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VOLUME CLVIX.

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

A Practical Journal for the Rural Family

QUALITY
RELIABILITY
SERVICE

NUMBER TWENTY-THREE

Pruning Apples for Profit

Make Your Pruning Shears Put Profit Into the Tree Instead of Cutting It Out

By Roy E. Marshall

Associate Professor in Horticulture, M. A. C.

MANY Michigan fruit growers have decided, yet different, views in regard to the kind of pruning that both young and bearing apple trees should receive, but a greater number of growers have no clear-cut ideas. The latter group talk with one neighbor and are convinced that he has sound ideas until another equally successful fruit man presents his apparently sound reasons for adhering to a very different pruning practice. Even the professional horticulturists, and those who pose as such, present very different arguments. One of the leading farm journals carried an article written by a rather prolific writer several months back, which advocated a very radical treatment of young trees and unfortunately many Michigan orchardists had sufficient confidence in the man or the journal to adopt the "butchery-like" practices. But isn't it logical that the greater number of fruit growers are "at sea" when such divergent views are presented?

The Michigan Experiment Station is one of the several that is conducting experiments that should throw some light upon several of the more important pruning problems. These experiments have not been in progress long enough to provide us with much information but in the meantime careful observations are being made of the several practices in operation in commercial orchards and they are largely the basis for such recommendations as are made.

A considerable number of fruit growers, knowing that sunlight should be admitted to the center of the tree to keep up production to get highly-colored fruit in the interior parts, believe it necessary to develop a tree with an open center from the point of heading. Immediately after the tree is planted they remove the central or main branch and save some three to five branches radiating outward and upward from the point of heading. These three to five branches later be-

come the main scaffold branches of the tree. This system of development does permit the entrance of sunlight and it results in a low-spreading tree, making possible economical pruning, spraying, thinning, picking, etc., but the trees are structurally weak and it is not uncommon to see main branches of bearing trees which have been trained in such a manner split out at the crotch. Furthermore, such trees are frequently more limited in bearing capacity than those trained somewhat differently.

The serious faults of the above sys-

The question that the average fruit grower would like a definite, sound reply to today is "how heavily should trees be pruned between the time of planting and time of bearing?" or, worded differently, "should trees be left without any pruning except that given at planting time, until they have established the bearing habit; should they receive severe pruning throughout this non-bearing period, or should they receive some intermediate treatment?"

Experiments, as well as observations have proven that unpruned trees come

ate between the two extremes. Unfortunately, experiment stations did not start work early enough to be able to advise us at this time as to the best treatment to follow. Experiments were started at the Graham Horticultural Experiment Station near Grand Rapids in the spring of 1919 which will throw considerable light on this whole question in the course of another five or ten years. We will soon know how much earlier non-pruned trees come into bearing than heavily or moderately pruned ones, but it will be several years before definite information is available as to the most economical kind of pruning in so far as results over a period of fifteen to twenty years are concerned.

My own opinion is that we cannot afford to take chances on letting permanent trees shape themselves or in no pruning of young trees. These trees are expected to remain profitable until they are sixty, eighty or more years of age, and we should not allow any development of branches to take place that may result in the breaking down of the tree or its parts previous to the attainment of such an age. On the other hand, I believe the practice of severe annual pruning of trees until they are eight or ten years of age is less called for than that of no pruning because fruit production is delayed longer than the average orchardist can afford to delay it and there is apparently nothing to be gained in continuing the heavy, or even moderate, pruning beyond the fourth or fifth years.

It would appear that moderate pruning, of young apple trees is the safest practice to follow. It should result in the formation of a rather strong framework with scaffold branches well placed and should bring the trees into fruit production not more than one or two years later than no pruning. Surely the sacrifice of one or two years is not as important to the average fruit grower as is the building of a reasonably strong tree. Such a pruning should consist of rather heavy cutting back and thinning out at planting time; a

(Continued on page 590).



Early Variety Needs Different Pruning Treatment.

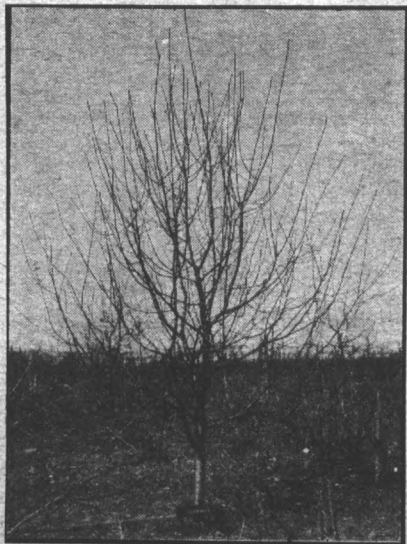
tem of training young trees may be avoided and at the same time the advantages may be retained if the so-called leader system of development is adopted. This system consists essentially of a central leader, extending upward to a height some six to seven feet from the ground and with six to nine main or scaffold branches distributed around and along the central branch from the point of heading to the top of the central leader. The leader is discontinued after the desired number of scaffold branches are obtained and the trees developed from that point essentially the same as an open center one. Since it is not possible to get the desired number nor proper distribution of scaffold branches in one season, it is customary to select two or three of the scaffolds each year until the desired number is obtained. Two to four seasons are thus required to build the framework of such trees.

The scaffold branches of modified leader trees form strong crotches with the central leader or axis which seldom split. Pockets are seldom formed in crotches to collect leaves and dirt and eventually result in heart rot of the trunk as sometimes happens with open center trees. Furthermore, it is better to have the upper part of the tree open to admit light to lower interior parts than it is to have the whole central portion of the tree open at the expense of fruiting capacity.

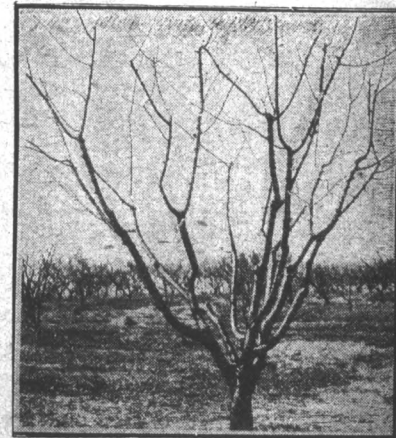
into bearing earlier than pruned trees and that heavily pruned trees are older before they start bearing than lightly pruned trees. Furthermore, unpruned trees attain larger size in a given number of years than pruned trees and the more severely pruned trees attain less in size in, say, seven or eight years than lightly pruned ones. These facts lead some fruit growers to conclude that since unpruned trees come into bearing earlier, that such a practice is the most profitable one to follow. These growers contend that rather severe pruning may be given after the trees have the bearing habit well established without interfering with production and that this treatment will in the course of some three or four years place the trees, that were not pruned during the first few years, in good condition.

Another group of fruit growers are not as particular about getting early fruit production as they are in building the strongest and sometimes the most ornamental kind of tree possible. They contend that the first four to six years should be devoted to the development of a strong framework that will support larger loads of fruit when the tree becomes old. In other words, they believe that heavier fruit production at an age of thirty years is more important than getting fruit on young trees two or three years earlier.

Then there are the orchardists who practice a kind of pruning intermedi-



This Six-year-old Tree Received Moderate Pruning for Five Years. Present Pruning is Light. Early Production Should Result.



A Severely Pruned Ten-year-old Tree that Has Not Produced Fruit, and which Will Not as Long as Fruit Wood is Kept Cut Off.



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DETROIT, DECEMBER 2, 1922

CURRENT COMMENT

THE MICHIGAN FARMER SAYS:

Our great object should be to take the "cull" out of agriculture.

No pure form of social or domestic life is developed except among people engaged in productive labor.

Much pretention goes under the name of "learning." True intelligence needs no pretention to assist it.

If potatoes were dollars, what a fine lot of millionaires we would have.

Rural life develops family unity, while city life tends to destroy it.

The Ship Subsidy Bill

CONGRESS is now in special session at the call of President Harding for the consideration of the administration ship subsidy bill. The President and his aids are urging the early passage of this bill with all the power at their command. It is being urged as a party measure as well as a measure for the immediate financial relief and future safety of the nation. But present indications are that there will be a determined fight against the measure by strong majority party members of both houses from the agricultural sections of the country, who oppose the subsidy in principle.

At this writing the bill is being considered in the lower house of congress, where it is expected to come to a vote before this issue reaches its readers. Current press reports indicate that the bill will be opposed by at least four members of the Michigan delegation who have the agricultural viewpoint. Should it pass the house, a determined fight will be made against it in the senate under the leadership of Senator Capper, Chairman of the Farm Bloc. Our readers will be kept informed as to the progress of the fight.

The proposition involved is more or less familiar to every well-informed citizen. During the war the government accumulated a vast amount of shipping. Ship building was rushed with feverish heat. The type of construction was varied in accordance with diverse and changing ideas, including both wooden and steel vessels of all sizes and many types. The result is admittedly unsatisfactory from the standpoint of a well-balanced and useful merchant marine for commercial use. The cost to the government was necessarily high, totaling three

billion dollars. At the close of the war the government found itself in possession of this vast fleet of ill-assorted ships, for which there was no market and no present use. The shipping board was confronted with a difficult problem, which it tried to meet by government operation of this merchant fleet. The result was an operating loss of some sixteen million dollars a month. Finally the wooden ships were scrapped as an economy measure and only the most fit of the fifteen hundred steel ships were kept in commission, with a reduction in the operating loss of about four million dollars per month. Now as a means of getting from under this operating loss the administration proposes a ship subsidy to aid privately owned and operated ships. Under the terms of the bill the ships would be sold at a world market price to private investors, who would be given a government bounty for their operation. In addition shippers would under the provisions of the bill be given a rebate in federal taxes of a fixed percentage of the freight paid on the cargoes of these ships.

The strong urge being used to secure the passage of this bill is the future safety of the nation. But other arguments, some of them far fetched, are being used. Here is an example: In a recent address at Chicago, Chairman Lasker, of the shipping board, compared the subsidy to the tariff, asserting that it was parallel in principle. But his illustration of the point was most unfortunately chosen, in that he compared it with the tariff on wheat and corn as a protection to the farmers. Unfortunately the tariff does not work that way, since the price obtainable for the surplus of these products in the world market fixes the price on the whole crop, less the cost of excessive transportation rates. The ship subsidy would not reduce these rates. There is little certainty that it would accomplish the results claimed for it. It is another experiment in the realm of special privilege, which we do not believe the farmers and common people of this country look upon with favor.

In his subsidy message the President mentioned the legislation contemplated for the relief of the farmers of the country. We believe that practical relief could be given to the farmers of the country by lowering the freight rate to seaboard of foodstuffs for export. This would tend to restore the parity between the price of farm products and general commodities and the purchasing power of the farmer's dollar. And it would not be in the nature of a special privilege. It would do for him only in a measure what the tariff now does for the manufacturer. This idea would no doubt be considered impractical by the advocates of the ship subsidy bill. But there seems small reason to believe that the ship subsidy is either more practical or more fair. Certainly an insurance of adequate production of staple foodstuffs, even in adverse years is of greater importance to the safety of the nation than is the maintenance of subsidized facilities for their transportation.

Getting the Most Out of It

THE bold program laid down last summer by President Friday, of the Michigan Agricultural College, has attracted nation-wide attention. Last week President Friday addressed members of the staff of the United States Department of Agriculture at Washington in response to an invitation by Secretary Wallace.

He outlined details of his program to develop the agricultural resources of Michigan through emphasizing the value of such crops as alfalfa and the necessity of ridding farms of inferior live stock as well as developing local

markets, and correlating agricultural production to market demand.

These matters attracted the attention of the secretary of agriculture during his recent tour through Michigan when he had opportunity to hear at first hand the program laid down by President Friday. Such a program however, could not be carried out under all conditions of rural development.

The high degree of cooperation between the various agricultural agencies in Michigan make possible the realization, in part, at least, of this venture by President Friday. No doubt, however, the results will be more or less spotted. Those communities which take active part in this program through prophetic leadership and with effective cooperative machinery will profit far more than will the unorganized or less aggressive sections. In other words, the degree to which our farmers go after the fruits of this scheme will measure the advantages that they, individually and collectively, will receive.

Taxing the Wood

WE all know too well that timber-producing trees are becoming scarce, while the demand for the products of the forest is gradually increasing. There is a high degree of uncertainty about the future of the lumbering business and no adequate program has been formulated in this state or country to care for coming demands.

This week a conference of those whose interest, or duty, lead them to give consideration to the forest situation will be held at Lansing. Ways and means of protecting coming generations from a forest famine are to be examined from every angle.

It is presumed that a little legislation will be needed to inaugurate a state-wide scheme for forestry development. In this connection, two questions seem uppermost. One is the proper protection of forest lands from fire and the other is the relief of timber-producing acreage from the annual tax burden. If this long-term crop can be required to pay tax only at harvest time a great stimulus will be given to the production of timber on a large scale as well as in the farm wood-lot.

On Child Labor

DURING the past few years much attention has been given to child labor, and rightly so, for the conditions under which many children have been working have been entirely detrimental to their well-being.

These conditions existed almost entirely under city conditions and outside of the influence of the family. They have virtually made children slaves and have destroyed their moral and physical fiber. Legislation has remedied these evils, but it has not remedied the evils of child idleness from which many city children suffer. To many students, this latter is of greater importance than the former was. The idle mind is very susceptible to evil influences.

Labor under wholesome conditions is necessary to the well-rounded development of the child. In this respect the young people on the farm are in a very fortunate position. Their constructive labor is done in cooperation with their parents who have their welfare at heart more than anyone else. The work they do is healthful, wholesome and instructive. Even their idle moments are most usually engaged in playing with pets or in some other wholesome diversion.

A good foundation is very essential for successful living and there is no better place to build a good foundation

than amidst rural surroundings. Because of this rural sections will always be the reservoirs from which America will draw its good moral fiber and sterling manhood and womanhood.

Farmers' Clubs' Program

FOR two days during the first week of December, delegates from the farmers' clubs of Michigan, and friends, will listen to a very instructive and highly entertaining program at their annual meeting held in the senate chamber of the Capitol Building at Lansing. The copy of the program reached us too late for publication.

A few of the many splendid numbers in this varied program may be suggested here. For instance, Professor Henderson, of the University of Michigan, will speak on "The Signs of a New World." Professor Tenant, of M. A. C., handles marketing problems. A number of talks on juvenile work will be presented, among these, "Boy and Girl Life in the Open Country," by Mr. Turner, our state club leader. Dr. Diehl, of Albion College, is well fitted to speak on "Spiritual Values in Country Life." The eighteenth amendment could have no stronger defender than Congressman-elect Grant Hudson, while rural education will be presented by Superintendent of Rural Education, Professor Otwell, of Lansing. The remaining good things in this program will be thoroughly enjoyed and appreciated by all who attend the annual meeting on December 5-6.

There are thousands of farm folks who cannot afford to miss this treat.

Ambishun

AMBISHUN is what makes the difference between man and other animals. It's what makes man better than a monkey, but because he's got it, man often does better than the monkey does in making a monkey of himself.

For inst., Jasper Watkins smokes and wears a celluloid collar at the same time. Now, no man what got sense would do that, 'cause fire insurance companies won't insure a man's life when he does those two things together. Now, a monkey wouldn't think a doin' either one, together or separate.

If it wasn't for ambishun, Sophie and me and the kids would be roostin' in trees, with pickin' fleas



as our principle recreashun. But sposin' I had no ambishun at all, which is purty near what I and lots a other folks's got, me and my fambly couldn't live in trees, 'cause our what you call fourfathers was ambishus. We would be arrested for followin' our natural inclinashuns, 'cause we are livin' on what their ambishuns did for us.

Ambishun is what made civilizashun, and civilizashun is what made work. The more civilizashun the more work, and the more work, the more civilizashun. That's why I ain't so civilized as some folks.

It's ambishun what made Joe Hunter run for constable. But he musta' been short-winded, 'cause he run quite a little behind the other fellow. Anyhow, Joe still thinks he'd make a mighty good governor. And bein' that Joe is ambishus, maybe the people will want him to prove it some day.

There's lots of differunt kinds of ambishun. For inst., Sophie thinks my secret ambishun to be a writer is what you call real foolish. She says even a monkey would have better judgment. If that's so, I guess I'll just keep on makin' a monkey of myself.

HY SYCKLE.

Poultry Hygiene and Sanitation

Suggestions on How to Prevent Disease Which Costs Poultrymen Untold Loss

By H. J. Stafseth,

Dept. of Bacteriology, M. A. C.

RECENT years have seen some valuable developments in poultry science. The art of culling has reached a stage of perfection which is remarkable to say the least. Improvements have also been made along the lines of feeding and housing, all of which has contributed toward decreased cost of production and increased returns until poultry husbandry has been placed among our most promising agricultural pursuits. Since this industry has attained such an economic importance the necessity of protecting it from all undermining forces should be evident. Looking over the field of poultry husbandry with this point in view it appears that one of the most essential factors governing its stability, namely prevention of disease, is being overlooked or even ignored. There can be no question as to the comparative production value of a healthy and a diseased flock. In the report of the secretary of agriculture for 1915 we find that financial losses due to diseases in poultry amounted to \$8,750,000. Thus disease prevention is of vital importance to the poultry breeder.

His interest in this matter is also shared by others. The swine breeders are interested in the eradication of avian tuberculosis because of the fact that a considerable number of hogs which go through the packing plants are condemned as unfit for human consumption, due to this disease. As a general rule the public is desirous of eliminating disease from food-producing animals. Poultry products are not yet subject to the strict ordinances that govern the sale of milk, pork, mutton or beef, but it is very possible that they will be included sooner or later. Chickens marketed for food are frequently found to be diseased and there may be some doubt as to the advisability of consuming products from diseased birds, even if there are no immediate outward manifestations of damage to health.

In earlier days animal disease was not considered to be of any serious consequence. Almost all efforts to alleviate suffering were limited to the

human species. Today we see to it that all kinds of domesticated animals receive medical attention. The methods of dealing with diseases have changed. While in former years the chief aim of the medical man was to cure the sick, the tendency is now to prevent and eradicate disease. Due to their high value some domesticated animals will perhaps always be treated individually. In poultry this will be the case only exceptionally. No great amount of success has been derived

Every modern poultry breeder is and should be anxious to obtain and maintain stock of high quality. For this reason he is often led to buy adult birds day-old chicks or eggs for hatching from flocks that have gained a wide reputation either as exceptionally good layers or excellent show birds without seeking the slightest information as to whether or not the flocks concerned are free from communicable diseases. This is a serious mistake because birds introduced from

visibly ill and may prove to be immune to the disease to which they have been exposed. Such individuals are often the cause of considerable trouble, due to the fact that they appear perfectly harmless and thus make it exceedingly difficult to discover and eliminate the source of infection. For these reasons it should be evident that mere inspection or physical examination will not reveal all that might be of importance to know regarding health. Therefore, besides showing signs of productivity, vigor and vitality the flock from which new stock is to be introduced should have a clear record as regards freedom from disease.

In this connection it may also be well to compare the adult bird, the day-old chick and egg as means through which infection might be introduced.

Adult birds may, without showing any signs of illness, carry the causative organism of the following communicable diseases: Bacillary white diarrhea, chickenpox, tuberculosis, fowl cholera, fowl typhoid, blackhead, coccidiosis, apoplectiform septicemia, fowl plague, and perhaps still others, besides various internal and external parasites.

The day-old chick is perhaps the most common means of spreading bacillary white diarrhea. As to whether or not other diseases are spread through the day-old chick but little is known. It appears, however, from information available at this time that the day-old chick may be considered a negligible factor in the dissemination of other diseases than bacillary white diarrhea.

Eggs bought for hatching may harbor the cause of bacillary white diarrhea. Shell contamination does not seem to be of any great importance as far as most diseases are concerned. It has been suggested that blackhead may be spread in this way.

As bacillary white diarrhea infection is easily discovered in breeding stock by means of the agglutination test it seems rather unnecessary that great losses should occur year after year from this disease. (To be continued).



The Flock of E. E. Shaw, Whose Pen Leads in Michigan Laying Contest.

from individual treatment in poultry diseases and the cost of application will often exceed the value of the bird. Thus the poultryman is not so much concerned with ailments tending to affect the individual as he is with such diseases as may affect the flock as a whole. It is therefore nutritional and communicable diseases that should receive the main portion of our attention. Heredity and environmental conditions may contribute to health or disease. Thus we find that in dealing with poultry hygiene we must consider, first: Selection of healthy stock; second, housing; third, feeding, and fourth the prevention and control of communicable diseases.

diseased flocks are quite certain to bring the infection with them, even if they are apparently well at the time of the purchase. In this way a formerly healthy flock may become diseased and no poultryman can do his best unless his flock is in good health.

Through the science of bacteriology we have learned that certain communicable diseases are so insidious in their nature that symptoms are not revealed for relatively long periods of time. It has also been found that individuals which have recovered from an infectious disease may continue to carry the causative organism. Infectious organisms may, furthermore, be carried by individuals which never have been

Seeds with Vim, Vigor and Vitality

Faith in Such Seeds is the Basic Consideration in the New Farm Enterprise Being Formed in Antrim County

FIVE miles south of Mancelona, on "M-13" lies a section of land which was cleared of stumps some eighteen years ago by one Solomon Brown, a nephew of Old John Brown of Civil War fame.

Solomon Brown was a potato dealer as well as a farmer, so he erected a potato warehouse 40x100 feet, with a side track on the G. R. & I, which passes through this land. Three years ago the warehouse burned, but the side track remains and is being used by the present owners.

Last spring this farm was purchased by H. C. Moore, L. L. Drake and W. C. Cribbs, securing possession on May 26. These men, who are all connected with extension work of the Michigan Agricultural College, are making a seed production institution out of the place. Their idea is to produce nothing but certified Rural Russet potato seed and Hardigan alfalfa seed.

On account of the late start they were only able to get forty acres of certified seed growing this year. When under full operation they intend to

grow 100 acres of potato seed and 500 acres of alfalfa, which will make a six-year rotation of one year potatoes and five years alfalfa.

The plan is to build up the soil by the growing of alfalfa. They will take off only alfalfa seed and potatoes.

When potatoes are planted commercial fertilizers will be used.

This season June grass and some sweet clover were turned under for the benefit of the potatoes and then 400 pounds of 3-10-4 fertilizer per acre were used.



THESE grade Jerseys from the herd of L. C. Pedersen, of Allegan county, illustrate the excellent type that can be developed through the use of good pure-bred sires. The average production of his herd of ten cows for a period of ten months was 5,758.9 pounds of milk and 299.1 pounds of butter. He is a member of a cow-testing association.

In spite of the late start and the finishing of planting on July 1, the yield was 150 bushels per acre; unfertilized strips producing about four-fifths this yield. On one plot, where 900 pounds of fertilizer per acre were used, the yield was greatly increased. A larger application will be used in 1923, when 110 acres will be planted in one field.

This farm is very level, there being only a variation of fifteen feet in altitude, with the exception of twenty acres which will be reforested in 1923.

The owners of the Antrim Seed Farm have been moving spirits in the development of the Russet Rural (Petoskey) potato. The standing of the Petoskey as a seed potato has been quite largely due to their efforts.

H. C. Moore, a graduate of Cornell University, has been with the Michigan Agricultural College for five years as extension potato specialist, and secretary of the Michigan Potato Producers' Association for the last four years. The development of the certified seed potato for Michigan was partly the results of his efforts to put Michigan in the foreground as a seed potato

state. He recommended that Michigan growers enter the certification work. He has always been strong for the closest inspection rules; knowing very well that Michigan could not retain first place in the seed game if the highest quality was not the guiding motto. Mr. Moore is known wherever the Michigan Rural Russet seed has been planted.

L. L. Drake, county agricultural agent for Antrim and Kalkaska counties, is a graduate of the Michigan Agricultural College. He is supervisor of county agents in the potato counties of the state, having been chosen by them as their chairman at a county agents' conference in 1921. His selection was due to the record he had made with the potato seed of his county. For two years Mr. Drake was county agent of Antrim county, following the resignation of W. C. Cribbs, who resigned to enter the department of markets at the Michigan Agricultural College.

Before taking up county agent work Mr. Drake was superintendent of the Traverse City State Hospital Farm for two years. His outstanding work in Antrim county has been the development of markets for certified potato seed grown under his direction. He sold a car of Rural Russets to the extension department of Pennsylvania. These were potatoes grown by Antrim county growers in 1919 and were not certified, but were field inspected, for at that time Michigan had not yet taken on the work of certification of potatoes.

This car of Russets was planted in 118 test plots with seed from four of the leading potato states that were certifying their seed and the Antrim seed from Michigan won first place in 116 out of the 118 tests.

The following year Mr. Drake assisted the Antrim county farmers in selling eighteen cars of certified seed in Pennsylvania and last year they sold forty-two cars in that state at eighty cents per bushel above the price paid for table stock potatoes. There were over fifty cars of certified seed produced in Antrim county in 1921 and the balance not sold in Pennsylvania was used to plant the 1922 crop within the county.

