughage of stock, grain scarce. Live stock is in good condition. Apples bring \$1.25@2.00 per bushel, potatoes \$1.25. No grain or beans being marketed. Dressed pork 12c, butter-fat 50c.—J. W.

Osceola County—Cutting firewood and feeding live stock is the principal work of farmers. Stock looks fine. Very easy winter so far. Dairying is on increase. There is plenty of roughage but not much grain. Potatoes are 60c a bushel, rye 80c, beans \$3.00, hay \$8@10.00 per ton, poultry 16c.—P. E. R.

Berrien County—Farmers are kept busy doing chores, trimming grape and fruit trees. About the usual amount of dairy and poultry. There is plenty of roughage for stock, but not very much grain. About one-third of grain in farmers' hands. Wheat brings about \$1.21 per bushel, oats 50c, potatoes \$1.00, eggs 50c per dozen.—J. B.

Don't Feed Milk

If you want to save money feed



Blatchford's Calf Meal
ESTABLISHED IN 1800
Special Factory Single Cash Trial Bag Offer!
50 lb. Bag \$2.40
100 lb. Bag \$4.75
These Prices f. o. b. factory only
Blatchford Calf Meal Co., Dept. 6181, Waukegan, Ill.

WHEELS

Trucks—Wagons
Steel or Wood Wheels to fit any wagon. Old wagons are made new with "Electric" steel or wood wheels that fit any running gear. Catalog describes Wheels, Farm Trucks, Wagons and Trailers. Write for this catalog today.
ELECTRIC WHEEL CO.
35 Elm St. Quincy, Ill.

CLASSIFIED ADVERTISING

This classified advertising department is established for the convenience of Michigan farmers. Small advertisements bring best results under classified headings. Try it for want ads and for advertising miscellaneous articles for sale or exchange. Poultry advertising will be run in this department at classified rates, or in display columns at commercial rates. Rate 8 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 6 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order. Live stock advertising has a separate department and is not accepted as classified. Minimum charge 10 words.

Words.	One time.	Four times.	Words.	One time.	Four times.
10.....	\$0.80	\$2.40	25.....	\$2.08	\$6.24
11.....	.88	2.64	27.....	2.16	6.48
12.....	.96	2.88	28.....	2.24	6.72
13.....	1.04	3.12	29.....	2.32	6.96
14.....	1.12	3.36	30.....	2.40	7.20
15.....	1.20	3.60	31.....	2.48	7.44
16.....	1.28	3.84	32.....	2.56	7.68
17.....	1.36	4.08	33.....	2.64	7.92
18.....	1.44	4.32	34.....	2.72	8.16
19.....	1.52	4.56	35.....	2.80	8.40
20.....	1.60	4.80	36.....	2.88	8.64
21.....	1.68	5.04	37.....	2.96	8.88
22.....	1.76	5.28	38.....	3.04	9.12
23.....	1.84	5.52	39.....	3.12	9.36
24.....	1.92	5.76	40.....	3.20	9.60
25.....	2.00	6.00	41.....	3.28	9.84

Special Notice
All advertising copy discontinuance orders or change of copy intended for the Classified Department must reach this office ten days in advance of publication date.

REAL ESTATE

NEW FARM CATALOG Just out, biggest and best ever. On page 26 read details 80 acres, improved, only \$300, \$150 cash. Page 23, 145 acres, 6-room house, team, 3 cows, 3 calves, 4 hogs, 65 poultry, corn dog, tools, grain, fodder, hay, 20 gallons sorghum, house furnishings all \$1,500, part cash. Page 48, 347 acres improved, 160 in cultivation, estimated 5,000 cords wood, pasture 125 head. Accident forces sale, 6 cows, heifer, registered bull, 2 calves, 2 mares, 2 sows, 27 pigs, 50 poultry, tools, hay, home furnishings, 800 cans fruit and vegetables, all \$4,000, \$1,800 cash. Many others. Get your free copy now. United Farm Agency, 828 MF, New York Life Bldg., Kansas City, Mo.