The potatoes sold in Pennsylvania and planted there last spring have held their place in out-producing seed from other states.

W. C. Cribbs was engaged in fruit raising in Berrien county until January 1, 1918, at which time he became county agricultural agent for Antrim county. Potato work was the large problem for that county. After some investigation he recommended the standardization of the Petoskey Rural Russet for the lower peninsula of Michigan, he being the first person on record to suggest a single variety for this section. In less than two years around eighty-five per cent of all potatoes grown in the commercial sections of the state were of the Russet variety. Hale Tennant and Mr. Cribbs, with the help of the other county agents in their counties, organized the Michigan Potato Growers' Exchange.

Before the first of July, 1918, Mr. Cribbs organized a potato marketing association in every town in Antrim county and then was asked by the state to help in other counties. He worked with eleven other agents in their respective counties during the balance of the summer.

That fall the potato inspection work, which eventually led to the certification of potato seed, was started. Mr. Cribbs with Mr. Waid, of the Michigan Agricultural College, inspected many acres within the county and found fields free from disease which produced 19,000 bushels. He advised farmers having diseased fields to sell all their potatoes and buy the clear seed.

Mr. Waid had gone over several other counties and had only found three

fields of good potatoes until reaching Antrim county. The county agents in other counties advised their growers to sell their diseased potatoes and buy from Antrim growers. This work on their part has resulted in other counties coming into prominence also as seed-producing counties.

Moore, Drake and Cribbs were all farm boys, Moore being born and raised on a truck farm in Maryland; Drake was born and raised in Benzie county, Michigan, and Cribbs in Berrien county, Michigan.

Late Agricultural News

WHAT CONGRESS SHOULD DO.

SENATOR CAPPER says that if the present majority party is to continue in power it must not be slow to finish the constructive program already started in the farming industry's behalf.

It must put through the complete rural credit plan, to provide farmers and stockmen with an adequate financial system.

It must increase the loan limit of the federal farm loan banks from \$10,000 to \$25,000.

It must reduce freight charges.

It must repeal Section 15-a and other objectionable provisions of the Cummins-Esch transportation act.

It must carry out the policy for a better system of marketing.

It must put the development of the Muscle Shoals project in the hands of Henry Ford.

It must pass the truth-in-fabric bill.

It must pass the Voigt filled-milk bill.

It must pass a constitutional amendment prohibiting tax-exempt securities.

It must bring about still further reduction in tax burdens and still further economies in the administration of government.

It must make undisturbed surpluses and stock-dividends pay their share toward the maintenance of government.

It must do whatever this nation can do to promote European recovery and the restoration of a foreign market for the surplus products of our farms and factories.

MICHIGAN BOYS WIN IN IOWA.

THREE horticultural students representing M. A. C. took second place in an apple-judging contest at Council Bluffs, Iowa, last week. Members of the team were Cyrus A. Boyer, of Bangor, who ranked third among individuals; Clair S. Waltman, of Ionia, fifth, and Don L. Lacy, of Lansing, sixth. The contest was won by the University of Missouri, which was only a few points in the lead of the M. A. C. team. Other institutions entered were Iowa State, the University of Wisconsin, and the University of Nebraska.

Funds to defray the expenses of the Michigan Aggie contestants were raised by the horticultural club, members of which marketed part of the apple crop from the college orchards, bought and sold fifty barrels of apples produced in Berrien county, and sold cider at football games and other events this fall.

By an odd coincidence, the team which defeated the Michigan men was from the University of Missouri, where Prof. V. R. Gardner, now of M. A. C., was formerly at the head of the horticultural department.

SHORT COURSE IN RADIO.

HERE'S a chance for the young man on the farm to learn how to assemble home-made radio sets. Arrangements are being made to teach all short-course students at M. A. C.

Dean Cribbs, the son of W. C. Cribbs, is the manager of the Antrim Seed Farm. He is a graduate of the East Lansing High School and spends his winters taking special potato and farm mechanics work at the Michigan Agricultural College. He has always spent his vacations while in school working for some good farmer, and as a result has received a broad training for this project.

We shall watch with increasing interest the progress of the work on this farm.

this winter the fundamentals of the construction of receiving apparatus, it is announced by Ashley M. Berridge, assistant director. Members of the farm mechanics department will carry on the instruction, and materials will be furnished by the college. In this way the use of radio will become widespread among the farm homes of Michigan, it is believed.

TRAFFIC INCREASES.

ACCORDING to reports by the Pere Marquette Railway, shipments forwarded from the Thumb district of Michigan show an increase of fifteen per cent over last year. In the Grand Rapids district, the shipments have increased fifty-four per cent and in the Traverse City and Petoskey region an increase of twelve per cent is reported. While out-going freight has increased, incoming freight has decreased as follows: Three per cent in the Thumb district; six per cent in the Grand Rapids district, and four per cent in the Petoskey district.

NEED BETTER MARKETING.

ECONOMIC problems were in the forefront at the thirty-sixth annual convention of the Association of Land Grant Colleges at the Willard Hotel,

Washington, D. C., November 21-22.

Secretary of Agriculture Wallace emphasized the need of giving more attention to the marketing of foods and other farm commodities. In the reorganization plans the department of agriculture has made a scientific and recording department which reports the situation in every section. Dean A. A. Potter, of Purdue University, in his address as president, said there is a tendency to stress certain subjects too hard. He urged a more scientific study of all problems in our attempts to solve the agricultural situation. Dr. Stevenson, the American representative at the International Institute in Rome, pointed out that all the European nations are taking steps to make their countries self-sustaining in agriculture, which if successful would very largely reduce our export trade in farm products.

HOWARD ON THE FARM SITUATION.

IN an address before the Land Grant College Convention, President James R. Howard, of the American Farm Bureau Federation, said that when he left his Chicago office, he was told that the probability was that the price level reports for September would show the farm prices to be one point above 1921, while the other commodities on the list would show an advance of twenty-five points above. "If this advance tip materializes," he said, "it will indicate in a graphic way, that the distress of the farmer is greater today than a year ago, because the farmer must buy largely of other commodities."

If any criticism were due the land grant colleges, Mr. Howard thought it would be that the policies of these institutions have been directed too much along the line of increased production and more efficient production, and too little in the forecasting of future needs from present conditions.

The right, honest, and profitable way to water milk is through the cow. Bowls in the barn, with running water, pay in winter.



Wednesday, November 22.

THE wets, under the name of the National Association Opposed to the Prohibition Amendment, held a convention in St. Louis for the purpose of organizing of every state to fight for the modification of the Volstead Act.—Annie McSwiney is on her fourth day of waiting and fasting outside the Dublin city gates, while her sister Mary is undergoing her sixteenth day of hunger strike.

Thursday, November 23.

HENRY FORD buys a new coal mine in West Virginia at a cost of one and a quarter million dollars.—Sixteen states will join in a conference at Milwaukee to consider the Lakes-to-Atlantic waterway.—The first quart of strawberries grown in Florida this season was auctioned off at \$8.50.

Friday, November 24.

EQUAL suffrage was killed for France when the senate defeated a bill granting votes to women.—It is reported that the R. M. Kellogg Co., of Three Rivers, has purchased a new ever-bearing strawberry plant from Mr. Rockhill, of Conrad, Ohio, for fifty thousand dollars.

Saturday, November 25.

SEVENTY miners are killed in a mine blast at Dolomite, Alabama.—Georges Clemenceau, the "Tiger" of France, pleads with the United States

not to desert France. He predicts another war with Germany.—The national committee for the prevention of blindness asked strict national and state restriction on the sale of wood alcohol, because of its use for liquor purposes and its detrimental effect on the system.

Sunday, November 26.

THE government has instituted civil suits against four war camp contractors to recover \$20,000,000 which was misused from the camp building funds during the war.—Mrs. Sarah Price put her foot down when they wanted to make a cake and put candles on it on her 110th birthday. She said she felt like a giddy young thing of eighty.

Monday, November 27.

DUBLIN is again under military rule, being controlled by troops of the Free State.—Senator LaFollette is organizing a progressive bloc and has already lined up nine senators and three representatives at the national capitol.

Tuesday, November 28.

FIFTEEN convicts escaped from Marquette, Mich., prison through a secret tunnel.—The Turks openly threaten to break the peace parley which is being held at Lausanne, Switzerland.

Profit Through Spray Rings

Charlevoix Potato Growers Find that They Can Cooperate in More Ways than One

By B. O. Hagerman

WITH three cooperative marketing associations ranking among the best in the state, as an example, the potato growers of Charlevoix county are finding that cooperation spells success.

This last spring through a series of meetings, propaganda was spread advertising the merits of home-made Bordeaux applied at a pressure of 175 to 220 pounds. The arguments presented in the case were such that many of the potato growers in the county were quite readily convinced. The next problem to be solved was that of purchasing one of these machines which would apply this home-made Bordeaux at the required pressure. As coopera-

tion, the spray check was very visible as far as one could see the field. Blight did not seem to be a serious menace this year in Charlevoix county and the results obtained are almost entirely due to the control of "Hopperburn."

An accompanying picture is of Mr. Bert Lumley, of Boyne City, who conducted one of the spraying demonstrations. Mr. Lumley was a partner in one of these spray rings, and being somewhat of an experimental temperament, was very willing to leave a strip of four rows through his field which only received the arsenical spray for bugs. The following results were obtained by digging the two inside rows



Mr. Lumley and County Agent Hagerman inspecting the Spuds.

tion is advocated by most every county agent as a panacea for farming ills, it immediately presented itself as perhaps a possible solution for this problem.

Following a little investigation from outside communities and states, it was learned that a few cooperative spray rings had been organized and operated successfully. Consequently, the Pennsylvania plan was adopted and several spray rings were organized.

The cooperative marketing associations in this county, like those in several other counties, purchased sprayers cooperatively from the potato growers' exchange. As the effect of cooperation was so vivid and so intensely pronounced in this transaction, the individual farmers themselves took it up, and as a result organized themselves into these spray rings and secured the services of an efficient sprayer at a minimum cost. There were two main types of sprayers involved in these transactions, namely, the engine type, and the traction type. The traction type seemed to enjoy the greater popularity, perhaps due to its necessitating a smaller financial investment.

The result of these spray rings have been many and varied. Neighbors have learned to work together and in many cases learned the advantage of a prearranged program of work. Three or four farmers used the same sprayer, making it necessary that they plan together and arrange their work so they would not all be wanting the sprayer at the same time. This result was extremely beneficial as it perhaps might be considered an A B C lesson in community cooperation.

Accompanying the spray ring work were several spraying demonstrations. Each demonstration consisted of leaving a check of about four rows through the center of the field which would not receive the Bordeaux. These four rows were sprayed only with arsenical poison for bugs. Aside from this, all cultural methods were the same during the entire season. It is very interesting to note that in every demon-

stration, the spray check was very visible as far as one could see the field. Blight did not seem to be a serious menace this year in Charlevoix county and the results obtained are almost entirely due to the control of "Hopperburn."

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GERMANY USES AMERICAN GRAFTING STOCK.

IN the past it has been the custom for American nurserymen to use French, Belgian and other European-grown stocks to grow their fruit trees and vines on. But it seems now that the tide has turned and Germany has started the use of American grape stocks for their grapes.

On native stocks the German grapes have considerable trouble with phylloxera, a tiny louse which feeds on the roots of the grape vine. Horticultural experimenters in Germany have found that this louse does not like American grape roots and by grafting native varieties on these roots they believe the German grape industry will be saved millions of marks. Many of the old grape vineyards are being uprooted and replanted to the new American-rooted stocks. The fruit of the American grape is not popular in Germany as most of their varieties are used for wine-making purposes.

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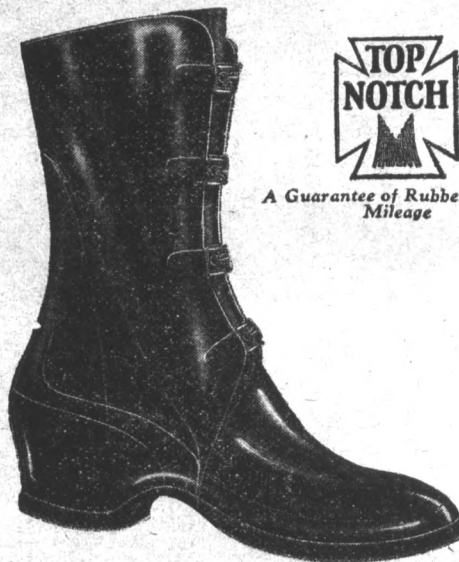
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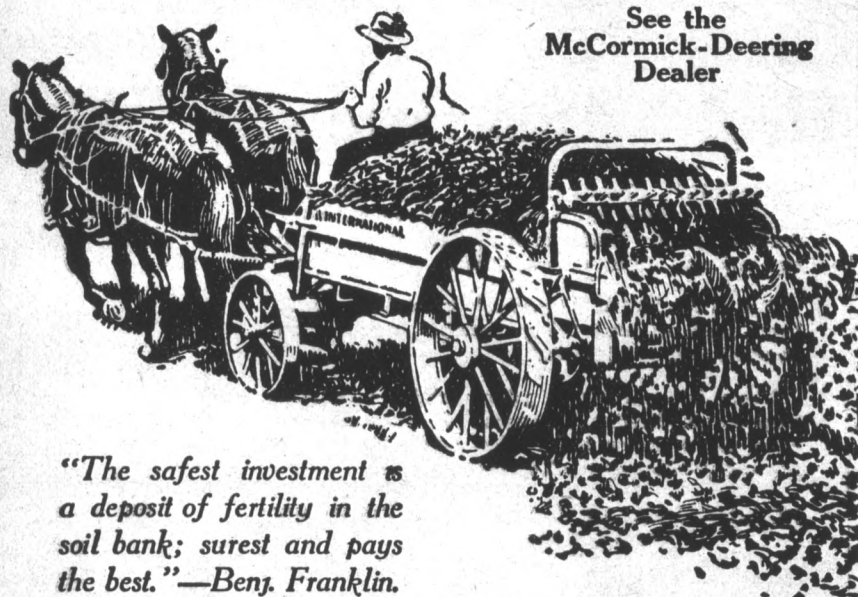
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CHICKEN LICE ON SHEEP.

I am going to keep my sheep in an old hen coop this winter. Will chicken lice stay on sheep, if they will, what should I use to remove them?—H. W.

I never heard of chicken lice bothering sheep, but they will infest many other animals. But there is no use in taking any risk. The old saying, "An ounce of prevention is worth a pound of cure," will apply here. If there are any lice in the hen house, clean them out before putting the sheep in.

Spray the interior thoroughly with any coal tar disinfectant (any good sheep dip). Mix about a teacup of disinfectant to a pail of water. With a hand air-pressure sprayer it is only a matter of an hour or two to spray the building and the expense will be very light. Then you will have no lice to get on the sheep.

APPLYING MANURE AND LIME TO ALFALFA.

We seeded a small field to alfalfa the latter part of August, and there are places where it does not grow well. Would it injure the alfalfa to mix ground limestone with manure and spread it on after the ground freezes. There was 550 pounds of hydrated lime applied to the acre about three or four weeks before seeding. Will soy-beans take the place of bran or middlings as a ration for pigs or cows? What is the method of inoculating them?—C. F.

It will not only not be injurious but very beneficial to top-dress new seeding alfalfa, or any other crop with manure and ground limestone. Don't use hydrated or caustic lime with manure as the lime will tend to set free some of the nitrogen in the manure. Ground limestone will be just as beneficial and will cause no loss.

Soy-beans will more than take the place of bran and middlings. Soy-bean meal or soy-bean oil cake will take the place of cottonseed meal or linseed meal in a ration. In other words, soy-bean meal is as rich in protein as either cottonseed meal or oil meal.

There are several ways of inoculating any legume seed. 1, send to the experiment station and get culture, apply as per directions. This is the simplest way. 2, get some soil from close to the roots of growing plants, containing nodules. Pulverize this very fine. Wet it with water containing a little dissolved glue and apply to the seed, stirring thoroughly so every seed is covered. 3, get quantities of soil from a field that has recently grown soy-beans and spread on your field. Cultivate it in.

A MILK SUBSTITUTE.

I have twenty-two fall pigs and I have no milk, only what I buy, and that is half water. How would tankage go and how much should I feed to each one hundred pounds of weight of pigs? Please tell me where I can buy it and its probable price.—A. H.

Your pig problem is exactly like mine, so I know of no better way to answer it than to tell you how I am doing. I have just weaned a bunch of pigs and am feeding a thick slop of ground oats and barley, equal parts, with about ten per cent of oil meal added. Besides this slop they get all the ear corn they will clean up twice daily. If I can find good skim-milk at a price not to exceed thirty cents per hundred pounds, I will not hesitate to use it to mix the ground feed with.

Tankage is theoretically the best substitute for skim-milk in pig feeding, but it is highly concentrated and needs to be fed with care. One part to ten or twelve of the corn, oats, bar-

ley mixture is enough. An overdose of tankage is worse than none at all. I like it best for good-sized shoats on a full feed of corn. In the past it has been rather inconvenient to secure as dealers dislike to carry it in stock on account of its objectionable odor, so it has usually been necessary to ship from one of the Chicago packing houses by local freight. I understand, however, that the Detroit Packing Company is now putting out a good grade of feeding tankage at around \$50 per ton.—Pope.

SALE OF HOMESTEAD.

A man disposed of a farm in Michigan without his wife's signature. Can the wife reclaim her share of the farm? If so, what portion is she entitled to? Does the law compel a man to notify his wife, or to have his lawyers notify her, if he applies for a divorce?—A. B.

If the land was their homestead the conveyance is merely void. If not, she still has her possible dower rights in it. Divorce without notice to the other spouse, either in person or by publication pursuant to the order of the court and as permitted by statute is void. If she can show that he knew of her whereabouts and that she was not notified, the decree of divorce will be set aside if obtained by mere publication.—Rood.

PILES IN PIGS.

Can you tell me the reason that my five-month-old pigs have piles? What can be done for them?—C. R.

Protruding rectum or piles in pigs is commonly caused by excess abdominal or excess fullness of feed, resulting in swelling of mucus membranes of rectum. Most cases can be handled successfully by washing parts affected with a two to five per cent solution of alum water when prolapse first appears. If parts are injured, surgical methods may be necessary, and had best be done by a veterinary surgeon. Keep animal on light laxative diet for a few days.—Pope.

TENANT'S RIGHT TO STRAW.

A rented a farm of a widow on shares. A received two-thirds of all crops grown on the farm. The woman died and A left the farm when his lease expired. The heirs and administrator said he could not take the straw from the farm. Can A take his share of the straw from the farm?—L. S. W.

Unless the surrender of the farm manifested an abandonment of the straw the tenant is entitled to take it.—Rood.

CARE OF PARENTS.

I am taking care of my mother and father. They have a piece of property and want me to have same when they are gone. So they deeded the property to me. Isn't there a printed form for such a lease? How should it read? Is it necessary to give back quit-claim deed?—Reader.

This is a very hard situation to deal with. Old persons become irritable and sometimes suspicious, and no provision can be made in such a deed to prevent the care-taker wishing the old people dead. The most satisfactory arrangement is to contract to pay so much per week for the keep, payable on death of person kept. A deed given by the old people containing a clause empowering them to revoke it whenever they please, and appoint it to some one else is satisfactory protection so far as they are concerned, but gives little security to the care-taker. This is not an instrument for the dub to draft.—Rood.

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The Fruit Growers' Program

THE fifty-second annual meeting of the Michigan State Horticultural Society will be held at the Press Hall, Grand Rapids, from December 5 to 7. This meeting occurs at the same time as the Michigan Apple and Potato Show and the meeting of the Michigan Potato Growers' Association. Therefore, fruit growers will have special inducements to attend, besides the very practical and interesting program which has been provided.

The program is as follows:

Tuesday, December 5.

Nine-thirty a. m., address of welcome, F. H. Locke, city manager of Grand Rapids; response, George A. Hawley, of Hart, president of Michigan State Horticultural Society; 10:30 a. m., "The Life Story of Apple Scab Fungus," Dr. G. H. Coons, botany department M. A. C.; 11:00 a. m., "Spray or Dust, Which?" W. S. Brock, secretary Illinois State Horticultural Society, extension pomologist, University of Illinois, Urbana, Ill.; 11:30 a. m., "Cherry Leaf Shot Control," W. Dutton, research associate horticultural department M. A. C.; 1:30 p. m., "Present Day Tendencies in Fruit Growing," C. I. Lewis, Chicago; 2:15 p. m., "Making and Losing Money with the Pruning Saw," V. R. Gardner, professor of horticulture, horticultural department M. A. C.; 3:00 p. m., "Control of Insects and Diseases in Different Parts of the Tree," H. A. Cardinell, extension specialist in horticulture, University of Missouri, Columbia, Missouri.

Wednesday, December 6.

Eight a. m., judging contest in Klingman Building, M. A. C., students; 9:00 a. m., "The Grape Berry Moth in 1922," R. H. Pettit, entomology department M. A. C.; 9:30 a. m., "The Grape

Berry Moth Control," G. A. Runner, United States Bureau of Entomology; 10:00 a. m., speaking contest, M. A. C. students; 11:00 a. m., business meeting, election of officers; 1:30 p. m., "Orchard Cover Crops and General Cultural Practices," Laurence Greene, professor of horticulture, Purdue University, Lafayette, Ind.; 2:15 p. m., "Cooperative Marketing of Perishables," N. R. Peet, manager Western New York Fruit Growers' Cooperative Packing Association, Rochester, N. Y.; 2:45 p. m., "Michigan Horticulture," Jason Woodman, member of State Board of Agriculture, Paw Paw, report of resolutions committee; 3:15 p. m., "The Cherry Industry and Some of Its Problems," W. G. McCool, manager Grand Traverse Packing Company, Traverse City; 4:00 p. m., "Is Pre-cooling a Success?" Henry Weltmann, secretary Lincoln Fruit Growers' Association, Stevensville.

Thursday, December 7.

Nine-thirty a. m., "Raspberry Disease Control," R. B. Wilcox, office of fruit disease investigations, Washington; 10:00 a. m., "Raspberry Improvement Work," R. E. Marshall, associate professor horticultural department, M. A. C.; 10:30 a. m., "Results of Fertilizer Demonstrations," County Agents J. L. Kraker, Benzie county; Chris. Bemis, Mason county; I. T. Pickford, Oceana county; C. P. Millihan, Ottawa county; K. K. Vining, Kent county; W. C. Eckard, Van Buren county; L. L. Olds, Kalamazoo county; F. L. Simanton, Berrien county; Wm. Murphy, Macomb county; 1:30 p. m., "Extension Work in Fruit Growing," T. A. Farrand, horticultural department, M. A. C., secretary Michigan State Horticultural Society; 2:30 p. m., "Marketing Through the Farm Bureau Produce Exchange," F. A. L. Bloom, manager Michigan Farm Bureau Produce Exchange, Detroit.

Spuds and Apples Galore

BOTH potatoes and apples in quantities from everywhere and in a profusion of varieties will be on dress parade at Grand Rapids, December 5-6-7-8.

The rousing occasion is that of the first Michigan Apple and Potato Show. Fruit men and potato growers will vie with each other in making this the event of the year in potato and apple circles.

Education, promotion, recuperation, cooperation and market extension are key ideas of this well-planned show and of the lively programs.

Buckle on your belt, grab a sandwich and put in your appearance at Grand Rapids on December 5-8. If the good things planned are well carried out you will burst the belt, neglect the sandwich and forget about your appearance in listening and making the rounds.

Potato Growers' Program

QUESTIONING, despairing, hoping, seeking, farmers from every potato-growing district of the state will gather at the meeting of the Michigan Potato Growers' Association at Grand Rapids, December 5-8, to clarify and crystallize old ideas as well as ideas more recently developed. This meeting will be held in conjunction with the Michigan Potato and Apple Show, the State Horticultural Society and the Michigan Maple Sugar Producers. Here is the program arranged for the potato growers:

Wednesday, December 6, 10:00 A. M., Ball Room, Pantlind Hotel.

J. W. Weston, Chairman.

Address of welcome by Lee Bierce, secretary Association of Commerce. Responded to by Dean R. S. Shaw, Dean of Agriculture and Director of Experiment Station, M. A. C.

Potato Marketing Requirements by F. A. L. Bloom, Detroit Produce Exchange.

The Question of State Supervision of Market Grades, by W. P. Hartman, Director Bureau of Foods and Standards, State Department of Agriculture.

2:00 P. M.—R. C. Bennett, Chairman. Practical Directions in Operating Equipment Involved in Potato Grading, by C. C. Wells, Manager Michigan Potato Growers' Exchange.

Potato Crop Statistics and How Obtained, by V. C. Church, Agricultural Statistician United States Department of Agriculture and State Department.

Market Reports and their Application, by R. H. Shoemaker, Bureau of Markets, local representative, Grand Rapids, Mich.

December 7, 9:30 A. M.—O. S. Wood, Chairman.

Plans of the Michigan Potato Certification Service, Tom Buell, President Michigan Potato Growers' Association.

Giant Hill and Rugose Leaf. Their Significance and Menace to the Potato Industry in Pennsylvania and Michigan, by Dr. E. L. Nixon, State College, Pennsylvania.

Requirements of the Ohio Seed Trade, by C. W. Waid, O. F. B. F., Columbus, Ohio.

Requirements of the Indiana Seed Trade, by F. C. Gaylord, Purdue University, Lafayette, Ind.

2:00 P. M.—H. B. Losey, Chairman. Potato Growing from a Nation-wide Standpoint, by Dr. Wm. Stuart, United States Department of Agriculture, Washington, D. C.

Potato Diseases in Michigan, by Dr. G. H. Coons, Plant Pathologist, Michigan Agricultural College.

Report of Season's Experimental Work with Potatoes, J. W. Weston, Potato Specialist, M. A. C.

(Continued on page 590).

Give EVEREADY FLASHLIGHTS this Christmas!



What's finer than an Eveready Flashlight for Christmas! The gift to be cherished and used a dozen times a day or night the year round.

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Trial Offer - 10c brings Midwest farmers' utility poultry paper, twice-a-month for 3 months. Poultry Guide, Box D, Montpelier, Indiana

POULTRY

JUST-RITE Baby Chicks LOOK!

A Hatch Every Week All Year

NABOB HATCHERY,

POSTAGE PAID, 95¢ live arrival guaranteed. MONTH'S FEED FREE with each order 40 Breeds chicks, 4 breeds ducklings, select and exhibition grades. Catalog free, stamps appreciated. Dept. 15, Gambier, O.

PULLETS

We yet have a few hundred Pullets in Leghorns, Barred Rocks, White Wyandottes and Orpingtons. The most of these Pullets are now near laying age and should be put into winter laying quarters soon. If you want a flock of winter layers, write to us now. Also Cockerels, Bronze Turkeys, Toulouse Geese and Pekin Ducks.

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Barred Plymouth Rock Cockerels \$5.00 each. Prize winning laying strain. J. A. BARNUM, Union City, Mich.

R. C. Br. Leghorns, Pekin Ducks, W. Chinese Geese, both mature and young birds. Mrs. Claudia Betts, Hillsdale, Mich.

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200 Single Comb Red pullets at \$2.50 to \$5 each. Also Cocks and Cockerels of both combs. From stock blood tested for bacillary white diarrhoea. Write for catalog. Interlakes Farm, Box 93, Lawrence, Mich.

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PULLETS & COCKERELS

Now Four Months Old

WHITE LEGHORNS and MOTTLED ANCONAS Also Black Leghorns, Brown Leghorns, Buff Leghorns, Black Minorcas, R. O. Rhode Island Reds, Barred Plymouth Rocks, White Plymouth Rocks, Silver Wyandottes, White Wyandottes. WE HATCH eggs from Hogenized flocks on free range on separate farms. Where our chicks are raised.

Send for Price List.

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RHODE ISLAND WHITES

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

S. C. White Leghorns

Cocks and Cockerels

RALPH S. TOTTEN, Pittsford, Mich

Single Comb Buff Leghorn

Early hatched chicks. Willard Webster, Bath, Mich

WHITE WYANDOTTES

207 egg average. Eggs all matings, \$2.00 per 15, \$10.00 per 100. Cockerels, hens and pullets \$5.00 each. FRANK DELONG, R. 3, Three Rivers, Mich

Additional Poultry Ads. on Page 574

Marketing Poultry

By J. H. Cutchen

ANY farmers today like to ship their poultry to market instead of selling it to the poultry buyer in their own town.

The buying public, in all the larger cities, especially, grow more discriminating every year, or at least they become more particular, and any poultry offered for sale must be nearly perfect in dressing and conformity.

As a general rule home-dressed poultry does not sell as well as city dressed, for the reason that the scalding is imperfectly done and the chickens have a spotted appearance which hurts their sale. The retail dealer, therefore, wants to buy them at a discount of two to five cents per pound as compared with city-dressed stock.

In shipping dressed poultry see that it is thoroughly cooled before shipping and wrap the head of each bird in a piece of paper to prevent any blood from dripping on the other chickens. Pack in barrels or boxes and ship by express or truck.

In shipping live poultry, the following precautions should be observed:

Do not ship any culls, thin stock, or diseased chickens. They are not salable and you only pay express uselessly.

If you are shipping enough stock to do so, grade your poultry when putting it in coops for shipment. Heavy springers in one coop. Heavy hens in another, and light stock by themselves. Do not crowd too many birds in a coop. One dead chicken pays the express on another coop.

In warm weather especially, many coops arrive at market with two to five dead in each coop because the shipper has crowded too many in a coop.

Always weigh and count your poultry when you ship. Do not guess at either the weight or number. If you have to make a claim against the express company or you have a dispute with your commission man, the number and weight are very essential to a satisfactory settlement in either case.

Ship early in the week. The markets in the big cities are practically over by Thursday noon and unless there is a short supply, Friday is bargain hunter's day.

Shrinkage is a big factor in shipping and should be taken into consideration when deciding whether to sell at home or ship to the nearest big market. The average shrinkage on chickens is from five per cent on aged stock up to ten per cent on young chickens. If you feed heavily before shipping, the shrinkage will only be that much heavier.

Turkeys shrink from ten to fifteen per cent and ducks shrink the most. The shrinkage on these seldom runs less than fifteen per cent. The most popular breeds of chickens are Plymouth and Barred Rocks and Rhode Island Reds. These, if in good condition, always command the best prices. Leghorns, Black Minorcas, Anconas, and other under-sized breeds are not wanted except at a marked reduction in prices, generally two to five cents per pound under the first mentioned breeds.

If they can be obtained, one trip coops are the most desirable to ship in. They weigh about twelve pounds. Slat coops weigh thirty-five to forty pounds. At the present express rates, it costs twenty-five to thirty cents

more to ship a slat coop than a light one and you then have to pay twenty cents for the return and you do not always get it returned.

In shipping for any holiday market, ship early. Prices are more likely to be lower the day before a holiday as every one is filled up by that time.

TRY EPSOM SALTS.

EPSOM salts are a cheap remedy to keep on hand to help in toning up a poultry flock that has had access to spoiled feed. The occasional use of the salts is a help in reducing losses from sour crop or indigestion due to overfeeding. A hen that has been crop bound is benefited by epsom salts.

The usual dose is half a teaspoonful for a mature hen. The salts can be dissolved in warm water and poured down the throat of the bird. Then you know the hen has received the dose. She may not eat enough of a mash containing the salts. A flock can be allowed to go hungry about half a day followed by a moist mash containing epsom salts for every bird.

When the salts are used as a preventive, place about three teaspoonfuls in a gallon of water and allow the birds no other drinking water. Many of the cases of so-called cholera are really only bowel trouble, due to faulty feeding methods. Often the use of epsom salts will improve such conditions. Epsom salts can be purchased in one hundred pound bags for less than four cents per pound, so the cost of using this in poultry doctoring is very reasonable.—Kirby.

A RECORD HEN.

LADY JEWELL, who belongs to the Western Washington State Experiment Station, and who has already had good laying records to her credit closed her year's test with a total of 335 eggs.

Lady Jewell is a White Leghorn hen which is owned by H. M. Lethers, of Washington, who values her at \$2,000. She was entered in the egg-laying contest at the experiment station. According to the superintendent of the egg-laying contest, this hen reached the former world's record of 324 eggs made by a California White Leghorn.

In this contest there are ten other hens which have passed the 300-egg mark for the year, one of them laying 332 eggs.

AN IMPRISONED HEN.

IRA FRAKER near Perrington, Michigan, unknowingly buried a hen when he was putting hay in the mow this summer. Lately this hen was uncovered and was found still alive, although she had nothing to eat but hay leaves and had scanty air circulation and absolutely no water during the time of her imprisonment.

In order to make herself more comfortable she ate away the hay surrounding her, but she could not make room enough for herself so that she could stand up. Because of being in one position so long, her legs have been rendered useless.

Poultry authorities think it remarkable that a hen should last so long under such circumstances without anything more nourishing than dry hay leaves.

Winter Eggs, By the Bushel

Mrs. Holsclaw Tells How Don Sung Made Her Hens Shell Out Eggs.

"In October, I started giving Don Sung to our 50 hens. It promptly brought them from 2 eggs a day up to 25 a day. My next \$1 box brought them up to 36 and 38 eggs a day right through January. Now (Feb. 17th) I am using my third \$1 box and I expect it will bring them up to 45 or even 50 a day. Our hens are in the best condition and the eggs are the largest and finest we ever had."—Mrs. W. T. Holsclaw, North Vernon, Ind.

Nearly 3 dozen every day for Mrs. Holsclaw, in November, December, January and February. Certainly not a bad increase for hens that were only laying 2 eggs a day, is it?

She started just as we're asking you to start, by accepting this offer:

Give Don Sung to 15 hens. Then watch results for 30 days. If it doesn't show you a big increase in eggs, if it doesn't pay for itself and pay you a good profit besides, tell us and your money will be promptly refunded.

Don Sung (Chinese for egg laying) acts directly on the egg-laying organs, and is beneficial in every way. It makes hens healthy and happy. They scratch and sing. Pullets develop earlier. The whole flock lays regularly in any season, in any weather, when eggs are scarce and high.

Can you afford to ignore the wonderful reports you are hearing from Don Sung users everywhere? Why not let us show you the same results, with your own flock? Don Sung is no trouble to use. It costs nothing to try. All we ask is a chance to prove our claims, entirely at our risk. Get Don Sung from your local dealer, or send 50 cents for package by mail prepaid (large size, \$1. holds three times as much).

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How to Feed From Shell to Show Room. Feeding in confinement; feeding breeding stock; nutritive ration; balancing feeds; preparing pullets for egg production; how to force molt; balance rations for winter eggs; how to produce meat at 4 cents per pound; color feeding; oat sprouting; how to make oat sprouter at home; feeding turkeys; methods and rations used by commercial egg farms.

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Sent absolutely free with 1 or 2 yr. subscription to **POULTRY TRIBUNE**, the big leading Poultry Magazine. Contains complete show reports. Tells everything you want to know about poultry. Monthly, 80 to 120 pages. Profusely illustrated. Send 15c and get 3 big issues of \$1 for 1 year and book free—\$1.50 for 2 years and book free. **POULTRY TRIBUNE**, Dept. 36 Mount Morris, Illinois

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ACT QUICK! SAVE THEIR LIVES BY USING **SMOKE-EM**

"SMOKE-EM" THE GUARANTEE ROUP CURE. A scientific, drugless cure for roup, colds, canker, diphtheria, and chicken pox. A discovery of the world's best known home of Holstein, Berkshire, and Leghorn Chickens. After losing thousands of dollars worth of our treasured birds from roup, we were determined to discover a cure. Since discovering and using "SMOKE-EM" for three years we have not lost a chicken from roup. Sold under a money-back guarantee. Thousands of testimonials. You owe it to yourself and to your poultry to write or wire us today for our large catalog fully describing this wonderful roup cure. The price is low.

The H. M. Spahr Breeding Estate, Dept. 337 Thurmont, Md.

VACCINATE NOW

For the Prevention and Treatment of Roup, Chicken Pox, Diphtheria, Canker, etc.

A. S. L. AVIAN MIXED BACTERIN

Produced under U. S. Patents

50 doses, \$2.00; 250 doses, \$5.00; 500 doses, \$7.50; 1000 doses, \$12.00. Syringes and Needles, \$1.50.

American Scientific Laboratories, Inc.
157 West Kinzie St., Dept. L32 Chicago, Ill.



EUROPE CONTROLS BLACK RUST.

ACCORDING to Dr. E. C. Stackman, of the department of agriculture, Europe has practically annihilated the pernicious common barberry with the result that the black stem rust of wheat and other grains is no longer a serious problem.

COURT HOLDS CHECKS COLLECTABLE.

MICHIGAN State Farm Bureau membership dues for the period 1920, 1921 and 1922 have again been ruled legally collectable by the courts. The recent ruling comes as the result of a farm bureau suit at Centerville, St. Joseph county, to collect \$20 delinquent membership dues. The case was remarkable in that the defense was represented by two of the most noted lawyers in southern Michigan and the farm bureau was represented by three equally prominent lawyers.

The issue was fought out in a three-day legal battle and the jury returned a verdict in favor of the farm bureau after thirty minutes deliberation. The farm bureau attorneys won the case on the straight collectability of the membership checks and the services rendered in return during the three-year period just ending.

HERE AND THERE IN MICHIGAN.

Alfalfa is finding a new demand among turkey growers who state that the birds grow more rapidly on alfalfa range than on any other forage crop of the farm.

Plans are being developed by County Agent C. C. Taylor, of Newaygo, to organize a horticultural society in that county. The meeting was held at Fremont on November 29.

The greatest tonnage of farm produce ever shipped from Decatur, Van Buren county, in one month, was billed out during October. The total was 501 cars, of which 335 were celery and onions.

George Sage, a pioneer farmer of Ionia county, who claims direct heirship to Russell Sage's millions, refuses to establish his legal right to the money because he believes it is more wealth than any one person should own and that it would entail a great deal of care.

In a test of Robust beans and common beans on the farm of F. A. Runnells & Sons at Clio, the yields showed ten bushels for common and twenty bushels for Robust certified seed.

Eastern fruit growers practice leaving pruned twigs in the orchards over winter, declaring that rabbits and mice will attack the bark of these tender twigs before gnawing the tougher bark of the tree trunks.

The live stock cooperative commission house located at the Detroit stock yards are handling one-third and more of the total volume of stock received at the Detroit market. Their weekly receipts are around 120 cars.

The next annual show of the Holland Poultry Association, will be held at Holland during Christmas week. It is expected that one thousand birds will be entered.

R. W. Tenny, agricultural agent of Eaton county, announces that Burlynn Bradley, of Kaloma township, won the first and third prizes with his corn at the exposition recently held at Baton Rouge, La.

The farm and garden project club of the Michigan State Normal College at Ypsilanti report that the seventeen hogs owned by the club made an average daily gain of 1.28 pounds through a period of forty-six days while hogging down a field of corn.

The Marquette county board of supervisors has appropriated \$5,000 for improving the county fair grounds next summer.

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~and a Year to Pay for Certified Electric Service

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A firm belief in the continuance of this popular demand, makes possible greater volume and materially lower production costs. Effective December 1, 1922, we enthusiastically announce:—

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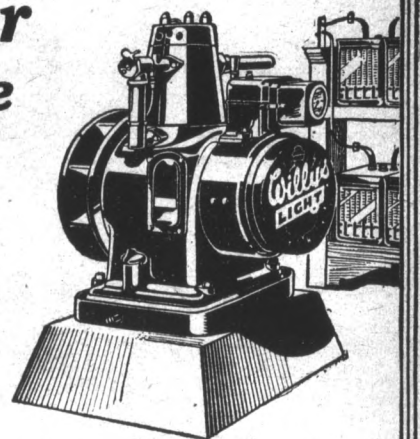
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Toledo, Ohio

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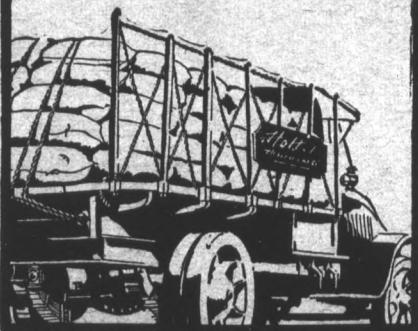
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Keep them there with the aid of WHITLOCK ROPE

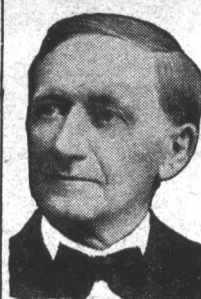
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Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.
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It's happening every day. Hundreds of fine dairy herds are sent to the shambles because of tuberculosis!

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Do you know what to do to keep your herd safe, to insure your cows against T. B., and your investment against loss? Do you want to be protected?

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Introducing this wonderful new lamp. Gives soft, brilliant light; restful to eyes; ideal illumination. Burns Kerosene or Gasoline. Clean, odorless, economical. Burns 96% air, 4% fuel. Absolutely safe. Lights with match. 100 times brighter than wick lamps. Patented. Greatest improvement of age. Table lamps, hanging lamps, lanterns. Work all or spare time. You simply take orders. We deliver by Parcel Post and do collecting. Com-missions paid same day you take orders. No experience necessary. Get started at once. Big season now on. Write today for catalog and special agents offer.

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392 Lamp Bldg., Akron, O.

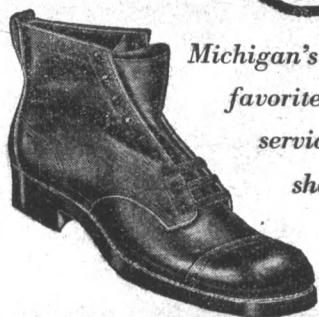
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H-B Hard Pan
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Soles are made from the choicest part of the hide. Uppers are specially re-tanned. Shoe resists water. Big, roomy and comfortable, fairly priced. This is but one of the dependable Herold-Bertsch line of dress and service shoes that have been worn by Michigan families for 30 years. Ask to see the Herold-Bertsch sign in the shoe store window.

HEROLD-BERTSCH SHOE CO.
Grand Rapids, Michigan.

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Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.

Wells & Richardson Co., Burlington, Vt.

MUSIC HELPS MILK PRODUCTION.

IN a recent experiment performed at the Caswell Training School at Kingston, North Carolina, they have found that music stimulates milk production.

It happened that the superintendent of the school installed a phonograph in the cow shed where eighty cows were being milked by the boys of the school. This was done to make things less monotonous for the boys, but after several weeks, it was found that the flow of milk of each cow was increased from ten to twenty pounds per week.

One cow, Butter Girl, gave during a week of music, 344.7 pounds of milk, as against 333.4 pounds during a week in which there was no music. During three weeks of music there was little increase in the output of this cow or other members of the herd, but when the music stopped Butter Girl dropped to 316 pounds per week. The records of other cows were similar.

The superintendent, Dr. McMary, says, "The effect of the music on the boys during the milking was marvelous, but its effect on the cows was even more so. Those Holsteins would practically go to sleep. Cows were fed first, and then the phonograph started. They would not move, if there was nothing to disturb them. The greater the supply of blood to the udder, the greater the quantity of milk produced. The more contented the mind of the cow, the heavier will be the flow of milk."

PRUNING APPLES FOR PROFIT.

(Continued from page 581).

removal of the longer growths originating from the central leader other than those intended for main scaffold branches and perhaps a light heading back to balance the tree after the first season's growth; a similar thinning out but less heading back after the second season's growth; a light pruning after the third season's growth, and very light thinning out of the previous season's growth thereafter until the tree has borne two or three crops. The thinning should, for the most part, be confined to the outer parts of the tree so as to admit sunlight and keep all parts of the tree functioning properly. Very few of the smaller growths in the interior of the tree should be removed.

In case one is growing some filler trees in between the permanent ones, I would recommend no pruning after the second growing season because these trees will probably not be retained for more than twenty years and we want to bring them into bearing just as early as possible and, furthermore, we are not interested in the formation of a particularly strong framework.

Make Many Small Cuts on Bearing Trees.

The average more or less neglected bearing tree is so thick about the outer parts that an even distribution of functioning fruit spurs cannot be maintained. Thus the outer ends of the branches should be considerably thinned to permit a free circulation of air, ample sunlight to produce fruit spurs and fruit, and to permit more thorough spraying. The common mistake is to pursue the easiest course and remove a few rather large branches, but such a practice leaves holes and does not result in an even thinning or an even growth. Again, too much large wood is removed, resulting in a heavy vegetative growth near the base of the removed branches.

In thinning out the outer parts of trees, less vegetative disturbance will result if many small branches—seldom over an inch in diameter—are removed in such a way as to leave the outer

fruiting wood evenly distributed and still open enough to permit the entrance of light and air. This type of work is best performed when the pruner climbs out near the ends of the main branches where he is able to work with a saw and pair of hand shears. This practice requires time, but experience has proved that the extra labor required is repaid many times through better results. In case old trees are bearing too many clustered, weak or inactive spurs, it is advisable to thin them to admit light, prevent overbearing of small fruit, and to stimulate the remaining spurs.

Bearing orchards are frequently seen in which trees have been stripped of all fruiting wood except near the ends of the branches. In other words, all the fruit is borne out on the ends of the branches instead of being distributed throughout the tree. In many trees there is no fruiting wood within a radius of twelve to fourteen feet from the head of the tree. It is understood that a branch can support more apples if they are distributed over its entire length, than if they are all clustered about the ends, probably six to twelve feet from the main trunk. A scaffold branch should have several good lateral branches well spaced along its entire length, each lateral supporting its share of fruiting wood. Such a tree can support a given load to better advantage and carry a much larger crop of fruit. When pruning the young tree always leave fruiting wood if it is located where it will have a chance to develop. The tree will fruit earlier and heavier.

Fruiting wood may be developed in the course of three or four years in a tree in which the scaffold limbs are bare by the use of well situated water spouts, by cutting them back from four to twelve inches in length to encourage the development of side branches. These in turn should be headed back the following year. After this, the heading back should be lessened to encourage the formation of fruit spurs. To make this operation successful it is essential that the trees be thinned about the outside to admit light sufficient to allow the development of fruit spurs and to color the fruit.

Pruning may be done any time during the dormant season. Possibly very slight preference should be given to late winter or early spring, so far as the trees are concerned, but if left until such a season the chances are very good that the work will not be completed because of rush of other farm practices. Consequently any favorable weather following the dropping of the foliage should be used for pruning.

POTATO GROWERS' PROGRAM.

(Continued from page 587).

Lessons from Field Observations During Season, by H. C. Moore, Secretary-Treasurer Michigan Potato Producers' Association.

Why a "Three-Hundred-Bushel" Potato Club, by D. L. Hagerman, Agricultural and Industrial Agent, of Grand Rapids, Mich.

6:00 P. M., Banquet, Pantlind Hotel.—Tom Buell, Toastmaster.

"Chief Petoskey," Why we Use the Michigan Russet Rural, by Dr. E. L. Nixon, Extension Specialist, Pennsylvania State College.

The County Agent's Responsibility in Production of Certified Seed by L. L. Drake, County Agricultural Agent, Antrim County.

State Use of Certified as a Means to Better Potatoes, by K. K. Vining, County Agent of Kent County.

"My Experiences," by Hon. Jason Woodman, Member State Board of Agriculture, Paw Paw, Mich.

Regional Use of Michigan Certified Seed Potatoes, by J. W. Nicolson, Michigan State Farm Bureau Seed Department.

December 8, 9:30 A. M.

Business session, board of directors, Michigan Potato Producers' Association; conference certified seed potato growers.

Notes from a Michigan Farm

By L. B. Reber

WHEAT is looking fine in this section, with about the usual acreage. Corn is making a disappointing yield as the extreme hot and dry weather last summer resulted in numerous nubbins. Whitecap corn seems to stand the dry weather better than the pure yellow corn, but I do not like it so well for feeding. The old-fashioned Gar corn does the best for me. The ears are small but fat, with a small cob, and even the nubbins are hard and solid.

I had a neighbor drill in a small piece of wheat for me. It was drilled in the corn stubble without working the ground at all; his wheat ground got a most thorough working with

rived today and I have them heeled in until I can haul home some old sawdust to place around the roots when planting. They must have sour soil, the poorer the better for them. My Syracuse raspberry plants are at the express office and I get them tomorrow. These plants cost me a shameful lot of big round dollars, but maybe they will pay. It is time to introduce newer and better varieties in this section.

Well, it is getting late and the rest of the family have all gone to bed, time for me to go, too. Say, boys, do you remember way back, up there in Wexford county, when we slept right under the shake roof and in the morn-



The Fruit Growers, in Parking their Autos in Barden's Field, Near South Haven, Learned that Fruit and Alfalfa Are Barden's Specialties.

plow, disc and harrow. He prophesied that my wheat would not amount to shucks, but to his surprise mine looks better than his. I fertilized the corn with pulverized sheep manure and the wheat will get some benefit from that. On part of the field I applied acid phosphate at the rate of eight hundred pounds per acre and you can see now just where I left off sowing the acid phosphate. I will report further on the field.

The fruit is all picked and shipped, and now we fruit men can live on memories until next June, when the strawberries begin to move. As the two governors said to each other, it's a long time between pay-days. Labor kicks on a monthly wage, but we fruit men go seven months without a pay-day. Kieffer pears did not sell for enough to pay to pick them, and thousands of bushels rotted on the ground.

Apples would not sell at all. The winter apples are the scabbiest, scrawniest lot I ever saw, in spite of our frequent and thorough spraying. One of the best orchards near Benton Harbor shipped two barrels of unclassified apples to one of number ones.