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs and poultry, yields a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get our farm paper—"The Earth" free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 912 Railway Exchange, Chicago.

LAND CAN STILL BE BOUGHT or rented in Oklahoma at prices that will enable the general farmer to show a net profit on his farming operations for the season. Prices of Oklahoma lands considering the prodigious production are exceptionally low. Plenty of uncultivated land still available for general farming. Season is open practically 12 months in year. Mild, healthful climate, good schools, fine roads, large prosperous growing communities make Oklahoma farm life pleasant and profitable. Write for facts to Frisco Railway, 832, Frisco Bldg., St. Louis, Mo.

STANISLAUS COUNTY, California—where farmers are prosperous. Crops growing all year round. Land priced low. Write free booklet, Dept. 6, Stanislaus County Development Board (County Chamber of Commerce), Modesto, California.

FOR SALE—160 acres good clay loam, tilled, large house, barn and out buildings, fine location. Good terms. W. E. Williams, St. Johns, Mich.

FARMS FOR RENT

FOR RENT—Ideally watered 1,350 acre stock farm. Big barns, two houses. Terms to suit. 90 miles North Grand Rapids. L. J. Hlavacek, 6431 North Spaulding, Chicago, Illinois.

MSCELLA NEOUS

FREE DOG BOOK. Polk Miller's famous dog book on diseases of dogs. Instructions on feeding, care, and breeding with symptom chart. 48 pages. Illustrated. Write for free copy. Polk Miller Products Corp., 1022 W. Broad St., Richmond, Va.

VIRGIN WOOL YARN for sale by manufacturer at bargain. Samples free. H. A. Bartlett, Harmony, Maine.

300 UNRULED LETTER HEADS and 300 good envelopes, all neatly printed as wanted for Two Dollars, postpaid. Money back if wanted. Cards, shipping tags, statements, etc., equally low prices. The Braytons, Freeport, Michigan.

OUR 1928 CATALOG just from press. 84 pages showing Largest Line of Poultry Supplies in the World. (Over 300 items.) Write today for your copy free. Brower Mfg. Co., C-27, Quincy, Ill.

A FEW "SUCCESSFUL" DEMONSTRATOR INCUBATORS for quick sale at great reduction. 60 to 300 eggs capacity. Good as new. Des Moines Incubator Co., Box 734, Des Moines, Iowa.

WATCHES, DIAMONDS CHEAP. Write for price list. O. D. Niles, Owosso, Mich.

FOR SALE—Triple Unit Nicker Bean Picker, new. Wasta Huber, Gladwin, Mich.

PET STOCK

FERRETS—Over thirty years experience, white or brown, females \$5.50 each, males \$4.75 each. Will ship C. O. D. Instruction book free. Levi Farmsworth, New London, Ohio.

SCOTCH COLLIES, from the best drivers. Cloverleaf Farms, Tiffin, Ohio.

MATTRESSES

MATTRESSES made any size, low factory prices. Catalog free. Peoria Bedding Company, Peoria, Ill.

FRUIT TREES AND NURSERY STOCK

PEACH TREES, \$5 per 100 and up. Apple Trees, \$7.50 per 100 and up. In large or small lots direct to planters, by freight, parcel post, express. Plums, pears, cherries, grapes, nuts, berries, pecans, vines; ornamental trees, vines and shrubs. Free catalog in colors. Tennessee Nursery Co., Box 125, Cleveland, Tenn.

100 GENUINE MASTODON EVERBEARING strawberry plants \$1.95, 250 for \$3.50, 500 for \$6.75. Bears July to December, 18 fill quart. 2 year Concord grape plants less than 2c each. Beautiful catalog free. George Stromer, Box 14, New Buffalo, Michigan.

MASTODON EVERBEARING—Less than 1 1/2c each. Why pay more. Champion Originator. Catalog free. Edwin Lubke, New Buffalo, Mich.

SEEDS

WOLVERINE OATS absolutely pure, color and germination perfect. Weight thirty-eight pounds, one dollar bushel, bags free. Freight prepaid, Michigan, on over twenty bushel orders received before March. Checks cashed early March when seed shipped. Satisfaction guaranteed. A. B. Cook, Owosso, Mich.