The other fellow may have my share of raising Chinese cabbage. Mine have not shown the least tendency to make heads. I did raise a big lot of Missouri pumpkins from some seed my brother sent me. They grew big and laid thick on the ground. Every year I change locations for my potatoes, and every year they are scabby and have wireworms in them. I plant the best of northern grown seed, but the result is always the same. The northern man may raise my potatoes and I send him grapes in exchange. Some base villain ran over and killed one of my Jersey Giant chickens. I hope he chokes on a chicken bone. They are growing like weeds and are great pets. I have seven left out of twenty-five baby chicks, but they are quoted at ten dollars each for ten-weeks' chicks, so I have seventy dollars worth out of the eight dollars I paid out. I haven't room for pigs on my fruit farm, so the Francisco man will have to raise mine for me. I raised a nice lot of beans and the beans raised a nice lot of bugs so I shall be in the market for beans all winter, but in small quantities at a time, say a big pan full of hot, baked ones at a time.

My seedless huckleberry plants ar-

ing the top quilt was covered deep with fine snow. Them were the days of real sport.—L. Benj. Reber.

MAKE A LITTLE KRAUT.

THE heavy production of cabbage in several sections of Michigan has created a real marketing problem. In many instances the situation can be improved, or at least a valuable food product can be made for home use, by converting some of this cabbage into sauer kraut.

The following equipment and ingredients are necessary: An earthen jar of ten-gallon capacity; a short piece of two-by-four or a heavy wooden mallet; a kraut cutter, or shredder; a wooden cover or plate; a weight; some cheesecloth or coarse muslin; sixty pounds of cabbage and about one-fourth pound of salt.

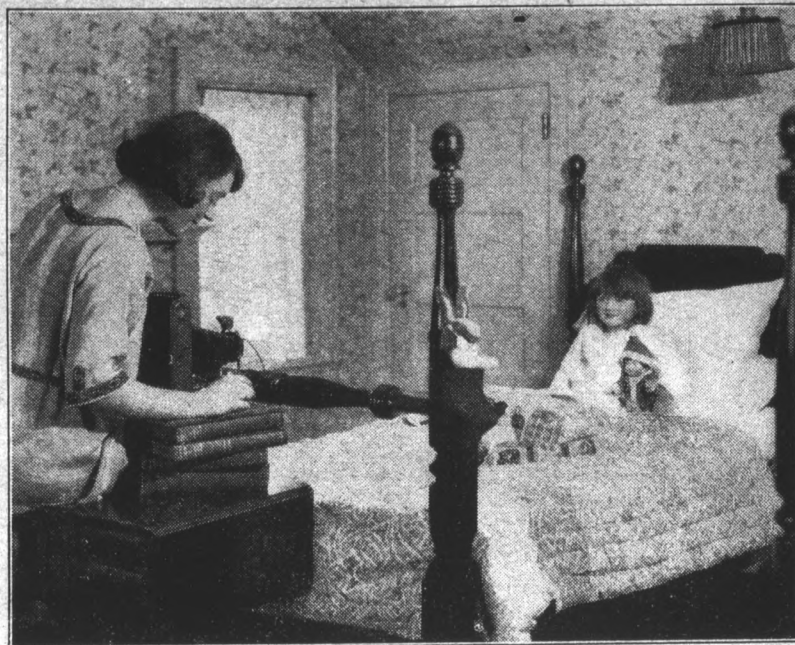
Select cabbage with white hearts and discard the outer leaves. Cut fine and place in jar in layers four or five inches thick. Over this layer sprinkle a little salt, then jam with the mallet or two-by-four until the cabbage becomes quite moist. Put in another layer and repeat the process.

When the jar is nearly full, cover the kraut with washed cabbage leaves and then with a wooden cover or a large earthenware plate. Weight down with a stone. Protect from dirt by covering the jar with a coarse muslin cover or several layers of cheesecloth.

Let the jar stand in a warm cellar from four to six weeks. The kraut is ready for use when bubbles stop forming and a thin crust forms over the brine. The upper layer of cabbage is usually soft and off-flavor and should be discarded.

RADIO SIMPLIFIED.

THIS book is very well illustrated with drawings which really make clear the point which is being emphasized. Confusion in the mind of the reader is avoided by use of parallel drawings of the various hook-ups, etc. Full information is given about the cars of the storage battery, and the operation of the vacuum tube with current from power lines and farm electric plants. The regenerative receiver, amplifiers and loud speakers receive full attention, as do spark and vacuum tube transmitters.



Keep Christmas with a Kodak

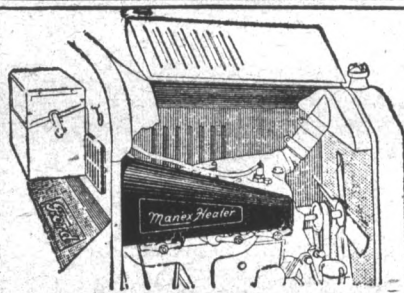
While far too excited to dress, little Jane has popped into bed again to pose for a picture with mother's new Kodak.

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CHAIN STORES MAY HELP THE POTATO SITUATION.

THE chain stores in Chicago, Detroit and other large cities are making potatoes their leaders. In many places these organizations are offering potatoes at from fifteen to sixteen cents per peck. Some are also offering two and a half-bushel sacks for \$1.16. On this basis, these stores are making about ten cents per hundredweight. But they are giving the consumers this staple food product at such a low cost that its consumption will greatly increase. If this type of store will make features of such farm products they will become great factors in relieving the situation when the production of certain crops is greater than the normal consumptive needs.

THE FARM WORKSHOP.

THE dimensions of the farm workshop should tend toward length rather than width. It should not be less than sixteen by twenty, or even thirty feet is much better. For with a feed rack, hay rack, or perhaps a boat, you've got not a bit too much room in a twenty-foot shop. If your shop is no more than twenty feet and you have a forge it will be to your advantage to build a lean-to at the end of the shop for this and the anvil, leaving a dirt floor to eliminate danger from fire.

It will be to your advantage, too, in having an opening that you can open or close directly in line with your vise on the workbench so that when you are working upon some long stuff, like ladder uprights, etc., you can allow the ends to project out into space. The opening should be so that it can be closed snugly to give the worker full protection during cold or inclement weather.

It will be for the best interests of the farmer for him to start out with but a few of the most necessary tools and add to them as the need manifests itself. In that way he will be less apt to find himself stocked with tools for which he has no good use.—D. K.

BUZZING UP THE LAND.

THAT baking, washing, lifeless, unproductive land is the merciless bandit who robs the laboring farmer of every possibility in the way of profits. This bandit can be outwitted. I have done it.

I was helped to do it by an outcast. This outcast is a plant. In the past we shunned it. There was no place in our busy lives for it. But there is such a place today, and let me tell you, that plant is none other than sweet clover.

Sometimes a cow or a sheep will not eat it. But they can be trained. That is, however, unnecessary, since the land can be buzzed up to virgin conditions without making hay of the blooming, branching sweet clover. Yes, this can be done while the farmer is gathering in cold hard cash from the land.

Now, you are listening. Well, before you turn your ear, let me tell you to plow that sweet clover under. Use a chain maybe, or anyway, do anything to get the soil on top. Two or three crops will make land mellow, active, full of vim and pep and ready to do what it did first after the forest was harvested.

Did I forget something? Yes, you

remembered it—that cold hard cash. You will need some to start with unless you have about twenty good swarms of bees for every ten acres of this sweet clover. I find that these busy, buzzing brothers are capable of gathering the cold cash from this sweet clover. When honey-making weather is reasonably plentiful a score of healthy swarms will secure within the little cells almost a ton of the sweet nectar. At eighteen or twenty cents per pound—well, figure it. Yes, the total is larger than from beans, or corn, or oats, or wheat.

Of course, you might need a little lime to satisfy the calcium appetite of this vigorous plant. You will have to supply this if, in days gone by, the appetite of clovers has used up the native stores. But lime paves and makes sure and safe the narrow way which leads to production on a virgin soil basis.

Ever-changing humus and home-generated nitrogen must be mined into these emaciated soils. Sweet clover is my prescription. It has the kick. Three doses will bring back the worst cases. You may need to supplement with a little commercial fertilizer. Then let the bees pay the bills as I have done.—Samuel Hagerman.

OTTAWA COUNTY HOLDS SUCCESSFUL FESTIVAL.

THE fourth annual Ottawa County Farm Bureau festival, held at Coopersville in cooperation with the Grange and the Coopersville Business Men's Association, proved the best ever held. The corn show commanded the greatest attention, there being 670 ears on display. Mr. Howard Rathner, who judged the exhibit, writing to Mr. Hambleton, local chairman, stated: "I wish to congratulate you and Mr. Milham very, very much for the exceptionally successful corn and grain show which you had at Coopersville. I have never judged a better corn display of similar nature."

Clyde Hollis, from Hudsonville, won sweepstakes with ten ears of Pickett Yellow Dent Corn. Frank Hambleton, from Coopersville, won on White Dent corn, and Stanley Kurek, from Marne, won on M. A. C. Yellow Dent in the amateur division. A number of these exhibits will be seen at the International Live Stock Exposition and Grain Show at Chicago, December 2-9.

SILVER FOX MEN TO MEET.

THE meeting of the National Silver Fox Breeders' Association will be held at Muskegon on December 6-7, and the annual silver fox show will be held at the same time. Entries for this show are being received from all parts of the United States, and even as far north as Alaska. As Michigan is the leading state in this unique industry, this meeting promises to be of unusual interest. Those who are interested in the possibilities of fox raising will find it worth their time to attend.

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WORLD EVENTS IN PICTURES



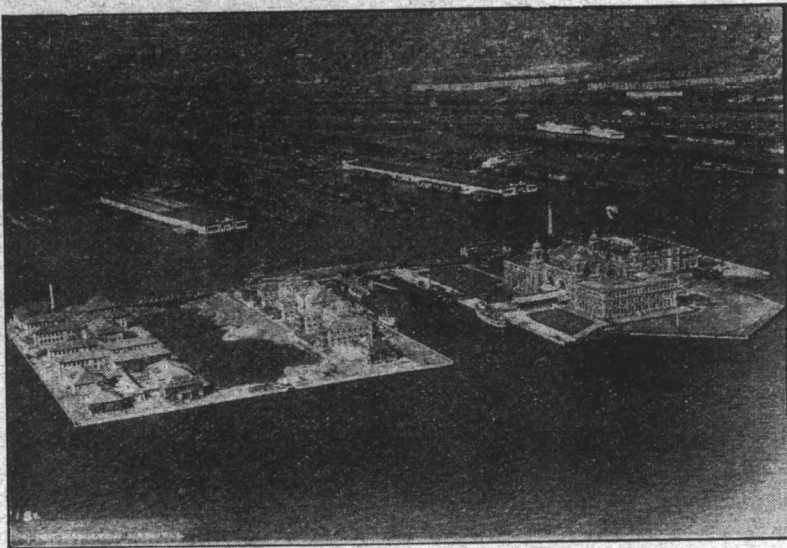
These smiling faces are evidence of the democratic landslide in New York when Alfred E. Smith was again elected governor.



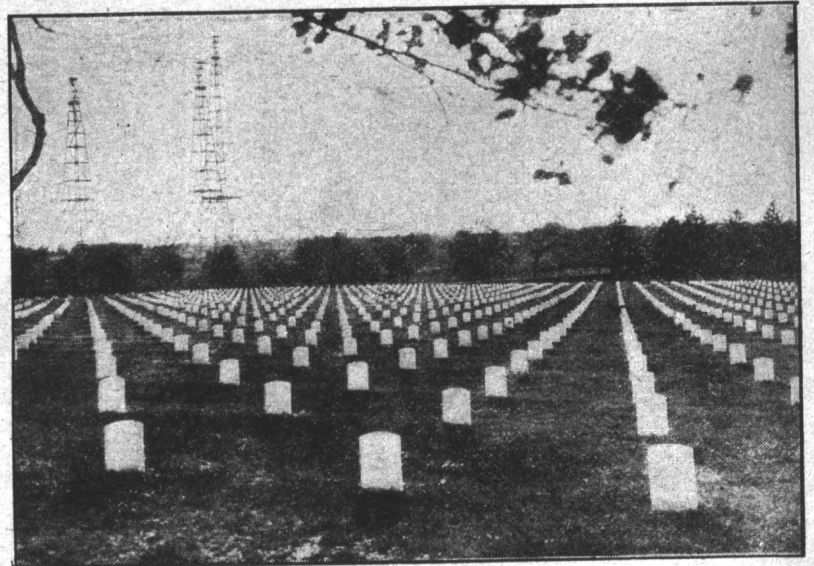
Marian Talley, 15 years old, amazed opera conductors by her wonderful lyric soprano.



Stanley Koenig, four years old, has toured the world with his father, Captain E. F. Koenig, U. S. Army.



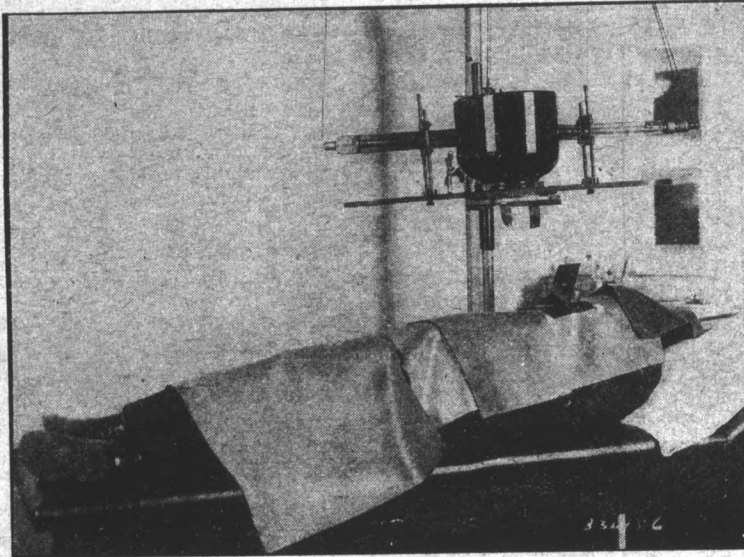
A remarkable air view of Ellis Island, the gateway to America, where nearly a million people land every year from foreign countries as soon as their ship enters New York harbor.



Mothers of many dead war heroes journeyed to Arlington National Cemetery in Washington, D. C., and placed wreaths on the graves of their departed ones.



Edward Houser, of Cincinnati, O., had a special Ford made for him and fills it all himself.



This wonderful X-Ray machine, having a voltage of 200,000 volts, was publicly demonstrated in New York City recently and gave evidence of its power to cure cancer.



Miss Thelma Connor, of Columbia University, is not afraid of rats, mice or guinea pigs.



This remarkable action scene shows Tevis Huhn, of Princeton, clearing the bar first in the 120 yard hurdles in Oxford Seniors' sports in England.



Rescuers at work at the Reilly mine in Spangler, Penn., where seventy-six were killed and many injured as a result of an explosion in that mine.

THE CROSS-CUT —By Courtney Ryley Cooper

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There was only a week now until Harry's case should come to trial. Only a week until the failure of the defendant to appear should throw the deeds of the Blue Poppy mine into the hands of the court, to be sold for the amount of the bail. And in spite of the fact that Fairchild now felt his mine to be a bonanza, unless some sort of a miracle could happen before that time, the mine was the same as lost. True, it would go to the highest bidder at a public sale and any money brought in above the amount of bail would be returned to him. But who would be the bidder? Who would get the mine—perhaps for twenty or twenty-five thousand dollars, when it was now worth millions? Certainly not he. Already he and Harry had borrowed from Mother Howard all that she could lend them. True she had friends; but none could produce from twenty to two hundred thousand dollars for a mine, simply on his word. And unless something should happen to intervene, unless Harry should return, or in some way Fairchild could raise the necessary five thousand dollars to furnish a cash bond and again recover the deeds of the Blue Poppy mine, he was no better off than before the strike was made. Long he thought, finally to come to his conclusion, and then, with the air of a gambler who has placed his last bet to win or lose, he went to bed.

But morning found him awake long before the rest of the house was stirring. Downtown he hurried, to eat a hasty breakfast in the all-night restaurant, then to start on a search for men. The first workers on the street that morning found Fairchild offering them six dollars a day. And by eight o'clock, ten of them were at work in the drift of the Blue Poppy mine, working against time that they might repair the damage which had been caused by the cave-in.

It was not an easy task. That day and the next and the next after that, they labored. Then Fairchild glanced at the progress that was being made and sought the pseudo-foreman.

"Will it be finished by night?" he asked.

"Easily."

"Very well. I may need these men to work on a day and night shift, I'm not sure. I'll be back in an hour."

Away he went and up the shaft, to travel as swiftly as possible through the drift-piled road down Kentucky Gulch and to the Sampler. There he sought out old Undertaker Chastine, and with him went to the proprietor.

"My name is Fairchild, and I'm in trouble," he said candidly. "I've brought Mr. Chastine in with me be-

cause he assayed some of my ore a few days ago and believes he knows what it's worth. I'm working against time to get five thousand dollars. If I can produce ore that runs two hundred dollars to the ton and if I'll sell it to you for one hundred seventy-five dollars a ton until I can get the money I need provided I can get the permission of the court—will you put it through for me?"

"If you'll let me see where you're getting the ore." Then he figured a moment. "That'd be thirty or forty ton" came at last. "We could handle

I have so far is an assay of some drill scrapings. I don't know how thick the vein is or whether it's going to pinch out in ten minutes after we strike it. But I'll know mighty soon."

Every cent that Robert Fairchild possessed in the world was in his pockets—two hundred dollars. After he had paid his men for their three days of labor, there would be exactly twenty dollars left. But Fairchild did not hesitate. To Farrell's office he went and with him to an interview, in chambers, with the judge. Then, the necessary permission having been grant-

"There's two-hundred-dollar ore back of this foot wall if we can break in to start a new stope," he announced. "It takes a six-foot hole to reach it, and we can have the whole story by morning. Let's go!"

Along the great length of the foot wall, extending all the distance of the big chamber, the men began their work, five men to the drills and as many to the sledges, as they started their double-jacking. Hour after hour the clanging of steel against steel sounded in the big underground room, as the drills bit deeper and deeper into the hard formation of the foot wall, driving steadily forward until their contact should have a different sound, and the muggy scrapings bear a darker hue than that of mere wall-rock. Hour after hour passed, while the drill-turners took their places with the sledges, and the sledgers went to the drills—the turnabout system of "double-jacking"—with Fairchild, the eleventh man, filling in along the line as an extra sledge, that the miners might be the more relieved in their strenuous, frenzied work. Midnight came. The first of the six-foot drills sank to its ultimate depth. Then the second and third and fourth: finally the fifth. They moved on. Hours more of work, and the operation had been repeated. The workmen hurried for the powder house, far down the drift, by the shaft, lugging back in their pockets the yellow, candle-like sticks of dynamite, with their waxy wrappers and their gelatinous contents together with fuses and caps. Crimping nippers—the inevitable accompaniment of a miner—came forth from the pockets of the men. Careful tamping, then the men took their places at the fuses.

"Give the word!" one of them announced crisply as he turned to Fairchild. "Each of us'll light one of these things, and then I say we'll run! Because this is going to be some explosion."

Fairchild smiled the smile of a man whose heart is thumping at its maximum speed. Before him in the long line of the foot wall were ten holes, "upholes," "downs" and "swimmers," attacking the hidden ore in every direction. Ten holes drilled six feet into the rock and tamped with double charges of dynamite. He straightened.

"All right, men! Ready?"

"Ready!"

"Touch 'em off!"

The carbide lamps were held close to the fuses for a second. Soon they were all going, spitting like so many venomous, angry serpents—but neither Fairchild nor the miners had stopped to watch. They were running as hard

AUCTION SALES

By Hugh Kephart

Said Brown, "I'm there with auction sales,

It's just a waste of time, I know,
For prices rise like wintry gales
If I should take a chance and go.

"My mind must be an open book
For all the folks around to read;
Just let them see me take a look
At some old cow or tool I need.

"Then Southwick, genial auctioneer,
Can cease his loud resounding din
As all the neighbors far and near
Are pegging bids too fast for him.

"He always points a slender stick
At bidders when they're acting shy,
But now it's flashing just as quick
As ever lightning crossed the sky.

"He wheels about with blinding speed.
(A mountain cat would be too slow)

The overlapping bids to heed
As fast and higher still, they go.

"They're barking like some angry pack
As hats and arms are wildly tossed.
The modest bid I made—alack!
Has gone unheard, forever lost.

"There's magic in my every glance,
The neighbors bank upon my eye,
They never take the slightest chance
When I approve, they rush and buy.

"That very pace I'm always led,
I've felt defeat in all my bones,
The many girls whom I'd have wed
Now sign their names from Smith to Jones.

"And so thru life it seems I get
The same results, the same return,
My interest is most sure to whet
Another's greed or grave concern."

that as fast as you could bring it here."

But a new thought had struck Fairchild—a new necessity for money.

"I'll give it to you for one hundred dollars a ton, providing you do the hauling and lend me enough after the first day or so to pay my men."

"But why all the excitement—and the rush?"

"My partner's Harry Harkins. He's due for trial Friday, and he's disappeared. The mine is up as security. You can see what will happen unless I can substitute a cash bond for the amount due before that time. Isn't that sufficient?"

"It ought to be. But as I said, I want to see where the ore comes from."

"You'll see in the morning—if I've got it," answered Fairchild with a new hope thrilling in his voice. "All that

ed, he hurried back to the mine and into the drift, there to find the last of the muck being scraped away from beneath the site of the cave-in. Fairchild paid off. Then he turned to the foreman.

"How many of these men are game to take a chance?"

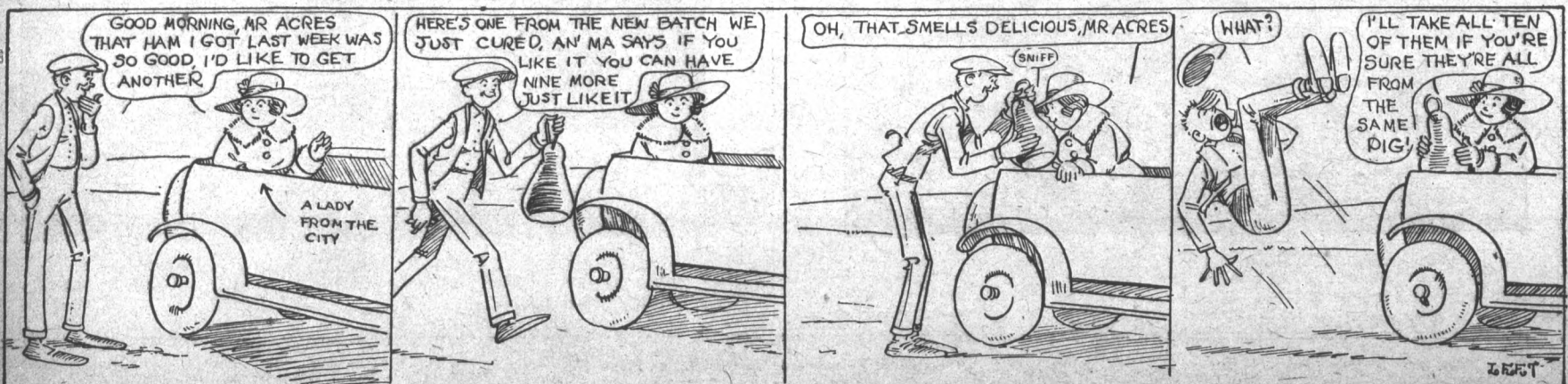
"Pretty near all of 'em—if there's any kind of a gamble to it."

"There's a lot of gamble. I've got just twenty dollars in my pocket—enough to pay each man one dollar apiece for a night's work if my hunch doesn't pan out. If it does pan, the wages are twenty dollars a day for three days, with everybody, including myself, working like blazes! Who's game?"

The answer came in unison. Fairchild led the way to the chamber, seized a hammer and took his place.

AL ACRES—The Lady's Knowledge of Ham Hogs Surprises Al.

—By Frank R. Leet.



as possible for the shaft and for the protection that distance might give. A wait that seemed ages. Then:

"One!"

"And two—and three!"

"There goes four and five—they went together."

"Six—seven—eight—nine—"

Again a wait, while they looked at one another with vacuous eyes. A long interval and then the tenth.

"Two went together then! I thought we'd counted nine?" The foreman stared, and Fairchild studied. Then his face lighted.

"Eleven's right. One of them must have set off the charge that Harry left in there. All the better—it gives us just that much more of a chance."

Back they went along the drift tunnel now, coughing slightly as the sharp smoke of the dynamite cut their lungs. A long journey that seemed as many miles instead of feet. Then with a shout, Fairchild sprang forward, and went to his hands and knees.

It was there before him—all about him—the black, heavy masses of lead-silver ore, a great, heaping, five-ton pile of it where it had been thrown out by the tremendous force of the explosion. It seemed that the whole great floor of the cavern was covered with it, and the workmen shouted with Fairchild as they seized bits of the precious black stuff and held it to the light for closer examination.

"Look!" The voice of one of them was high and excited. "You can see the fine streaks of silver sticking out! It's high-grade and plenty of it!"

But Fairchild paid little attention. He was playing in the stuff, throwing it in the air and letting it fall to the floor of the cavern again, like a boy with a new sack of marbles, or a child with its building blocks. Five tons and the night was not yet over! Five tons, and the vein had not yet shown its other side!

Back to work they went now, six of the men drilling, Fairchild and the other four mucking out the refuse, hauling it up the shaft, and then turning to the ore that they might get it to the old, rotting bins and into position for loading as soon as the owner of the Sampler could be notified in the morning and the trucks could fight their way through the snow-drifts of Kentucky Gulch to the mine for loading. Again through the hours the drills bit into the rock walls, while the ore car clattered along the tram line and while the creaking of the block and tackle at the shaft seemed endless. In three days, approximately forty tons of ore must come out of that mine—and work must not cease.

Morning, and in spite of the sleep-laden eyes, the heavy aching in his head, the tired drooping of the shoulders Fairchild tramped to the boarding house to notify Mother Howard and ask for news of Harry. There had been none. Then he went on, to wait by the door of the Sampler until Bittson, the owner, should appear, and drag him away up the hill, even before he could open up for the morning.

"There it is!" he exclaimed as he led him to the entrance of the chamber. "There it is; take all you want of it and assay it!"

Bittson went forward into the cross-cut where the men were drilling even at new holes, and examined the vein. Already it was three feet thick, and there was still ore ahead. One of the miners looked up.

"Just finishing up on the cross-cut," he announced, as he nodded toward his drill. "I've just bitten into the foot wall on the other side. Looks to me like the vein's about five feet thick—as near as I can measure it."

"And—" Bittson picked up a few samples, examined them by the light of the carbides and tossed them away—"you can see the silver sticking

out. I caught sight of a couple of pencil threads of it in one or two of those samples. All right, Boy!" he turned to Fairchild. What was that bargain we made?"

It was based on two hundred dollars a ton ore. This may run above—or below. But whatever it is, I'll send you all you can handle for the next three days at fifty dollars a ton under the assay price."

"You've said the word. The trucks will be here in an hour if we have to shovel a path all the way up Kentucky Gulch."

He hurried away then, while Fairchild and the men followed him into town and to their breakfast. Then, recruiting a new gang on the promise of payment at the end of their three-day shift, Fairchild went back to the mine. But the word had spread, and others were there before him.

Already a wide path showed up Kentucky Gulch. Already fifteen or twenty miners were assembled about the opening of the Blue Poppy tunnel, awaiting permission to enter, the usual rush upon a lucky mine to view its riches. Behind him, Fairchild could see others coming from Ohadi to take a look at the new strike and his heart bounded with happiness tinged with sorrow. Harry was not there to enjoy it all; Harry was gone, and in spite of his every effort, Fairchild had failed to find him.

All that morning they thronged down the shaft of the Blue Poppy. The old method of locomotion grew too slow; willing hands repaired the hoist and sent volunteers for a gasoline engine to run it, while in the meantime officials of curiosity labored on the broken old ladder that once had encompassed the distance from the bottom of the shaft to the top, rehabilitating it to such an extent that it might be used again. The drift was crowded with persons bearing candles and carbides. The big chamber was filled, leaving barely room for the men to work with their drills at the final holes that would be needed to clear the vein to the foot wall on the other side and enable the miners to start upward on their new stope. Fairchild looked about him proudly, happily; it was his, his and Harry's—if Harry ever should come back again—the thing he had worked for, the thing he had dreamed of, planned for.

Some one brushed against him, and there came a slight tug at his coat. Fairchild looked downward to see passing the form of Anita Richmond. A moment later she looked toward him, but in her eyes there was no light of recognition, nothing to indicate that she had just given him a signal of greeting and congratulation. And yet Fairchild felt that she had. Uneasily he walked away, following her with his eyes as she made her way into the blackness of the tunnel and toward the shaft. Then absently, he put his hand into his pocket.

Something there caused his heart to halt momentarily—a piece of paper. He crumpled it in his hand, he rubbed his fingers over it wonderingly; it had not been in the pocket before she had passed him. Hurriedly he walked to the far side of the chamber and there, pretending to examine a bit of ore, brought the missive from its place of seclusion, to unfold it with trembling fingers, then to stare at the words which showed before him:

"Squint Rodaine is terribly worried about something. Has been on an awful rampage all morning. Something critical is brewing, but I don't know what. Suggest you keep watch on him. Please destroy this."

That was all. There was no signature. But Robert Fairchild had seen the writing of Anita Richmond once before!

(Continued on page 597).

Where Was I To Get the Money

—and then Emma Broach told me about her "Magic Purse Filler"—an ideal way to earn extra money each week without having to step out of the house.

HOW we were going to manage was worrying me almost sick—I hadn't had anything new for so long that I was getting ashamed to go anywhere. And I wanted things for the house—new curtains and a long list of other items.

Everet's teeth needed attention. So did mine. And there were some bills six months overdue.

But where was the money to come from?

We were paying for a home. That and the butcher's and grocer's bills and other necessary expenses took every cent almost as fast as Everet could earn it. No matter how we skimped and squeezed and went without, there was never anything left over.

I Couldn't Neglect My Home

"If I could earn some extra money!" I kept thinking. But it seemed like wishing for the pot of gold at the end of the rainbow.

Nearly every day I had my work all done by one or two o'clock or a little after. Often I was all through by ten or eleven in the morning. It seemed a shame to let all that spare time go to waste when I needed money so badly.

But what could I do? I couldn't neglect the meals or the housework—so a place in a store or office or any other work requiring regular hours was out of the question. Except for plain mending, I couldn't sew. I knew I was not cut out for canvassing or selling—and besides I was too sensitive about what the neighbors would say to try anything so public. Rack my brains as I would, there seemed nothing else left.

Emma Had A Lot Of New Things

One afternoon last spring when I was feeling blue and discouraged, Emma Broach came over. We had been friends since our school days. But we now lived so far apart that it was often a long time between visits.

Of course I was glad to see her. But I must confess that in a way she made me feel more blue and discouraged than ever. From head to heels every thing she had on was new—she looked as if she had just stepped out of a fashion plate. I couldn't help envying her.

When she mentioned a little trip she had taken the week before, and some new furniture she had just ordered for her living-room, my envy doubled. I knew her husband didn't make any more than Everet. I wondered how she did it. Finally I blurted right out and asked her.

I Was All Ears

"Really, Helene," she answered, "I have bought so many things in the last few months that I know people must think some rich relative has left us all his money. But it's even better than that. I call it my 'Magic Purse Filler'."

"Helene," she went on, "I've found the ideal way to earn money at home—in spare time. It's so easy and interesting that it doesn't seem like work at all."

I was all ears—maybe Emma's "Magic Purse Filler" would solve my troubles too.

"You know how popular wool hose have become," she continued. "Even in summer—for golf, tennis and other sports. And in winter everybody wants them. That's the secret of all my new things—I earn them by knitting hose."

"Oh, no!" Emma explained, in answer to my question. "Not by hand. I knit them on a wonderful little hand knitting machine—my 'Magic Purse Filler'. I can knit a pair in so short a time. And I get fine pay for every pair I make."

Emma Tells The Way

"But who pays you?" I asked. "And how did you get started?"

"There is a concern in Rochester, New York," Emma answered, "that wants all the home-knit hose it can get—to supply to stores. You know how nearly everybody thinks genuine home-knit goods are so much better than the factory kind. It's the Home Profit Hosiery Company. You get the knitter from them. They show you how to use it—how to knit hose, sweaters and many other articles. They also furnish free yarn—it doesn't cost you a penny. You do the knitting entirely at your own convenience—sit down at the machine just whenever you feel like it. Then, as fast as you finish a dozen or more pairs, you send them to the Home Profit Hosiery Company and they send you a check. It's the easiest way to earn extra money I have ever heard of."

If Emma could do it, why couldn't I? She had a booklet with her that told all about the plan. I eagerly read every word of it and then immediately sent for a machine.

With the machine came a book of instructions that made everything simple and clear. After a little practice—simply following directions carefully—I quickly got the knack of it and have been doing fine ever since.

My First Check

The first week—just sitting down at the machine whenever I had nothing else to do—I knit four dozen pairs. A few days later I received my first

check—and how happy and proud I was. Since then the postman has brought me dozens of such checks—Many of them for much larger amounts; but none has ever given me such a thrill as that first one did—for it meant that at last I had found the way to keep my pocket book filled instead of empty—a way to end all the old skimping and worrying and doing without.

Operating the Home Profit Knitter looked so easy that Everet—who at first sort of pooch-pooched the whole idea—got interested and tried his hand. Now many an evening he fills his pipe and sits down at the Knitter and knits two or three or a half dozen pairs of hose before going to bed—says he would rather do it than read.

I No Longer Have To Do Without

Before long I had all the back bills paid up and enough money to blossom out in new clothes. Also for the first time in my life I now have a little money in the bank—all my own. And the amount is steadily

growing larger each month.

It's really surprising what a difference a little extra money can make. More than once I have earned enough in a single week to pay for a nice new dress. The biggest check I ever received in all my life came one week when Everet helped me every evening. Everet said last night maybe we would be better off if he were to quit his job as a painter and give all his time to knitting hose—and at that perhaps there's more truth in his remark than he realized.

Mrs. Helene Himberg,
261 Wyckoff Street,
Brooklyn, N. Y.

NOTE: The above is an actual experience. It was related by Mrs. Himberg to one of our representatives and is printed here practically in her own words. Mrs. Himberg's signed statement as to the facts is on file in our office.

It's Helping Hundreds Of Others

All over America, the Home Profit Knitter is helping girls and women (and men too) turn their spare time into money—helping people get out of debt—helping them pay for homes—helping them dress better—helping them buy new furniture and pianos, and phonographs—helping them provide for trips and vacations and other pleasures—helping them to lay up money to send their boys and girls to college—helping them build bank accounts—helping them buy cars—helping them get more comfort, more enjoyment and more self-respect out of life.

Knitting socks on the Home Profit Knitter is easy, rapid, profitable and pleasant. You can also knit sweaters, golf stockings, ladies' stockings or children's stockings, and many other articles. All you have to do is to follow the simple instructions.

You can send all your work to the Home Profit Hosiery Company and get good pay for it—all on a guaranteed basis—or you can buy your yarn and sell the finished work direct to friends and neighbors and local stores, just as you choose. Either way you can earn an extra \$5 to \$15 (some do even better) every week the year round—the amount depending on how much time you give to the work.

If your regular income is not enough—if there are things you want or need—why not at least write to the Home Profit Hosiery Company and get full information? Through their simple and guaranteed plan you can easily bring an end to your worries about money—and without having to step out of the house. Use this coupon. You should do it right away—it may make a difference of hundreds of dollars a year to you.

Home Profit Hosiery Co.

(Incorporated)

Dept. BV-12, 872 Hudson Ave.,
Rochester, New York

Home Profit Hosiery Co., Inc.
Dept. BV-12, 872 Hudson Ave.,
Rochester, N. Y.

Send me full information about making money at home in my spare time with the Home Profit Knitter. I am enclosing 2 cents postage to cover cost of mailing, and I understand that I am not obligated in any way.

Name.....

Street.....

City..... State.....

Write Name and Address Plainly

Michigan Farmer Club List

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EXPLANATION:—Figures in the first column represent the regular prices of other publications.

The figures in the second column give our prices for subscriptions to the Michigan Farmer and the other publications for one year.

The figures in the third column give the prices at which other publications can be added, if more than one is wanted in combination with Michigan Farmer.

EXAMPLE:—We will send the Michigan Farmer and Detroit Free Press each one year for only \$4.50. If the same party wishes the McCall's Magazine, it will cost 60c extra, or \$5.10 for this combination.

ABOUT DAILY PAPERS:—Our rates on daily papers are made for subscribers living on R. F. D. routes, or in towns where the daily does not maintain regular news boys or carrier service. If in doubt, send us your order, and we will have it filled, if possible. Our rates on Michigan daily papers apply to the state of Michigan only.

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More Missionaries

Our Weekly Sermon—By N. A. McCune

THERE are various kinds of missionaries. I read some time ago of a missionary who landed at an African port. In the hold of the ship were several hundred Bibles that had been printed in the United States, from a translation into the language of a certain tribe, which this missionary had made. But the Bibles could not be gotten out of the hold for several days, because they were under six thousand cases of liquor. Both the Bible and the liquor were missionaries, but not the same kind.

A missionary has recently returned to America who has been around the world. He went as a missionary of good will and brotherhood. He traveled about thirty thousand miles, and visited the principal countries of the far east, and in store for her. Five times in one hundred and thirty years she has been invaded by Germany. I talked with one man whose home had twice been occupied by German officers in his lifetime.



Are missionaries needed in the United States? It looks so. One thing is certain, you cannot explain to the average European why America is not in the League of Nations. We understand it, perhaps, but they do not. The fact remains that our President went to Europe and preached a very noble doctrine of international brotherhood, which he said would be organized into a League of Nations. But after that the United States refused to enter this League. Many Europeans believe that it was because we are selfish and wanted to make more money out of Europe. Said a member of the Chinese cabinet to Mr. Smith, "We can't quite understand you and your country. You seem to have two kinds of life—one moral, religious and philanthropic. But the other seems to be narrow, selfish and unworthy." The United States, Mr. Smith found, is savagely criticized because she had not been willing to continue an interest in European problems. "America First," "Keep out of entangling alliances," and the like, are quoted as convenient pretexts for us to hide behind, so that we take no risks for the sake of other peoples. Repeatedly was it said to our traveler, that if another war should break out, America will be to blame.

HE went to Japan. There he spoke to great audiences on the world's need of peace and brotherhood. He was applauded again and again. He met a ship builder who had just given away two million dollars for educational purposes. Ninety-six Japanese out of every hundred can read and write. That beats the United States. He says that Japan has learned her war-like methods from the white man. She heard Germany singing, "Deutschland Uber Alles," and Britain, "Rule Britannia." She heard America saying, "America for Americans," and, "My country, right or wrong." She saw Germany, England and Russia taking over some of the great sea ports of China, and China helpless to prevent them. She saw Russia creeping down on Manchuria, and she said, the only way to be big and powerful is to have a standing army, and to be ready to fight. She got ready, fought Russia and won. From the hour Japan won over this white nation she has been different.

Mr. Smith went to China. There also were great audiences awaiting him. But strangely enough, when he spoke with all the passion of his soul on the need of a world-wide peace, of international brotherhood, there was but little applause. People did not warm up to his doctrines. He found out the reason. China has been a peaceable nation, with respect to her foreign relations. There have been many internal wars, but she has not attempted to fight other nations. The boxer trouble was the attempt of extremists to put the foreigner out. And the Chinese say, it hasn't worked. It does not pay to be peaceable. Her lands have been taken, her ports seized, and her richest province is now under some kind of a mandate of Japan. Should China become thoroughly awakened, should her uncounted millions learn the methods of the white

man, she might become the most powerful and menacing enemy to peace the world has ever seen. It is needless to remark, that it is to be hoped that as this vast people learns the ways of modern civilization more fully, that it will learn the ways of peace, and not of war.

EUROPE is full of fear, and full of despair. There were two or three reasons for war in 1914, but there are a hundred now. Mr. Smith's remarks on France are highly interesting. "France believes that the rebuilding of the devastated regions is to be delayed many, many years. No substantial reparations have been paid by Germany, and none are probable for a long time to come. France lives in perfect horror of what the future has in store for her. Five times in one hundred and thirty years she has been invaded by Germany. I talked with one man whose home had twice been occupied by German officers in his lifetime."

Are missionaries needed in the United States? It looks so. One thing is certain, you cannot explain to the average European why America is not in the League of Nations. We understand it, perhaps, but they do not. The fact remains that our President went to Europe and preached a very noble doctrine of international brotherhood, which he said would be organized into a League of Nations. But after that the United States refused to enter this League. Many Europeans believe that it was because we are selfish and wanted to make more money out of Europe. Said a member of the Chinese cabinet to Mr. Smith, "We can't quite understand you and your country. You seem to have two kinds of life—one moral, religious and philanthropic. But the other seems to be narrow, selfish and unworthy." The United States, Mr. Smith found, is savagely criticized because she had not been willing to continue an interest in European problems. "America First," "Keep out of entangling alliances," and the like, are quoted as convenient pretexts for us to hide behind, so that we take no risks for the sake of other peoples. Repeatedly was it said to our traveler, that if another war should break out, America will be to blame.

ALMOST the very day it was known that the United States refused a mandate over Armenia, the Turks began to be more belligerent and insolent. This is a question on which there are emphatic differences of opinion among us. But whether we be democrats or republicans or something else, we will in time be compelled to say that our country cannot remain isolated, and let the suffering world take care of itself. We send shipload on shipload of relief, but these do not replace murdered families, and devastated cities.

What is the hope of the world? One thing is certain, it is not in politics, nor is it in armies and navies. A prime-minister said, "We have tried the politician; they can't keep us from war. We have tried the newspapers; they have failed. Let us now try the Christian church; perhaps it can teach us a better way."

SUNDAY SCHOOL LESSON FOR DECEMBER 3.

SUBJECT:—Jesus sending out missionaries.

LESSON:—Luke 9.1 to 10.24.

GOLDEN TEXT:—The harvest indeed is plenteous, but the laborers are few, pray ye therefore the Lord of the harvest, that He send forth laborers into his harvest. Luke 10.2.

The Cross-Cut

(Continued from page 595).

CHAPTER XXI.

Harry Harkins Is Found.

SO she was his friend! So all these days of waiting had not been in vain; all the cutting hopelessness of seeing her, only to have her turn away her head and fail to recognize him, had been for their purpose after all. And yet Fairchild remembered that she was engaged to Maurice Rodaine, and that the time of the wedding must be fast approaching. Perhaps there had been a quarrel, perhaps—Then he smiled. There was no perhaps about it! Anita Richmond was his friend; she had been forced into the promise of marriage to Maurice Rodaine, but she had not been forced into relinquishment of her desire to reward him somehow, some way, for the attention that he had shown her and the liking that she knew existed in his heart.

Hastily Fairchild folded the paper and stuffed it into an inside pocket. Then, seeking out one of the workmen, he appointed him foreman of the gang, to take charge in his absence. Following which, he made his way out of the mine and into the town, there to hire men of Mother Howard's suggestion and send them to the Blue Poppy, to take their stations every few feet along the tunnel, to appear mere spectators, but in reality to be guards who were constantly on the watch for anything that might occur. Fairchild was taking no chances now. An hour more found him at the Sampler, watching the ore as it ran through the great crusher hoppers to come forth finely crumbled powder and be sampled ton by ton, for the assays by old Undertaker Chastine and the three other men of his type, without which no sampler pays for ore. Bittson approached grinning.

"You guessed just about right," he announced. "That stuff's running right around two hundred dollars a ton. Need any money now?"

"All you can let me have!"

"Four or five hundred? We've gotten in eight tons of that stuff already; don't guess I'd be taking any risk on that!" he chuckled. Fairchild reached for the currency eagerly. All but a hundred dollars of it would go to Mother Howard—for that debt must be paid off first. And, that accomplished, denying himself the invitation of rest that his bed held forth for him, he started out into town, apparently to loiter about the streets and receive the congratulations of the townspeople, but in reality to watch for one person and one alone—Squint Rodaine!

He saw him late in the afternoon, shambling along, his eyes glaring, his lips moving wordlessly, and he took up the trail. But it led only to the office of the Silver Queen Development Company, where the scar-faced man doubled at his desk and, stuffing a cigar into his mouth, chewed on it angrily. Instinctively Fairchild knew that the greatest part of his mean temper was due to the strike in the Blue Poppy; instinctively also he felt that Squint Rodaine had known of the value all along, that now he was cursing himself for the failure of his schemes to obtain possession of what had appeared until only a day before to be nothing more than a disappointing, unlucky, ill-omened hole in the ground. Fairchild resumed his loitering, but evening found him near the Silver Queen office.

Squint Rodaine did not leave for dinner. The light burned long in the little room, far past the usual closing time and until after the picture-show crowds had come and gone, while the man of the blue-white scar remained at his desk, staring at papers, making row after row of figures, and while outside, facing the chill and the cold

of winter, Fairchild trod the opposite side of the street careful that no one caught the import of his steady, sentry-like pace, yet equally careful that he did not get beyond a range of vision where he could watch the gleam of light from the office of the Silver Queen. Anita's note had told him little, yet had implied much. Something was fermenting in the seething brain of Squint Rodaine, and if the past counted for anything, it was something that concerned him.

An hour more, then Fairchild suddenly slunk into the shadows of a doorway. Squint had snapped out the light and was locking the door. A moment later he had passed him, his form bent, his shoulders hunched forward, his lips muttering some unintelligible jargon. Fifty feet more, then Fairchild stepped from the doorway and took up the trail.

It was not a hard one to follow. The night wind had brought more snow with it, to make a silent pad upon the sidewalks and to outline to Fairchild more easily the figure which slouched before him. Gradually Robert dropped farther and farther in the rear. It gave him that much more protection, that much more surety in trailing his quarry to wherever he might be bound.

And it was a certainty that the destination was not home. Squint Rodaine passed the street leading to his house without even looking up. Two blocks more, and they reached the city limits. But Squint kept on, and far in the rear, watching carefully every move, Fairchild followed his quarry's shadow.

A mile, and they were in the open country, crossing and recrossing the ice-dotted Clear Creek. A furlong more, then Fairchild went to his knees that he might use the snow for a better background. Squint Rodaine had turned up the lane which led to a great, shambling, old, white building that, in the rosy days of the mining game, had been a roadhouse with its roulette wheels, its bar, its dining tables and its champagne but which now, barely furnished in only a few of its rooms, inhabited by mountain rats and fluttering bats and general decay for the most part, formed the uncomfortable abode of Crazy Laura!

And Fairchild followed. It could mean only one thing when Rodaine sought the white-haired, mumbling old hag whom once he had called his wife. It could mean but one outcome, and that of disaster for some one. Mother Howard had said that Crazy Laura would kill for Squint. Fairchild felt sure that once, at least, she had lied for him, so that the name of Thornton Fairchild might be branded as that of a murderer and that his son might be set down in the community as a person of ill-intent and one not to be trusted. And now that Squint Rodaine was seeking her once more, Fairchild meant to follow, and to hear—if such a thing were within the range of human possibility—the evil drippings of his crooked lips.

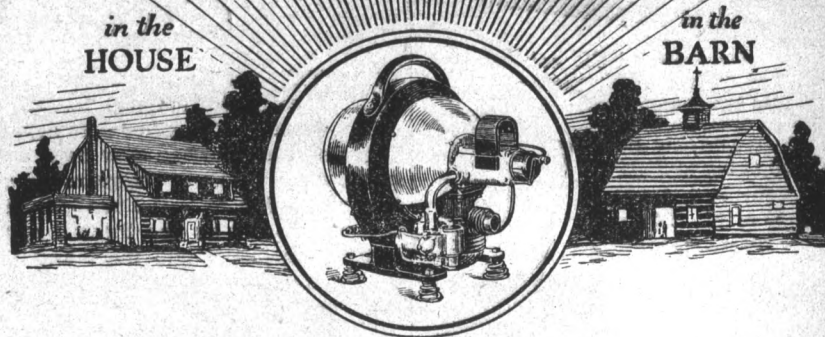
He crossed to the side of the road where ran the inevitable gully and taking advantage of the shelter, hurried forward, smiling grimly in the darkness at the memory of the fact that things were not reversed; that he was following Squint Rodaine as Rodaine once had followed him. Swiftly he moved, closer—closer; the scar-faced man went through the tumble-down gate and approached the house, not knowing that his pursuer was less than fifty yards away!

(Continued next week).

Six square feet is the minimum convenient area for a kitchen work table according to kitchen score cards adopted by a number of housewives.

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Woman's Interests



Cross-Eyed Mary

WITH golden curls and rosy cheeks she skipped joyfully to school. It was her first day, the very first that she had ever been away from home. She was six years old and now was going to be a little lady. The rapture she felt as she thought of the other girls she would meet and play with. Her cup of joy was full and overflowing.

Reaching the school she formed in line with the other girls who stared at her—some grinned, some smiled, some laughed at her and said, "hello, cross-eyes." For the first time in her little life she suffered a pang of pain as she had never suffered before, for she realized that she was different from the others—she was cross-eyed.

The day at school dragged on and on. It was so long. It seemed that she would never get away from it. But, when the day ended she hurried home amid the jeers of boys and girls calling after her—"Cross-eyed Mary." Her dear little heart was broken and all the joy she felt in the morning was turned to tears.

She persevered at school day after day until she could stand it no longer. Then she went to her mother with big tears in her eyes and told her all her troubles. She begged her mother not to send her back to school because she wasn't the same as other girls.