SCIENCE AND PRACTICE demonstrate Improved American Banner wheat, Wolverine oats, Improved Robust beans best for Michigan. A. B. Cook, Owosso, Mich.

SWEET CLOVER SEED, white blossom, grown northern Michigan. Recleaned, scarified. Sealed bags. Delivered your station \$6.00 bushel. Thos. Buell, Elmira, Mich.

TOBACCO

SPECIAL OFFER—Chewing or smoking 5 lbs. \$1; 10, \$1.75; Cigars 50 for \$1.95; pay when received, money refunded if not satisfactory. Farmers Association, West Paducah, Kentucky.

GUARANTEED HOMESPUN TOBACCO—Chewing, 5 pounds, \$1.25; 10, \$2. Smoking, 10, \$1.50. Pipe Free! Pay postman. United Farmers, Bardwell, Kentucky.

TOBACCO; KENTUCKY SWEETLEAF, Mellow, aged. Smoking 15 pounds \$1.65. Chewing \$2.25. Pay when received. Ernest Choate, Wingo, Kentucky.

HOMESPUN TOBACCO: Chewing 5 lbs. \$1. Smoking 5 lbs. 75c. Pay when received. Pipe free. Farmers Union, A5, Paducah, Ky.

HOMESPUN TOBACCO: Chewing 10 lbs. \$1.50. Smoking 10 lbs. \$1. United Farmers, Paducah, Ky.

POULTRY

WHITTAKER'S MICHIGAN CERTIFIED REDS Both Combs. R. O. P. Trapped. Michigan's greatest color and egg strain. Cockerels, chicks, eggs. Catalog free. Interlakes Farm, Box 9, Lawrence, Mich.

8 VARIETIES Record of Performance Male Matings. Breeding cockerels, pullets, and chicks. Free catalog giving big early order discounts. Beckman Hatchery, Box 57, Grand Rapids, Mich.

BUFF LEGHORN PULLETS, hatching eggs and baby chicks that live and grow. Circular. Hillcrest Poultry Farm, Bath, Mich.

PURE TANCRED COCKERELS with pedigrees, five dollars and up. Smiley Farms, R. 5, Jackson, Mich.

S. C. BROWN AND WHITE LEGHORNS, 332 egg, catalog. Harlan Fulton, Gallipolis, Ohio.

BABY CHICKS

WHITE LEGHORN CHICKS from big white eggs. Shipped anywhere c. o. d. Guaranteed to live. Low prepaid prices. Trapped, pedigreed foundation stock. Egg contest records to 314 eggs. Hundreds of cockerels, pullets, hens. Bargain prices. Big 28th annual catalog free. George B. Ferris, 934 Union, Grand Rapids, Michigan.

DOWN'S LEGHORNS LEAD STATE CONTEST—Last report (Dec. 14) shows our leghorns leading Michigan International Egg Laying Contest. 1,000 pullets now being trapped in R. O. P. To insure delivery when wanted—order your Michigan Accredited chicks now! Free circular and prices on request. Down's Poultry Farm, Romeo, Mich.

TOWNLIN CHICKS, eggs, breeding stock in four leading varieties have made a record of profit performance for thousands of poultrymen that points the way successward for you. Don't fail to get our New 1928 Catalog. Tells how to raise chicks and why our egg blood lines make profits easy. Copy free. Townline Poultry Farm, Route 1, Box 107, Zeeland, Michigan.

BABY CHICKS. The Village View large type, vigorous, healthy chicks. Direct from our poultry farm and hatchery to you. Ask for our large free catalogue which tells all about our hatching and breeding establishment. Price reasonable if orders are booked now. Village View Poultry Farm, Zeeland, Mich., R. 3.

BABY CHICKS—You can buy your early hatched Michigan Accredited chicks right here at home. First hatch January 15. Also booking orders now for spring delivery at special discount. Send for catalog and prices. Brummet-Fredrickson Poultry Farm, Box 28, Holland, Michigan.