And, it was not until those chubby

little arms were clasped about her mother's neck, with the big tears rolling thick and fast down her cheeks, that the mother realized the injustice she had done.

Many heart-aches and sorrows can be kept from the dear little ones we love, and many hours of regret from parents, if they watch carefully over their children. Little Mary's eyes should have had attention when the first tendency of trouble became apparent. Many of these cases merely require lenses to correct the defect



Then She Realized She Was Different from the Others.

which causes the eye to cross. The parent who neglects the eyes of the child is neglecting a plain duty.—Eye-sight Conservation Council of America.

Hints for Christmas Gifts

NOW is the time to plan for the kind of gifts that you wish to have ready at Christmas time. Bags of all kinds are always acceptable, and even the men carry them. Here are some hints for making purses. The material may be wide ribbon, silk plush, velvet, leather, sealskin, or fur. If silk or satin is chosen, one can get it plain, stamp with a pretty design, and paint it in oil colors. If oils are used, be sure and press the painting in on the wrong side. Among the pretty designs are owls, bird of paradise, a basket of flowers, etc. A Christmas greeting with the name of the owner-to-be, can be placed inside. It can be beaded in, if preferred.

Bath slippers are made by purchasing a pair of white wool-lined soles. Shirr a wide ribbon around the sole, after placing a design of flowers, or berries on the toes. Shirr the top on a rubber, the size of the ankle. Put a bow of ribbon in front, or other decoration, if desired. The ribbon or silk used for the slippers, may be of pink, red, blue or any shade desired.

All kinds of dainty boxes are acceptable. One for home-made candles can be made of blue blotting pads. Cut into the desired shape, while flat. Bring up the corners, and sew together with blue silk cord or ribbon. A nickle or brass clasp can be purchased to fasten the cover. Paint some Christmas greetings on the cover, a holly branch or a sweet little verse from a Christmas hymn, such as "Peace on Earth, Good Will to Men."

A box of writing paper, with the monograms gilded on the corner, a

bunch of Christmas flowers, is acceptable. Book marks with hand-painted designs, hand-embroidered handkerchiefs with worked monograms in the corner are good. Plan to make your gifts practical as well as beautiful.—Miss I. D.

"JUST THE HOUSEWORK."

THE average farm wife will walk about twelve miles daily doing just the housework about the home and farm. Scientific minds have worked out different simple arrangements for the home that will cut down her steps by half.

It is well to plan to have a small kitchen with no more wall space than is necessary to accommodate the furniture. However, in one country home which I observed a short while ago, the kitchen was large, but very well arranged and I doubt if many more steps were required in doing the daily work than if the kitchen had been small. The sink, stove, table, cabinet and cupboard were all placed close together. The cabinet was situated between the stove and the sink so as to be in reach of both water and raw materials. The sink was large enough to hold the dishpan and the rack for draining the dishes. The cupboard for the dishes was only a step away. A drawer in the cabinet at the left received the kitchen silver. The other dishes were put on a kitchen cart to be carried to the dining-room cupboard, which was located near the kitchen door. A very important detail that was noted here was that a raised threshold had been

avoided between the kitchen and the dining-room, so that the kitchen cart might roll smoothly through.

An important small item was the kitchen stool. It was similar to the style used in some drygoods stores and lunch rooms. It was attached to the cabinet and was so located that it could be used when doing work at the cabinet or sink. When not in use, it could be pushed under the cabinet entirely out of the way.

By some little changes in your kitchen, it may be that you may save on the twelve miles that the average housewife covers every day.

THE ART OF MAKING WHITE OR CREAM SAUCE.

AND it truly is a culinary art to make this sauce to the creamy consistency that will tickle the palate of every member of the family.

One very good rule to remember in its making, as well as in the daily menu is, "nothing done in a hurry is ever done well." When making this sauce, give yourself plenty of time. You will need one pint of milk, or use half-and-half of milk and white stock, two tablespoons of butter, two heaping tablespoons of flour, one-half teaspoon of salt and a liberal dash of pepper.

First heat the milk in a double boiler. Some have advised the use of cold milk, but I find I have the best success if it is heated.

Put the butter in a saucepan on a slow fire, and stir until it melts and bubbles. Be very careful not to brown it, add the flour (dry) and stir constantly until well mixed. Pour on about one-third of the milk. Let it boil, and stir well as it thickens. One may tip the saucepan slightly to keep from sticking. Add about half of the remaining milk, let boil and thicken and stir vigorously until perfectly smooth. Be sure to rub out all lumps while it is yet very thick. Now add the remainder of the milk, salt and pepper and let boil, stirring the while that it may be perfectly smooth.

One can "dress up" the most commonplace dish, such as salmon, potatoes, fish, vegetables and numerous special dishes, to look very tasty. A touch of "something different" may be given to some of the dishes if bread crumbs that have been put in melted butter, or dried beef cut into bits, or pimentoes cut in shred, or grated cheese, be added to the sauce just before combining with the other food.

TESTED RECIPES.

Bran Muffins— $\frac{1}{4}$ cup sugar, shortening size of an egg; cream shortening and sugar together. Add to this 1 egg, 1 cup sour milk (or sweet milk), 1 cup prepared bran, $1\frac{1}{2}$ cup flour, 1 level teaspoon soda (or 2 teaspoons baking powder if sweet milk is used), pinch of salt. Mix well. This will make one dozen muffins.

Baked Squash (whole)—Scrub the squash clean, then cut one slice from one end so that it may stand securely. Then arrange it in the oven, and bake until very tender. The squash will take about thirty minutes to bake. Then allow to cool and cut off the top and scoop out the inside leaving the shell. Mash the pulp, and add to it a cream sauce, then return to the shell in layers and sprinkle each layer with grated cheese and small pieces of butter. Cover the top with browned and seasoned bread crumbs and mixed cheese and butter. Brown in the oven and serve hot.—Miss H. A. L.

Some Short-Cuts in Sewing

By the Prize Winners

First Prize.

Mrs. A. H., Battle Creek, Mich.

When gathering, lengthen the machine stitch and make two rows of stitching about three-eighths of an inch apart. Draw up one thread of each row and you have neat gathers that will not slip out of place.

When putting on a straight facing or binding, let one edge be selvage. This saves much time and basting.

The less particular things may be pinned instead of basted. If you are careful to put the pins in at right angles to the line of stitching, the machine foot will pass over them with no trouble.

A little fancy stitching adds much to the appearance of some otherwise plain looking things. Wind floss on the bobbin of your machine, loosen the shuttle tension enough to allow the floss to pass through easily, and

alls by ripping up the inside leg seam, sewing the patch in place and then re-sewing the seam.

In making buttonholes in every-day garments, I sew back and forth three or four times, leaving a small space in center where buttonhole is needed. This is then cut, being careful not to cut the stitching.

In making plain garments I cut out several garments at a time. Then stitch all seams so as to have them ready for pick-up work at odd times.

To prevent ripping in tablecloths, sheets, or towels at the ends, I sew back and forth two or three times in the same place instead of tying the threads.

When hemstitching wears out, I stitch serpentine braid across the worn edge. This makes a neat finish and lasts a long time.

When I get new underwear I stitch two or three times around the buttonholes on the sewing machine. This prevents them from stretching or losing their shape.

Fourth Prize.

Mrs. H. A., Carsonville, Mich.

I have five children to sew for, the oldest being five years of age. I do my summer sewing in the winter when the men are not working very hard and don't require the hearty meals that take so much time to prepare. I use lots of pins and do very little basting. I do the stitching with No. 40 thread, and instead of French seams lay the edges together and fold over about one-quarter inch and stitch. I find this will hold as long as the cloth will wear.

I make everything I can with the kimona sleeves. When it comes to darning men's cotton work socks, I crochet around the hole with knitting cotton, using single crochet and skipping every other stitch until hole is filled. I use tape to tie children's nightgowns instead of making buttonholes.

Fifth Prize.

Mrs. T. R. C., South Boardman, Mich.

I think my greatest short-cut in sewing is the plain slip-over dress with sleeves and body all cut together. I use an old dress for a pattern. Cut out, finish around the neck and opening first. Sew up the two sides and arm seams, hem, finish the sleeves with bias binding, put on the fastening, the dress is ready to wear. I put straps on the side seams and make a sash or a belt. The neck can be opened down the front, back or on both shoulders.

A yard and a half of pink checked percale, scalloped around the bottom and sleeves and finished with white bias binding and a white lawn sash made a very pretty dress for my seven-year-old daughter.

I find that a supply of cotton tape and bias binding of different widths is a great help. I always have a package of safety razor blades that are sharp on only one side, at hand when I want to do ripping.

PUMPKIN CROQUETTES.

In a mixing bowl mix two cupfuls of boiled and drained pumpkin with two tablespoonfuls of butter, salt, pepper and paprika, to taste, and one-half cupful of fine cracker crumbs, stir well, together, until well heated, then allow to cool, and shape into neat croquettes, brush over with beaten egg, toss in bread crumbs, fry in smoking hot fat to a golden color, drain and serve hot with tomato sauce.—Miss H. A. L.

A Christmas Dessert

RING out the bell for Christmas for that holiday is now on the way, and the busy housewife has already begun to plan for the Yuletide dinner.

Just what to have is always a perplexing problem. Perhaps it is roast fowl and potatoes in their jackets, but what about the trimmings? For the best letter with recipes for a dessert course for a Christmas dinner we will give a three-piece kitchen set. The second and third prize winners will receive a pair of fancy six-inch scissors, and the following two will each receive needle cases.

Send your letter to the Household Editor, Michigan Farmer, Detroit, Michigan, before December 7.

lengthen the stitch. Ordinary thread is used for the needle. Stamp the material and work on the wrong side. This stitching has the appearance of couching.

Second Prize.

Mrs. S. R. B., Montgomery, Mich.

When cutting children's garments from a small amount of goods and piecing is necessary, piece where trimming would look most effective. Cover the seam with a bit of braid or a simple design in embroidery work or a few fancy stitches, as the long and short stitch, or feather stitch. On garments for grown-ups wool yarn or beads can be used in charming effects.

To do punch work by a short-cut method, use a design such as a wild rose or butterfly, baste a piece of strong paper underneath, then a piece of coarse curtain net. Work through all. When finished cut out linen, being very careful not to cut net. Tear out paper, leaving net, which greatly resembles punch work. This can be worked to great advantage in mending thin breaks in lunch cloths and also to cover stains. Work the design over the stain or hole and cut away.

Third Prize.

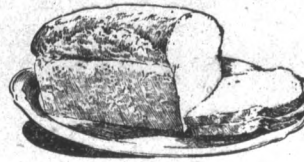
Mrs. A. S., LeRoy, Mich.

I have a family of seven to sew for, so I have to use all the short-cuts I can. I do very little basting and find I can make the work look just as neat as when I baste it.

I do my patching of every-day clothes on the sewing machine. I put a patch on the knee of a pair of over-

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A GOOD RECIPE FOR MILK BREAD

3 quarts of Lily White Flour, 2 pints of lukewarm milk, 1 cake of Fleischmann's yeast. Set in morning in warm place and rise until light. 3 teaspoons of salt, 1 tablespoon of sugar, 1 tablespoon of melted butter or lard. Mix with Lily White Flour until stiff, or from 20 to 25 minutes. Set in warm place and let rise until light. Make in loaves and work each loaf from six to eight minutes. Set in warm place until light. When light take warm milk and sugar and put over top. Keep good fire and bake slow one hour and when baked wash over again to make nice smooth brown crust.

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No. 4193—Ladies' Apron. Cut in four sizes: Small 34-36; medium 38-40; large 42-44; extra large 46-48 inches

bust measure. A medium size requires 4½ yards of 36-inch material. Price 12c.



No. 3656—Ladies' House Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require five yards of 36-inch material. The width of the skirt at the foot is two yards. Price 12c.



No. 4187—Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size requires 2¾ yards of 44-inch material. Price 12c.

No. 3854—Girls' Dress. Cut in five sizes, 6, 8, 10, 12 and 14 years. A 10-year size requires 2½ yards of 44-inch material. Price 12c.

Which is Larger the Sun or a Cent

The sun is the largest but you can hold the cent so close to your eye that you'll lose sight of the sun.

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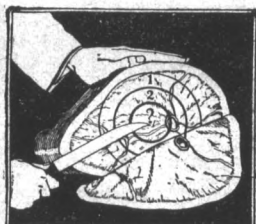


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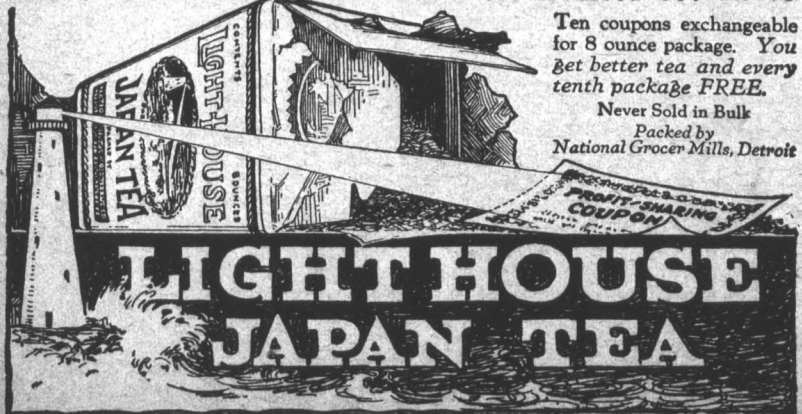
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MUSTARD DRESSING.

Will you please publish recipes for making home-prepared mustard that will taste like the mustard one buys at the store?—Mrs. W. H. E.

It is impossible to make a prepared mustard exactly like the commercial brand one buys at stores, as this recipe is secret and the process lengthy. The following is a recipe for a very good mustard dressing.

Use one and one-half tablespoons of mustard, one egg, one tablespoon corn starch, one tablespoon sugar, one tablespoon salt, a little pepper and a half pint of vinegar. Mix all together and cook in a double boiler until thick. This will keep a long time if air is excluded.

HOW TO MAKE CHOP SUEY.

Will you please send me a recipe for making chop suey, and also a mayonnaise for fruit?—Miss M. M.

Crop Suey.—Cook one and one-half pounds of loin pork until tender; cut in one-inch pieces. Chop one bunch of celery. Place half cup of oil in a

fryingpan and then dust half cup of flour over the diced meat. When fat is hot, add meat and brown slightly. Next add celery and half cup of white onions chopped fine; quarter pound of Chinese chestnuts; half pound of bean sprouts; one can broken mushrooms; one teaspoon salt; one teaspoon pepper; three cups liquid from cooked pork. Simmer slowly for three-quarters of an hour and serve with rice.

To Make Bean Sprouts.—Wash navy or lima beans and soak over night. Cover a wire rack with a piece of cheesecloth and then with a layer of cotton batting. Lay the beans on in single rows and cover with another layer of cotton. Keep moist with slightly warm water in a sunny window.

Fruit Mayonnaise.—Beat together the yolks of two eggs and all the sugar they will take. Add half a teaspoon each of pepper, salt, celery seed, ground mustard; then add half cup of vinegar and cook, stirring constantly. When cooked, add a lump of butter, the size of an egg and beat. The longer you beat it the better it is.



WHY SUFFER RHEUMATISM?

If you can think back a quarter century you will remember that it was more the rule than the exception to find our grandfathers and grandmothers, and even our uncles and aunts, in many cases, to be all crippled up with rheumatism. It is not imagination that leads you to think that the present generation of ancestors shows more immunity to the ravages of this crippling disease. It is a certainty, verified by the fact that mortality statistics show a drop in the death returns from rheumatism of more than forty per cent.

This is very gratifying but it does not alter the fact that much misery is still borne by certain victims of the disease, as is shown by frequent letters from sufferers. Very many of these cases may be cleared up if an intelligent attempt is made to get to the seat of the trouble instead of wasting effort and money in palliatives, such as liniments and other external applications.

We have learned that in most cases of rheumatism there is a focus of pus poisoning somewhere and that the way to cure the trouble is to locate and get rid of this focus. Quite often it is at the roots of decayed teeth, and it not infrequently happens that teeth showing no special signs of decay, when subjected to the searching power of the X-Ray show unsuspected abscesses.

The tonsils come next as the probable seat of trouble. It is not their size that counts, but their condition as to disease. If both teeth and tonsils can be shown to be innocent the trouble may yet be found in some of the sinuses of the head, or in an old diseased appendix or infected gall-bladder.

Generally it takes a very skillful physician, making a very searching examination, to locate the exact trouble, but once it is found the removal of this deadly focus will clear up the infection as nothing else will.

It is a mistake to think that diseased

teeth account for all the rheumatic and arthritic pains of which people complain. Many persons, acting on this theory, have had good teeth removed and bemoaned the absence of beneficial result. There are many sources of infection quite apart from the teeth. The poisonous agent is the collection of pus and this will be true wherever it may be located. It is absolutely imperative that it be removed for not only does it give rise to distressing aches and pains, but it drags down the whole system and does serious damage to the heart.

IODINE FOR GOITER.

My daughter, age fifteen, has rather a large neck and I am afraid of goiter. Please tell me if iodine taken internally is good. Is there anything better that we can apply ourselves?—H. F.

In making experiments in a certain district where goiter was very common, it was found that giving thirty grains of sodium iodid, twice a year, to a large number of girls prevented them from developing any enlargement of the thyroid gland. This is safe treatment, but it is my opinion that it is always better to consult a doctor and get the treatment that is applicable to the special case in point rather than go ahead on general plans which, after all, may not suit your individual case.

USING PULMOTOR.

Is it any good to use the pulmotor or attempt any other form of artificial respiration in a drowning accident where the body has been in the water all day?—J. K. L.

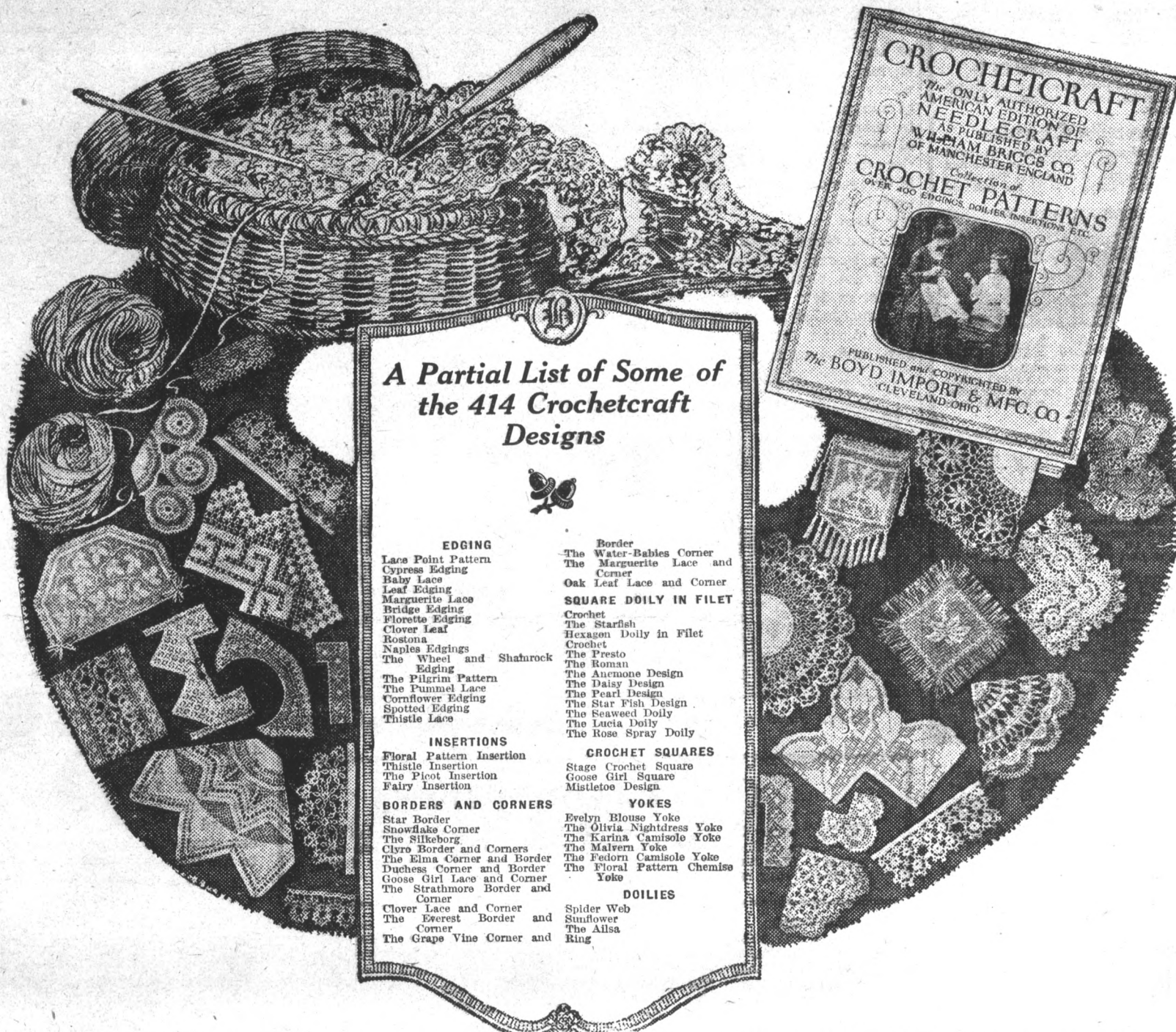
Not if the water was deep enough to shut off respiration. When a body has been in the water only a short time artificial respiration should always be tried, and it should be begun at once without waiting for a pulmotor or other device, as every second is precious. But once a person is dead no device is going to bring him back.

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The Elma Corner and Border
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The Strathmore Border and Corner
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Border

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The Anemone Design
The Daisy Design
The Pearl Design
The Star Fish Design
The Seaweed Dolly
The Lucia Dolly
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Stage Crochet Square
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Our Boys' and Girls' Department

How I Got My Deer

The Experience of One of the Club Boys

By Russell Mackey

THE month of November proves to be the most interesting to the man with a gun. It is at this time of the year that a war is waged against the monarch of the Michigan woods, the deer. Every year thousands of men leave their employment and go in search of this animal. Thousands of deer are killed every year but still they are numerous, although the herd is decreasing and will soon be extinct unless the season will be closed for a few years.

I am a nimrod myself and every year go in search of these quadrupeds. I have not been very successful as a hunter of deer but somehow or another I succeeded in getting a very large buck during the season of 1921. I shall endeavor to relate to the boys

how I succeeded in shooting this fine specimen.

The first day of the deer season found me roaming the woods in search of game. Deer were plentiful but I could not get within sight of the kind I wanted. Small deer without horns almost walked up to me but I would not shoot them. Probably they knew that the law warned any hunter against shooting them and therefore they did not fear me in the least.

Each of my brothers succeeded in shooting a five-pointed buck, and because of this I began to possess the hunting fever more than ever.

At last my chance came. One fine afternoon I decided to go out with my brother to look around for signs. We came upon the imprints of a large

buck. I was rather inquisitive and asked my brother if the track was a fresh one. He informed me that the deer had gone through about two hours before.

Being aware that the deer had a good start I decided to try my best in overtaking him. Such a task proved to be a very difficult one. The deer went through places that were almost impenetrable. At last I arrived on a hill overlooking a stream and spruce woods. I descended this hill and crossed to the hill on the other side of the ravine. The sun began to near the horizon so I thought it best to start back to camp. However, a fine shot presented itself. A partridge was sitting under a small balsam. I applied the sight to him and pulled the trigger. The result was that Mr. Partridge lost its head.

I retraced my steps to the hill from which I started and after reaching my destination I decided to follow the summit of the hill until I struck the trail that led to the camp. I had a keen eye on the country below me. At last my eyes detected something that looked like a pair of antlers. I looked a second time and being convinced that the object was a deer I raised my gun to my shoulder and after getting a bead on him I fired. The large monster fell on his knees but was up in a second. The sight pleased me so much that I shouted, "I've got him." The way I descended that hill reminds me of a hotly contested race. When I arrived at the bottom of the hill I could not locate the spot in which he was standing. After a hasty search I found it and began to follow the retreat of the creature. No signs of blood could be seen at first and I became disgusted, because I thought I had missed the target. At last specks of blood appeared on the snow. This increased my speed. I was practically on top of the animal before I detected it. It was located in a small hollow and a close examination disclosed that it had gone to the Happy Hunting Grounds.

A very difficult task presented itself. It was necessary for me to remove the entrails. At last I accomplished my task and through this act covered my hands and face with blood.

When I arrived at the camp I was asked if I had shot a deer. I expected to keep this a secret and would surprise them later, and accordingly answered "No." My brother in return replied, "Yes, you did." I can see some blood on your face." My hopes of keeping this a secret were destroyed and therefore admitted that I had shot a beautiful five-point buck.

I later weighed this deer and it proved to be a very heavy one, weighing 181 pounds.

A CHARACTER SKETCH.

BY ZELDA F. WOOD.

There sits in this school-room, day by day
A girl who is serious, yet sweet and gay;
Her hair is the brown of autumn leaves
When harvesters gather in their sheaves;
Her eyes are the blue that a sailor spies
On a tropical ocean, 'neath tropical skies.
She is never vain, or cross, or cold
She is sweet and gentle—but never bold,
And her cheerful nature, and kindly smile
Make friends who are true for all the while;
And of all that I meet, day after day
In sunlight or shadow, at work or play
This one of them all, it seems to me
Is just what a school girl ought to be.
Adrian, Michigan.

Our Letter Box

THIS letter box will be where the boys and girls can express their views, tell of themselves and things about the farm, or ask advice. The most interesting letters each week will appear here. Address your letters to me.—Uncle Frank.

Dear Uncle Frank:

This is the first time I ever attempted to write to you, although I have wanted to awfully bad.

My daddy has taken the Michigan Farmer for some time.

I am sixteen years old. I do not live on a farm, but just moved off of one last spring. We are renting a house at Austin Corners and I tell you it's some village.

I am at home alone at present, and have been all week, so I have to take care of the house and four children, the youngest not quite two years old. (Uncle Frank, please excuse all mistakes, but this pen of mine has balky streaks and I forget and try to spell words different than what they ought to be), and we certainly do have a lot of fun with him. He walks all over and says everything.

The people next door have three children and they have the whooping cough.

I will tell you what we have for pets, then I must quit my chattering, because once I get started I do not know enough to stop. We have five cats and one cow, and she is some pet.

Well, so-long until next time. Your niece, Gladys Knowlton, Davisburg, Mich.

It must be that pen helped, as your spelling was all right. It must be nice to live in "some village," at least your neighbors seem to have a whooping time there.

Dear Uncle Frank:

I am sending you an answer to your puzzle. We do not get your paper, but I read it at our neighbors. I really like the Al Acres, and also the Cross-Cut. Our neighbors have a Frank, and I often think he looks like you.

I go to school every day. Am in the

sixth grade. We live on a sixty-acre farm. I would like to have some of the nieces and nephews write. Your loving nephew, William Panta.

What does your neighbor's Frank look like. Is all his hair on his chin and none on his head, or has he plenty on his head and none on his chin? Tell me what he looks like and I'll tell you if you are a good guesser.

Dear Uncle Frank:

May I join in, and be your nephew? I have some tame rabbits, a camera, a violin, and had two pet doves but they left one morning. My brother and I went out with his twenty-two rifle to see if we could shoot some sparrows. We went in the chicken-coop and there was one of our tame doves. My brother was going to shoot it but it told him, "No." So he set his rifle down and caught it with his hands. He grabbed it by the tail. It tried to get away. All at once the dove got away, leaving in his hand a handful of tail feathers, and the next morning we went out but the dove did not come back.

Well, I will close for this time. Vesper Butts, Clayton, Mich.

I am glad your brother did not shoot the dove, although I bet it feels the loss of its tail. You certainly can be a nephew.

Dear Uncle Frank:

On Saturdays my brother and I have a race to the mail box to get the Michigan Farmer, which we all enjoy reading. The first thing I look at is the Boys' and Girls' page and when I see the heading, "Read-and-Win," I get busy.

We have hot lunches again this term at school, and I like them very much.

I am cook this week, and if you come out I trust you will have something good.

I 'Read' but do not 'Win.'

Well, I will have to go to bed now, so that I can study tomorrow. Good-night! Your niece, Lucille Stuckey, Redford, Mich., RR. 3.

Just keep on reading and some day you may win. I'd take my chances on something good with you as chief cook.

Dear Uncle Frank:

I am a little city girl that wants to join your happy column. I am twelve years old and I am in B-7 grade. I love the country very much. One time when I was at my aunt's house in Washington I went out in the field to pick berries and on my way back I was lost in the oats field. I came out on the other end and went back to the house. My father has been a reader of the Michigan Farmer many years, and I also have enjoyed the boys' and girls' section. I remain, your niece, Dorothy Wicke, 5064 Garland Avenue, Detroit, Mich.

I think we are all very glad to have you join us. Apparently it was so easy for you to get lost in the oat field as it is for some folks to get lost in the city.

Dear Uncle Frank:

I raised about a quarter of an acre of popcorn and got twenty bushels off it. I also raised a half-acre of sugar beets. I have caught three muskrats already, but today the water is so high that I can not find the traps. This year I caught nearly thirty rats and I got ten cents each. I bindered thirty-five acres of grain this year, and I helped haul it in. My father raised 1,700 bushels of grain.

Well, I must stop as my letter is getting too long. Another new nephew, Erwin Helmrich, Bay City, Mich.

I hope you do well selling your popcorn. I think it is very nice that you are interested in things which bring you a profit.

Dear Uncle Frank:

I was very pleased when I came home from school and found my map lying on the table. I like it just fine. I didn't think I would get one. Now I am going to try again. I took my map to school. I am going to have the teacher put it on the wall.

We have three kittens and one dog for pets. We have lots of fun with them. I like to read your letters in the Michigan Farmer.

Well, I must close. I remain, as ever, your loving niece, Nina McCall, Marlette, Mich.

I like your unselfishness in wanting all of the school to get the benefit from your map. I hope you are successful again.

Dear Uncle Frank:

I am answering your questions for the first time. I am a boy fifteen years old, and am a member of a calf club, also a handicraft club. I received the county championship last year and enjoyed a week at Lansing. I have a calf five months old. It eats oats, hay, and most everything. I like to feed it bran as it will eat it right from my hand. I live on a 100-acre farm and enjoy helping my father with the work. Sincerely yours, Clarence H. Braun.

Good for you. I hope you will add other championships to your list before you quit.

A TRIED AND TESTED BAIT.

BY JOHN O. ROBERTS.

THE following formulae may be compounded by anyone and is excellent lure for the animals intended.

For muskrat lure, extract parsnip juice by boiling (boiling keeps it).

Procure five cents worth of oil of annis and five cents worth of oil of bergamot from your local drug store. Mix the oil of annis and oil of bergamot together and add parsnip juice to blend perfectly, both in smell and taste. Add strong soapsuds until the mixture flows freely. This makes a good bait, but by adding a little musk from the rat's scent glands you have a powerful lure that appeals to both appetite and passion. (Parsnip must be boiled thick).

To prepare for skunk compound the same way, except to put a small de-

cayed minnow in, in place of parsnip juice, and three or four drops of skunk scent in place of rat scent. In this you also have a powerful lure equal to and better than many patent lures advertised.

Use just a couple of drops on a small bunch of grass, or brush, placed close to the trap.

Never allow the muskrat bait to spill in running water, as the fluid will spread and float, thereby giving all the rats a taste and losing all their wish to get at it any more.

THE PUZZLE SOLUTION.

MANY had the puzzle which appeared in our November 18 issue, correctly solved. In fact, a great many more than I expected got the mixed English straightened out and then found the answer to the question. In

Imagination Contest

MAUY have asked that Uncle Frank's picture be printed in these columns, because they want to see what the fellow they are writing to looks like. All the pictures the camera has taken so far would spoil the page, so none of them have been used. Therefore, this week you are asked to make a drawing of what you think Uncle Frank looks like. You can make this picture funny or serious, just as you like. Let your imagination guide your pencil, and we're sure you can do as well as the camera did, anyhow. The ten best drawings will receive the usual prizes: The first two, Michigan Farmer pencil boxes; the next three, nickled pocket pencils, and the last five, Michigan Farmer maps of the world and new Europe. Please send your pictures to Uncle Frank, Michigan Farmer, Detroit, Michigan, before December 8.

order to compare your replies with the correct one, the latter is given below: QUESTION-HUNT.

What per cent of Michigan cattle are tubercular?

Answer: Three and one-half per cent. Page 26 or 548.

THE LUCKY TEN.

BECAUSE of the large number who had the answer to the combination puzzle of November 18 correct, I had to use the drawing method of determining the winners again. This I felt was the only fair way in which I could pick the winners.

The ones who were lucky enough to have their papers drawn out of the basket were:

Pencil Box.

Nellie Mayer, Three Rivers, Mich., RR. 4, Box 131.

Max Knude, Bridgman, Mich.

Nickled Pocket Pencil.

Louis James Simonich, of L'Anse, Mich., Box 985.

Cecilia A. Wiegand, Warren, Mich., RR. 1.

Lura Ten Have, East Saugatuck, Mich., RR. 1.

Maps.

Josephine Laprad, Monroe, Mich., RR. 4.

Bessie Smith, Laraway Road, Grand Rapids, Mich.

Ruth E. Hill, Flint, Mich., RR. 6.

Hazel Marvin, Albion, Mich., RR. 2.

Vaughn Hill, Grand Ledge, Mich., RR. 3.

WANT TO CORRESPOND.

The following would like to correspond with other young folks interested in this department:

Violet Williams, Roscommon, Mich.

Aletha Topham, Clifford, Mich.

Fern Chamberlin, Topinabee, Mich.

Mildred Frinkel, Port Hope, Mich.

Gladys Coxen, Ovid, Mich.

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HILLSDALE ROBE & TANNING CO., Hillsdale, Mich.

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Rats! Do You Know What They Cost You?

Good authorities say 2 cents per day, or \$7.20 per year for every "rat boarder" on your place.

Rats are sly and cautious. Attempts to exterminate them have rarely succeeded.

But Keep Them Out!

That's first in importance in keeping them in check.

Rat proof your granary, corn crib, cellar, poultry house, etc. with YOUNGSTOWN EXPANDED METAL. Put it anywhere a rat may find an entrance.

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As a special inducement to get to try Youngstown Expanded Metal for rat-proofing, we have a limited quantity of this material in narrow widths and varying lengths to be sold at 3c per square foot—freight paid to your depot. Figure up the quantity you can use, and order direct from our \$1,000,000 factory.

A few dollars invested now will more than pay the slight cost of rat-proofing all your buildings.

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Buy the LATEST

Look! See What You Get—Special WITTE Throttling Governor Engine with non-spill extension hopper—weight over axle—2 wheel truck—easy to move. Direct Geared. Lever controlled clutch—Arm swing motion. We have only one Log Saw—our New Improved. Lighter, stronger—steady running—worth more. Lifetime Guarantee—Cash or Terms—Immediate Shipment. Free Saw at small extra cost. Catalog Free.

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Bigger returns from pigs sent to market thirty days earlier soon pay for a dry, sanitary, vermin-proof, fire-safe, hog house of Natco Glazed Hollow Tile. Free from painting and repairs, perfectly ventilated. Easily erected at reasonable first cost—no upkeep expense. Write for your copy of the new Natco on the Farm Book.

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BARREN COWS—are the results of CONTAGIOUS ABORTION.

Prevent this by using ABORNO. Easily administered by hypodermic syringe. Kills abortion germs quickly without harming cow. Write for booklet with letters from users and full details of Money-Back Guarantee.

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Waukegan, Ill. In business over 125 years

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Dairy Farming

GROWING INTO A PURE-BRED HERD.

SOME men achieve a pure-bred herd of dairy cattle by the simple expedient of buying one ready made, and then spending the rest of their lives in the effort to maintain the herd, get back the original investment, and pay dividends upon the money invested. The pure-bred business cannot be learned over night, and offers no quick road to wealth, even if it does hold out the hope of good rewards for the skilled stockman and business man.

Personally, I rather like John Steele's way of getting into the pure-bred business. Just thirty years ago he bought four registered Holstein heifers, and has not bought a single female since. Today he has one of the large, good herds of the country.

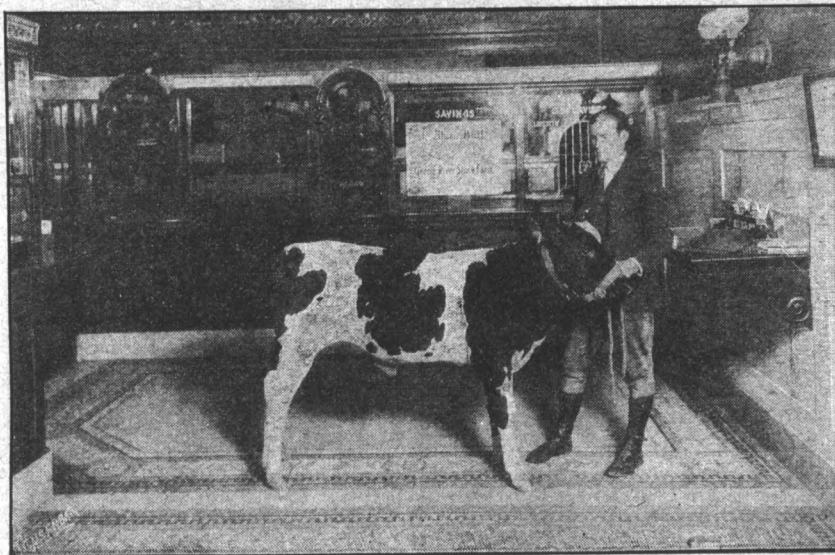
The female progeny of these four heifers was carefully raised, and bulls

top of the sale was obtained by Baird Brothers on a yearling son of Cedar Lawn Canary Paul, out of a 1,000-pound cow. The top female was a thirty-one-pound cow, which sold for \$850.

There were fifteen bulls consigned to this sale, and without exception they were of the kind intended for heading select herds of pure-breds. There was spirited competition for all of these bulls, and contrary to the result in many sales, the bull prices brought up the total average of the sale.

RENTING DAIRY FARMS.

RENTERS and owners of farms on which dairying is an important enterprise meet problems that are hardly known where only the ordinary crops are grown. Buildings and fences become important considerations, and



A Typey Young Bull Developed in the Corey J. Spencer Herd, Poses in the Local Bank for the Picture Man. The Use of Pure-bred Sires is One Method of Improving the Financial Status of Cow Owners.

of extra good breeding and individuality placed at the head of the herd. Many of the daughters of these bulls made most excellent A. R. O. records, as John Steele believed thoroughly in giving every cow on his farm a chance to show what she could do.

Steele preferred the practical, cautious methods of the everyday farmer in his breeding operations. His testing work was done under conditions which the average farmer could duplicate. High pressure methods found little favor with him. But he was always alive to improved methods of doing things.

This is shown by the readiness with which he took up silage way back in 1880. He also conducted numerous field experiments. Today, at the age of seventy-five, he is still striving to improve his methods. If he had to do it all over again he probably would do just as he did thirty years ago: start small and grow larger.

When he got started in the dairy business there was no good market for milk, so Steele solved the difficulty by making cheddar cheese. His neighbors offered to bring their milk also, so before very long he had a cheese factory in full operation. He continued this until the coming of the condensaries made the further operation unprofitable.

HOLSTEINS SELL WELL.

SIXTY-FIVE head of Holsteins were sold at the Waukesha County Association Sale on November 14, for an average of \$325. This is by all odds the most successful Holstein sale of its character in many months. The

also the division of land between pasture and feed crops. Questions arise concerning the size, quality, and ownership of the herd. The very nature of the business makes it necessary that the landlord take an interest in live stock and the crops and conditions necessary to make it profitable. Vexing problems may develop in connection with the ownership of the cattle, the furnishing of man labor, supervision and assistance by the landlord, machinery and tools, work animals, the division of receipts from swine and poultry, the rental of pasture, and the keeping of accounts.

Another important phase comes up when the tenant leaves the farm—the division of jointly-owned live stock, payment for feed left on the farm, and for winter grain, fall plowing, manure hauling, and improvements made by tenants. There are also discussions of the length of notice given of intention to terminate the lease, the length of the lease period, and the arrangements that have been found workable when farms are rented on crop shares to tenants having a few cows and getting all of the income from them.

It was found that most good dairy farms are rented on some sort of share basis and that it is usually the smaller and poorer farms that are rented for cash, but there are some owners, often those living at a distance from their land or those knowing little about farming, who find the cash arrangement the best, even though the farms may be good enough to attract the best tenants. However, the condition of the buildings and fences on many cash-rented farms and the difficulty of arranging for betterments handicap the

WE USE THE De Laval Cream Separator

86% of the Exhibitors at the 1922 National Dairy Show

held at Minneapolis, October 7-14, use De Laval Cream Separators. These exhibitors of purebred dairy cattle are the cream of the world's best dairymen—they know the best separator and use it.

Butter made from De Laval separated cream also won first place in every class at the annual convention of the National Creamery Butter-makers Association, held in connection with the Dairy Show. This makes the twenty-sixth time that De Laval-made butter has won first place since 1892. The world's best buttermakers use and recommend the De Laval.

In order to determine the oldest De Laval Separators still in service, we will give a prize of

\$25 to the Owner of the Oldest DE LAVAL in Each State

Simply write to your nearest De Laval office, giving the date you purchased the machine, length of service, size, serial number, and a statement regarding the service you have received from it.

Prize winners in each state will be announced in due course.

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GET BEHIND A "Midget" Marvel
One Man
Self-Contained Roller Flour Mill
Only a small house and small power necessary. There's more profit in this high class business than anything you can get into on the same capital, because "It makes a Better Barrel of Flour Cheaper." Saves the high freight on wheat out and flour and feed in. "The first eight months I made a net profit of over \$800," says A. H. Ling, Jetmore, Kan.; "My profits from the 'Midget' Marvel average right around \$40 per day," Chas. M. McKinney, Cooper, Tex.; "Was \$6000 in debt when I bought my 25 barrel 'Midget,' and the little mill pulled me clean out of the hole long before I bought my 40 barrel mill from you," says M. A. Kann, Oxford, Mich.
Capacities: 15, 25, 50 and 100 barrels of fine roller patent flour a day as any mill can make.
Your community wants one of these mills. Start one before someone else gets in. It's a lifetime paying business. Write today for free booklet, "The Story of a Wonderful Flour Mill," 30 days free trial.
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ON MAN OR BEAST.

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Delivered

Sore Shoulders
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For sale at Drug Stores, Hardware and Shoeing Shops, or mailed by us. If you have never tried it send for FREE SAMPLE.

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BEANS WANTED

Send one pound fair sample. State how many. Give shipping point. We will bid straight price your station. Clover Seed wanted also.
A. H. FOSTER CO., Allegan, Mich.

dairyman on such places. Some land owners who rent for cash encourage better tenants and better farming by leasing a herd of cows with the land, but there are very few who follow this practice.

A copy of a bulletin treating this subject fully may be had by writing the Department of Agriculture, Washington, D. C.

MILK AT TEN CENTS IN CHICAGO.

OVER two hundred grocery and delicatessen stores have announced a price of ten cents a quart on milk. This is a cut of two cents from the former price.

The Milk Cooperative Marketing Company, which is an organization of Illinois, Wisconsin and Michigan dairy farmers, make it possible for these stores to sell at this price, as they will deliver the milk to the stores at a price which will enable them to make a fair profit at ten cents.

It seems that this low price on milk is another indication of the value of cooperation. Undoubtedly the farmers are getting just as good if not a better price for milk than they have had before. But they are eliminating a middleman and are passing on to the consumer part of the saving thereby.

KEEP HEIFERS GROWING.

RETURNS get our attention. Possibly for this reason the heifer calves are unduly neglected. But this stock should be kept growing normally. With silage and clover or alfalfa hay, one should feed each heifer from two to five pounds of farm-grown grains per day. If no silage is available, feed two pounds of corn daily with all the clover or alfalfa hay the heifers will consume. With silage and no legume hay, a good ration consists of a portion of silage and fodder or mixed hay with a grain mixture consisting of equal parts of corn and linseed meal.

FARMERS USE OLEO.

IN a recent survey made in Jackson county among the patrons of a creamery it is found that fifty per cent of them admitted to the use of oleo on their tables. It is said that one oleo manufacturer admitted to a dairy expert that if it wasn't for the farmer trade the oleo people would go out of business. Thus it seems that many dairy farmers are supporting their strongest competitors.

WATCH THE BULL.

NO man trusts a tiger until it is dead. A bull, although he uses an entirely different method, can do just as much damage as any animal in the zoo or in the jungle. He is more vicious and treacherous than most of them, and with such a reputation no man should trust him for a minute, no matter what his record for good behavior has been. "Mean" bulls perhaps have killed fewer men than those considered safe.

A bull led on a staff attached to the ring in his nose may save a tragedy. Better still, keep him in a pen so arranged that handling would not be necessary at all. Plans for constructing safe bull pens may be obtained from the Department of Agriculture, Washington, D. C. Every farmer who owns a bull would do well to put up this warning in his barn: "Watch the Bull."

NATIONAL MILK PRODUCERS' MEETING.

(Continued from last week).

Construction Work in New York.

Finding wider markets for milk was the subject of a talk by W. W. Hovey,

general manager of the Dairymen's League Cooperative Association of Utica, New York. The league association is not only working to improve the quantity of milk, but increase its sale in various ways. During the war, milk in the New York territory changed from grade C to grade B. Much advertising is being done in the newspapers to promote the sale of milk. Billboard advertising in foreign languages is being done in the foreign settlements of the city. In four years the consumption of milk has increased from 2,000,000 to 3,000,000 quarts.

A bureau of nutrition has been organized. School children are receiving milk. It was found before this campaign started that many city children were sent to school without any breakfast. Records show that the effect of drinking milk on children is phenomenal. Fifty sales agencies have been established for the distribution of dairymen's league products in the east. Sales agencies have also been established in sixty-five foreign countries. Dairymen's league products are now sold in all nations. They are well known in Palestine, and are on sale in the heart of Africa.

Michigan's Program.

The work of the Michigan Milk Producers' Association was described by N. P. Hull, president of the association. In the outset the distributors were told that if they would play fair the producers would play fair. The contract provides that the dealers will take no milk that does not come from the Michigan Milk Producers' Association. The association gets two cents per 100 pounds for selling, and has \$68,000 accumulated besides paying all expenses. A new plant is being built to take care of the surplus. Small receiving plants will be started on the outskirts of the territory to manufacture the surplus. The producers and distributors meet at conferences as friends, and after five years of cooperation they are better friends than ever.

The Turner Center System.

The New England Milk Producers' Association plan was described by John S. Murdock, attorney for the association. The Turner Center system has been in operation in Maine for many years. It was formerly cooperative but for a long time has been operated by a company that has divided the surplus earnings after paying operation costs and a reasonable profit, among the producers. The company now has twenty-eight plants in the country, and large plants in Boston, Lynn, Lowell and Providence. In 1926 the Turner Center system will be farmer-owned. Five per cent of the milk checks will be used to retire the preferred stock. It does a business of \$4,000,000 a year.

At Plymouth, N. H., is a creamery acquired by farmers, which has not been so successful. Cooperative plants designed to take care of cooperative milk are established in several New England cities. There are thirty-four farmers' cooperative creameries in Vermont, all competing with each other except six which federate in hiring a sales and a purchasing agent.

It is the purpose of the New England association to organize all these competing plants into one system, and develop them until they control the milk handling situation in New England. Sentiment among the cooperatives is strong for this consolidation into one marketing enterprise.

THE Michigan Potato Growers' Exchange has named F. L. Granger, of Benton Harbor, as sales manager to succeed R. A. Wellman, who resigned to enter potato selling business with A. B. Large, former manager of the exchange. Mr. Granger formerly sold grapes on the Benton Harbor section during the summer, and potatoes and onions in Texas during the winter.

What are YOU Going to Do for Christmas?

YOU have friends to remember this Christmas. Perhaps you do not want to spend much money for gifts—but want them to have something on Christmas morning that comes from you.

The Michigan Farmer Will Solve Your Xmas Problem

Subscribe to The Michigan Farmer for a year for one or as many of your friends as you want to remember on Christmas. Before Christmas your friends will receive handsome Christmas cards bearing Christmas greetings from you and the information that The Michigan Farmer will be delivered each week for twelve months.



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Our success can also be yours. Our young animals are the finest examples of breeding and will do much to improve your herd. Get the blood of the King of Sires **EDGAR OF DALMENY**

into your herd and you will have individuality, distinction and quality.

The services of our Grand Champion Stallion, **GEORGE HENRY**

are available.

Your correspondence and inspection are invited.

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ORION, MICHIGAN
W. E. SCRIPPS, Prop. SIDNEY SMITH, Supt.

Registered Aberdeen-Angus cattle. Two bulls from eight to eleven months old. One a show bull, large and growthy. Priced reasonable. Inquire of F. J. WILBER, Clio, Mich.

FOR SALE, Several registered Aberdeen-Angus bulls and heifers of various ages. **LANG BROS.**, Davison, Mich.

Registered Guernseys
Another crop of calves. Choice bull calves \$75, their breeding and records will please you.
J. M. WILLIAMS, No. Adams, Mich.

For Sale Guernsey Herd Bull
3 yr. old. Sire, Anton's May King sold for \$7,000.00. Dam, Bonnie's Bloom 550 lbs. B. F. Price \$175. Fall bull calves by above sire. Accredited Herd.
GILMORE BROTHERS, Camden, Mich.