FAIRVIEW CHICKS, Pullets, Hens and Pedigreed Cockerels have paved the way to bigger poultry profits for hundreds. Our 1928 Catalog tells you how to raise poultry for profit. Get our Live and Let Live Prices. Fairview Hatchery & Farms, Box CM, Zeeland, Michigan.

BARRED ROCK CHICKS—Incubators now running. Order chicks early. Card's chicks are better chicks. Chicks, eggs, and breeding stock. Flock under State and Federal supervision. Leo V. Card, Hillsdale, Mich., Phone Cambria 4109.

LOOK! 100,000 chicks 9c up, 20 varieties. Using many 200 to 312 egg record bred ROP cockerels. Send for free catalog giving big early order discounts. Lawrence Hatchery, Grand Rapids, Mich.

SUPERIOR RINGLET BARRED ROCK Cocks and Cockerels, large ringy fellows. L. Wyndham, Tiffin, Ohio.

HELM'S WINTER LAYERS—Insure bigger poultry profits—\$8.75 up. Free "Poultry Lessons." Illinois Hatchery, Metropolis, Ill.

TURKEYS

WHITE HOLLAND TURKEYS and White Pekin Ducks, pure-bred healthy stock. Addressed stamped envelope for reply. Alden Whitcomb, Byron Center, Mich.

TURKEYS, all breeds. Strictly pure-bred. Unrelated pairs and trios, reasonable prices. Eastern Ohio Poultry Farm, Bealsville, Ohio.

PURE-BRED BRONZE BREEDING STOCK, unrelated pairs, vigorous, good quality. Mrs. Chas. Boone, Traverse City, Mich., R. 5.

MICHIGAN'S BEST Giant Bronze turkeys, large, utility and fancy. The birds that always give satisfaction. N. Evelyn Ramsdell, Ionia, Mich.

FOR SALE—White Holland tom turkeys, weight from 15-20 lbs. Price \$10.00. D. E. Dean, Holly, Mich., Route 3.

PURE-BRED Bourbon's toms, twelve; hens ten. F. J. Chapman, Northville, Mich.

PURE-BRED BOURBON TURKEYS, hens \$8, toms \$12. Mrs. H. O. Ruggles, Milford, Mich.

BOURBON RED TURKEYS, Artell strain. Chas. Beatty, Milford, Mich.

AGENTS WANTED

MAN TO WORK his local territory, booking orders for shrubs, roses, perennials, ornamental and fruit trees, etc. Also hire agents. Full or spare time. Five year replacement. No investment or experience necessary. Outfit free. Real opportunity. Knight & Bostwick, Newark, New York State.

NEW HOUSEHOLD DEVICE washes—dries windows, sweeps, cleans walls, scrubs, mops. Costs less than brooms. Over half profit. Harpers, 173 Third St. Fairfield, Iowa.

WE PAY \$48 A WEEK, furnish auto and expenses to introduce our Soap and Washing Powder. Buss-Beach Co., Dept. A-163, Chippewa Falls, Wis.

WE PAY \$160 MONTHLY salary and expenses to introduce guaranteed poultry and stock powders. Bigler Co., J-123, Springfield, Ill.

HELP WANTED

WANTED—WORKING MAN (married man) for general farm work. Must understand tractors and all farm machinery and be able to handle men. Address Box 130, Michigan Farmer, Detroit.

MILK ROUTE SALESMAN WANTED—\$200.00 cash bond required. Steady employment, good wages and chance for advancement. Write for further particulars. Freeman Dairy Company, Flint, Mich.

DRIVER SALESMAN—23 to 35 years age. Permanent employment; good future. Write us if interested. Belle Isle Creamery, 3600 Forest E., Detroit, Mich.

SITUATIONS WANTED

BOY 18 wants job on farm. Experienced. Box 131, Michigan Farmer, Detroit.

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I received my fence all O. K. and am more than pleased with it. You saved me 50c a rod over local prices. — Jose A. Gonzales, Rowe, N. Me.

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