Registered Guernsey Bull. Born Nov. 18, '21. Out of Advanced Registry Sire and Dam. An extra good individual, very reasonable price for quick sale. Herd on Federal Accredited List. No. 21701. Knapp & Woodworth, R. 2, Waterliet, Mich.

GUERNSEYS—REGISTERED BULL Calves. Containing blood of world champions. A. R. cows. Federal inspected. **HICKS' GUERNSEY FARM**, Saginaw, W.S. Mich.

Wallinwood Guernseys

Young bulls from A. R. cows for sale.
F. W. WALLIN, Jenison, Mich.

Guernsey Bull ready for light service. Bred heifer. Yearling heifer. Adv. Reg. breeding. Free from disease. G. A. Wigent, Watervliet, Mich.

For sale Registered Guernsey cows, May Rose Breeding also bull calves \$50 each. Registered A. R. dams. **JOHN EBELS**, R. 2, Holland, Mich.

WINNWOOD HERD

Registered Holsteins

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Ask us about a Real Bull a
Maple Crest or an Ormsby.

JOHN H. WINN, Inc., Rochester, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

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Holstein Friesian heifer and bull calves, purebred registered and high-grade. Price \$20 up. Splendid individuals and breeding. Write us your requirements. Browncroft Farms, McGraw, N. Y.

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All ages, from high-producing dams. Also a few registered and high-grade Holstein cows at farmers' prices. Pedigrees and prices upon request. A clean herd under Federal supervision.
WHITNEY FARMS, Whitney, Mich.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write **GEO. D. OLARKE**, Vassar, Mich.

Yearling Bull, \$100

Pure bred, registered, federally tested. Dam, a 13 lb. 3 yr. old daughter of King Segis Pontiac, 37 lbs. Good individual, mostly white. Guaranteed healthy. Priced to sell quickly. Pedigree on request.
ALBERT G. WADE, White Pigeon, Michigan.

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Young Bulls that will please you in breeding, individuality and price. Some of them are very desirable for heading pure bred herds. Federally accredited.
I. M. SHORMAN, Fowlerville, Mich.

For Sale a semi-official daughter of Maple Crest Korn. Hengerveld. Federal tested, also a few granddaughters from 1 to 3 yr. old. Terms if wanted. **M. L. McLaughlin**, Redford, Mich.

For Sale King Segis Breeding

Nine months old bull, whose seven nearest dams average 27.72. This is the last of my nineteen of this age. The others are all sold.

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I Have Two registered Holstein Bull calves that I will farm out, for period of three years, to responsible farmer or dairyman, who wishes to improve his herd.
A. R. GRAHAM, Flint, Mich.

FOR SALE Reg. Holstein-Friesians. Male calves 35 lb. sire and 27 lb. dams A. R. O. cows. Heifers bred to 35 lb. sire, from one to a car load. Heavy springers, \$125 and up. **FRANK STAFFEN**, Howard City, Mich.

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

Registered Jersey Cattle. Some young bulls for sale, ask for pedigree. Others would spare a few cows to freshen soon, records kept. Herd accredited. **J. L. CARTER**, Lake Odessa, Mich.

For Sale: Jersey bulls ready for service, cows and heifers due to freshen soon. All cows Register of Merit. Accredited herd.
SMITH AND PARKER, R. 4, Howell, Mich.

Lillie Farmstead Jerseys For sale, 3 heifers bred to freshen this fall, 2 bull calves, 6 to 9 mo. old.
Colon C. Lillie, Coopersville, Mich.

Jersey Bull Calves 7 mos. to near yearlings strong in S. Lammers. T. B. tested.
H. HALSEY, Homer, Mich.

Jersey Cattle Young stock for sale. Accredited herd.
F. L. BODIMER, Reese, Mich.

JERSEY Bull ready for service. Federal accredited herd. High production, and show winners. Choice individual, price low. C.S. Bassett, Kalamazoo, Mich.

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5 yearling bulls 8 yearling heifers
10 of the above sired by our \$5200 Repeater bull. We have others not related. This is an opportunity to start in good stock at a moderate price.

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BUY A BULL

that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. We guarantee every animal to be a breeder. Federal Test. One hour from Toledo, Ohio, N. Y. C. R. R.

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Milking Shorthorns priced reasonably. An accredited herd selected for beef and milk.
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Polled Shorthorn Cows & Heifers
in calf and calf by side. Also a few young bulls. Herd headed by Victor Sultan and Royal Nonpareil.

We can please you in richly bred cattle with quality at farmers' prices.

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We are offering two splendid white yearling bulls by Imp. Newton Champion and a few extra good heifers and young cows at very attractive prices. For full particulars write to

C. H. PRESCOTT & SON,
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offer for sale both milk and beef breeding, all ages
Write **M. E. MILLER**, Sec'y, Greenville, Mich.

Milking Shorthorns Bull calves for sale. Also 2 cows.
ROSEMARY FARMS, Williamston, Mich.

Clayton Unit Shorthorn Breeders' Assn. Scotch, Scotch-Hinkley and Milking Shorthorns for sale all ages. **W. J. Hinkley**, Sec'y, Flushing, Mich.

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All are dehorned and the best of quality. Must be sold at once your choice one load or all. Most all bunches Herefords. Weight 500 lbs. to 1000 lbs. and each bunch even in size, some just fair flesh, account short pasture. Know of light Shorthorn steers 54c. State number and weight preferred. **V. BALDWIN**, Eldon, Iowa

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Every's Berkshires have proven their superiority at the leading Michigan fairs in 1922. You want the best. Let us help you to get started right. Spring boars priced reasonable.
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Berkshire gilts, one boar for sale. April farrow from A No 1 stock at very low price.
JOHN KERTYS, R. 1, Daggett, Mich.

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TOPMAST SENSATION

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The sensational, undefeated pig of 1922. Sired by **UNIQUE SENSATION**, Junior Champion, National Swine Show, 1921. We are breeding only a limited number of sows to this boar. **WE HAVE ONLY A FEW SPRING BOARS LEFT.** Prices very reasonable. **WRITE IN NOW.**

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"The Home of Grand Champions"

Duroc Fall Yearling

and spring boars. Some real herd prospects sired by O. C. K. Col. 2nd. All Col. of Sangamo and Diamond Joe. Priced to sell. Fall pigs either sex. Write for description and prices.
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all sold. Have two spring boars left at a reasonable price. Will book orders for April & May Pigs.
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Woodlawn Farm Duroc Hogs meet present day requirements, length, size and quality. Young stock for sale at reasonable prices and fully guaranteed. Write your wants.
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Oakwood Farm offers choice gilts of Orion Cherry King and Walt's Top Col. breeding bred to Pathfinder Orion for Ang. and Sept. farrow.
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Duroc Jerseys We have a choice lot of service. Will ship on approval. Satisfaction guaranteed.
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BROOKWATER DUROC JERSEYS
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Sired by Panama Special 55th and Big Bone Giant Sensation.

BROOKWATER FARM, Ann Arbor, Michigan
H. W. Mumford, Owner, **J. B. Andrews**, Lessor.

Undeclared under year Duroc boar of Michigan and junior champion at state fair and a number of other boars for sale. Sensation and Pathfinder breeding predominating. **Michigana Farm**, Pavilion, Mich.

Duroc spring boars, gilts, summer and fall pigs for sale. Reasonable prices and satisfaction guaranteed. **Jesse Bliss & Son**, Henderson, Mich.

DUROC-JERSEYS Do you want a good Pathfinder boar pig?
E. D. HEYDENBERG, Wayland, Mich.

DUROC-JERSEYS Spring Boars for sale.
CAREY U. EDMONDS, Hastings, Mich.

DUROCS Spring boars and gilts, Pathfinder breeding. Sturdy individuals.
CLARENCE B. CALKINS, Wayland, Mich.

Pleasant View Durocs Spring boars and gilts. Choice individuals at reasonable prices. **W. C. Burlingame and Son**, Marshall, Mich.

Durocs all ages, very prolific, big bone, good breeding. Write for prices, age, etc. Satisfaction or money back.
B. E. KIES, Hillsdale, Mich.

BIG TYPE CHESTER WHITES

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

Chesters We are sold out of Boars. Choice spring pigs. For immediate shipment of spring pigs, write **WEBER BROS.**, Royal Oak, Mich., 10 mi. and Ridge Rds., Phone 408.

Big Type Chester Whites. Spring boars and fall boar pigs sired by Hill's Big Buster, 3rd prize yearling at the 1922 State Fair.
LUCIAN HILL, Tekonsha, Mich.

CHESTER WHITE BOARS
Prize winners, from prize winning stock, for sale at reasonable prices.
F. L. Bodimer, Reese, Mich.

Chester Whites We still have some good March boars for sale also fall pigs, both sexes at right prices.
F. W. ALEXANDER, Vassar, Mich.

Chester White Special Two fine herd boar and show prospects sired by Advance Type and Prince Big Bone.
JOHN C. WILK, Alma, Mich.

O.I.C.'s Breeding stock of all ages. 20 boars, buy now. Grand Champion Boar and Sow at Michigan State Fair. Stock cholera immune. Will ship on approval. Come and see my herd. Farm located S.E. of Flint on Atherton Rd. next to D.U.R.
EARLE R. MORRIS, R. 6, Flint, Mich.

Registered O.I.C. Boars

J. CARL JEWETT, Mason, Mich.

TO DECREASE SHRINKAGE.

EVERY farmer knows the large shrinkage which often occurs in cattle between the farm and the stock yards. This shrinkage, however, can be reduced by proper feeding previous to the moving of the cattle, and also in the management during that period.

Where cattle have been fattened on grain and grass, it is advisable to place them in a dry lot a day or two before shipping, and feed all the timothy hay they will eat, and at the same time cut heavily on the grain ration.

Cattle fattened in a dry lot on grain and clover or alfalfa hay should be changed to timothy hay at least twenty-four hours before shipment, and their grain ration should be reduced at least fifty per cent. A full grain ration should not be served the animals for at least twelve hours before shipping. Some good cattlemen substitute oats for a portion of the grain ration at this time.

Where the animals are fed on silage, clover or alfalfa hay and some nitrogenous concentrate, it has been found advisable to omit the nitrogenous concentrate for at least a day preceding shipping. Timothy hay should also displace the leguminous hay and the silage should be cut to about one-third the regular amount.

Handle the cattle quietly so that they do not become excited or heated.

DEMAND FOR SHORTHORN BULLS.

THE experience of S. H. Pangborn Sons, of Bad Axe, would indicate that breeders and farmers in the state are out looking for good Shorthorn bulls. Since June 1 they sold bulls to Raymond Kerbyson, Deckerville; Roy Little, Carsonville; Mathew Sproul & Sons, Crosswell; John Horst, Akron; R. C. Smith, Oxford; Thos. W. Shine, Bad Axe; R. B. Wheeler, Snover, and two to Palmer Bros., Belding. This makes a total of nine bulls sold in three months.

START PIG SURVEY.

THE United States Department of Agriculture is starting its second semi-annual pig survey, by the distribution of fifty thousand questionnaire cards through the rural mail carrier.

Last year the survey covered only seventeen states, but it proved of such value that the entire country will be covered this time. Each rural carrier will receive ten cards or questionnaires which he will give out to the pig owners on his route. These cards are in simple form and can be filled out in a few minutes.

The cards will show the number of sows farrowed during the last six months of 1921 and the number farrowed during the first six months of 1922, also the number farrowed or due to be farrowed in the last six months of 1922. They will also indicate the number of sows bred to farrow during the first six months of 1922. The number of hogs which died of hog cholera or other diseases during 1921 and 1922 as well as the number of pigs saved per litter.

The department deems this survey valuable as it will enable the farmers to adjust their production to the needs of the market. This is just one of the steps which the department is taking in furnishing the farm producer statistical information which will give him a better knowledge of the future trend of the market, and its probable needs.

Common horse sense is all right in its place, but it would make us believe the world was flat and that the sun revolved around the earth. Judgment based on facts is a better guide.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer. Initials only are published. When a reply by mail is requested the service becomes private practice and \$1 must be enclosed.

Nymphomania.—I have a Jersey cow about eight or nine years old; bought her one month before she came fresh. Some four weeks after she freshened, she came in heat, it was too early to breed her. Now she is in heat every third day and remains in heat for two days. She has been served several times but fails to get with calf. What can be done to cause her to come in heat only once in three weeks? R. J. W., Ravenna, Mich.—Had you bred her when she first came in heat she might have gotten with calf. She now has disease of the ovaries and this may be formation of cysts (sacks containing liquid), or of solid tumors or degenerations, or, more commonly than all, the disposition of tubercle. She may suffer from tuberculosis affecting the ovaries. Your veterinarian can crush ovarian cysts through the rectum and vagina. After doing this she might perhaps breed.

Diseased Molar Tooth.—We have a five-year-old horse that has a discharge from one nostril, but commercial remedies for colds, distemper and catarrh fail to help him. No ulcerated patches on membrane of nose, and I might add, it has been more than two months since I noticed anything wrong. L. A. W., Hersey, Mich.—If your horse was suffering from simple case of nasal catarrh a mucus discharge would come from both nostrils; however, in this case you must hunt for an exciting cause, such as a diseased molar tooth with suppurating root, the discharge dripping into nasal chamber, and dropping out of head. Examine mouth and you will perhaps find the upper fourth grinder tooth ulcerated; if so, have your veterinarian extract it, then the animal will soon recover. Flush nostril with salt water, a teaspoonful to each pint.

Infectious Abortion.—I have three cows that have lost their calves, one at the seven-month period, the other two at six and a half months. All three in seemingly good health. Can you tell me what ails them? L. B. S., St. Johns, Mich.—If they have no vaginal discharge, breed them right away, but if they have any discharge, flush vagina, using one part lysol to 100 parts tepid water and treat them daily until well. Most likely they will carry their calves the full gestation period; however, you should clean and disinfect your cow barn and keep it clean. If your cows are of good stock, don't beef them.

Congested Quarter.—Heifer due to freshen next July, one-quarter of udder and teat are congested and hard. J. F. W., St. Clair, Mich.—Give her a tablespoonful of fluid extract of phytolacca at a dose three times a day and cut down her grain ration. If her bowels are costive, feed roots and salt her daily.

Lice.—My cattle are troubled with lice, mostly on their backs. R. C., Capac, Mich.—Apply one part vinegar and ten parts raw linseed oil, occasionally.

Robert Garrod, Lawrence, Mich.—Try the yeast treatment. Directions: Drop a cake of fresh compressed yeast into one quart of tepid water, let it stand in warm room for two hours, then inject it into vagina. Apply this treatment daily for one week before cow comes in heat, and always three hours before service. In my practice I usually wash out vagina with soap and water before commencing treatment. A fountain syringe is what is required to apply this treatment. Vaccination (with living cultures) is considered good treatment for these kind of cases.

M. K., Alma, Mich.—Is the milk from a cow that has aborted fit for use? Yes.

Garget.—Have a cow that will freshen next month which gives clotted milk from one teat. Is there danger of quarter caking? J. E. N., Mt. Bing, Ark.—Apply one part fluid extract of phytolacca and six parts of olive oil twice a day.

Diarrhea.—For the past two weeks my cow has been scouring. What shall I do? Give her a teaspoonful of powdered catechu and a dessertspoonful of ginger in ground oats three times a day.

HOGS

O. I. C. 50 last spring pigs either sex not akin. Big, growthy stock, recorded free, ½ mile west of Depot, Citiz. Phone. OTTO B. SCHULZE, Nashville, Mich.

O. I. C. & Chester White Swine strictly big type with quality. The kind that grow large. A few spring pigs either sex. Newman's Stock Farm, R. 4, Mariette, Mich.

O. I. C. & Chester White Choice pigs 8-10 wks. old, either sex \$10.00. Prominent bloodlines. Shipped on approval. Recorded free. CLARE V. DORMAN, Snover, Mich.

O. I. C's. Spring gilts and service boars for sale. Prices right. A. J. BARKER & SON, Belmont, Mich.

O. I. C's Spring pigs. Pairs not akin. Also July, August, and Sept. pigs. MILO H. PETERSON, Elmhurst Farm, Ionia, Mich. Citiz. Phone

Registered O. I. C. April Boars also July Pigs. Shipped C. O. D. CHAS H. STEEL, R. 8, Eaton Rapids, Mich.

O. I. C. Boars and Gilts sired by 1921-1922 G. Champion at W. Mich. State Fair. GEO. M. WELTON & SON, Middleville, Mich.

O. I. C. 15 large growthy Mar. boars at Farmers' prices. CLOVERLEAF STOCK FARM, Monroe, Mich.

Registered O. I. C. Boars

H. W. MANN, Dansville, Mich.

Spring Boars Now Ready To Ship H. O. SWARTZ, Schoolcraft, Mich.

Walnut Alley Big Type, Poland China, the kind that makes good. Boars and gilts ready to go. A. D. GREGORY, R. 8, Ionia, Mich.

Lone Maple Farm L. T. P. C. March Boars and gilts ready. Prices reasonable, stock as represented. F. R. Davis & Son, R. 3, Belding, Mich.

B g Type P. C. Spring boars and gilts ready for new homes, also sows and pigs. CLYDE FISHER, St. Louis, Mich.

LARGE TYPE POLAND CHINAS Boars and gilts for sale from one of the best herds in Mich. Sired by E's Clansman Mich. 1921 Grand Champion. Alasha, M and W's Orange and Daddy Long Legs 2nd. Give us a visit and look them over if not write to N. F. BORNOR, Parma, Mich.

L. T. P. C.

Choice Gilts \$25 to \$40. Boars \$30. Fall Pigs \$15. HART AND CLINE, Address F. T. HART, St. Louis, Mich.

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

LARGE TYPE P. C.

Largest in Mich. Pig ready to ship, why not order from the herd that has given so many their start in the hog business, the kind that makes good, they have quality as well as size. W. E. LIVINGSTON, Parma, Mich.

Leonard's Big Type P. C. gilts sired by Leonard's Liberator and Orange Clansman and fall Pigs at bargain prices. E. R. LEONARD, St. Louis, Mich.

BIG TYPE POLANDS A few choice boars of March farrow sired by Emancipator 2nd. Double treated for cholera, and ready for service. Come over, or write. WESLEY HILE, Ionia, Mich.

L. T. P. C. Spring boars and gilts now being shipped. There's a reason. They talk for themselves. Call or write M. M. PATRICK, Grand Ledge, Mich.

Large Type Polands. Spring boars and gilts, sired by Michigan Liberator and Big Chief. Immured by double treatment. Also fall pigs both sexes. George F. Aldrich, R. 6, Ionia, Michigan

Large Type Poland Chinas Spring boars sired by Foxey Clansman 1922 Grand Champion and by F's Clansman 1920 Grand Champion Mich. State Fair. Also two choice 1921 fall boars. All immune by double treatment. Come and see them or write. A. A. FELDKAMP, Manchester, Mich.

Boars at Half Price From Mich. Pioneer herd of Big Type Poland Chinas We have been breeding them big for 30 years. Our hogs represent the blood lines of Giant Buster, The Clansman, Liberator, The Yankee, Big Bob, etc. Write for what you want. JNO. C. BUTLER, Portland, Mich.

Big Type Poland China spring boars ready for service weighing over 200 lbs. Sired by Hoyer's Liberator 1st prize Jr. yearling at Tuscola, Saranac and Saginaw fairs. Also fall pigs at \$15 each. Shipped on approval. D. HOVER, Akron, Mich.

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

For Sale Large Type Poland China Boar pigs ready for services, at reasonable price. SCHAFER BROS., Comstock Park, Mich.

Francisco Farm Poland Chinas

Still have a few of those good young boars ready for service. Also Top Notch fall pigs either sex. Both pigs and prices are right. P. P. POPE, Mt. Pleasant, Mich.

Large Type P. C. Boars of all ages, at very low prices. Satisfaction guaranteed. R. W. MILLS, Saline, Mich.

Hampshire Boars Sons and grandsons of Maplewood Payroll 93811, 1st prize aged boar and grand champion at Mich. State Fair and other state fairs 1922. Get up-to-date breeding. Prices reasonable. Also open and bred gilts and young sows. G. H. DODDS, R. 5, Kenton, Ohio

Choice Boars ready for service. Priced to sell. Also sows and gilts. O. E. GARNANT, Eaton Rapids, Mich.

Hampshire Spring boars now ready, place your order soon. 10th year. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Cheshire Boars May litter, 160 to 170 lbs, not fat. Registered in buyers name. \$20.00. SIM L. VINCENT, Lapeer, Michigan

SHEEP

Kope-Kon Farms Offers the best in yearling Shropshires of course. Also choice of the best lot of Ram Lambs you will see this year. Follow M 29. S. L. Wing, Coldwater, Mich.

SHROPSHIRE RAMS Come to the farm or write Dan Booher, R. 4, Evart, Mich.

Strong robust one and two yr. old Wool-Mutton Shropshire rams priced right. Tell us what you want. Maplewood Stock Farm, Allegan, Mich

For Sale Oxford rams and ewes all ages, guaranteed breeders. Write or call at farm. Geo. T. Abbott, Palms, Mich., Tel. Deckerville 78-3.

Cotswolds 50 head Rams and Ewes all ages, no better flock in State. Write or phone A. M. BORTEL, Britton, Mich. Phone no. 706.

REG. DELAINE RAMS At Farmer Prices. Write or Come. CALHOUN BROS., Bronson, Mich.

1400 Breeding Ewes FOR SALE

in lots of 50 or more, black faced, from 1 to 4 yrs old; no broken mouths, in good condition, located 22 miles S. W. of Detroit on Detroit and Toledo electric and Dixie Highway. Telegraph address, Rockwood Almond B. Chapman, So. Rockwood, Mich.

Reg. Hampshire ewes. Also ram lambs. Best of breeding. Priced to sell. W. W. CASLER, Ovid, Mich.

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. Rates 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. Real estate and live stock advertising have separate departments and are not accepted as classified. Minimum charge, 10 words.

Rates in Effect October 7, 1922

Words	One time	Four times	Words	One time	Four times
10.....	\$0.80	\$2.40	26.....	\$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.

MISCELLANEOUS

FOR SALE—Gasoline four cylinder twenty horse power motor, with gas tank and magneto. Mounted on timber frame and fitted with drive shaft and pulley. Used two months to run factory line shaft during coal shortage. Cost \$400.00. Will sell cheap. Address C. M. Hall Lamp Company, Detroit, Mich.

TOBACCO—Select 3-year-old Kentucky leaf. Pay for tobacco and postage when received. 5 lbs. smoking \$1.25; 5 lbs. chewing \$1.50. Farmer's Union, Hawesville, Ky.

HOMESPUN TOBACCO. Chewing: 5 pounds, \$1.75; 10 pounds, \$3; 20 pounds, \$5. Smoking: 5 pounds, \$1.25; 10 pounds, \$2; 20 pounds, \$3.50. Send no money, pay when received. Co-operative Tobacco Growers, Paducah, Kentucky.

NATURAL LEAF TOBACCO. Chewing: 5 pounds, \$1.75; 10 pounds, \$3; 20 pounds, \$5. Smoking: 5 pounds, \$1.25; 10 pounds, \$2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

NATURE BRAND HONEY—Delicious, wholesome. Direct from the bee farm. Five pounds \$1.00, postpaid. Elmer Luebeck, Knox, Indiana.

WANTED to buy horseradish in large quantities. State price in first letter. Joe Minarits, 8927 Keller St., Detroit, Mich.

POULTRY

ROSE AND SINGLE COMB R. I. Reds. At Indiana State Fair, Sept. 4-9, 1922, we had 7 blue ribbon winners, 9 seconds, 2 thirds and 2 fifths. Stock for sale reasonable. F. A. Langohr & Son, Columbia City, Ind.

RHODE ISLAND REDS. R. C. Large fancy cockerels and pullets at \$3 each. Burt Sisson, Inlay City, Mich.

SUPERIOR Ringlet Barred Rock Cockerels, early hatched, extra fine. Prices reasonable. J. L. Wyndham, Tiffin, Ohio.

PURE BRED Mammoth Bronze Turkeys. Exceptionally large, vigorous birds, both sexes. Mrs. Ralph Sherck, Caledonia, Mich.

BABY CHICKS. Save \$3 to \$10 per 100 by placing order now. Pullets lay at 4 months age. Write for free catalog. D. T. Farrow Chickeries, Successors Farrow-Hirsh Company, Peoria, Illinois.

BUFF ORPINGTONS. Barred Rocks, White Leghorns, Guineas. Right. Write Fenner Bailey, Montgomery, Mich.

PURE BRED light pencil-neck brahma cockerels; early hatched; extra fine. Mrs. Will Raymond, Bailey, Mich.

LIGHT Brahma Cockerels. Fine big utility birds \$3.50. William Adams, R. F. D. 5, Plymouth, Mich.

FOR SALE Fine Pure bred White Leghorn cockerels for breeding, \$5 each. J. J. Firestone, Allegan, Mich.

ORPINGTON'S White and Black Cockerels and Pullets, Howard Luther, Fairgrove, Mich.

PURE bred Mammoth Bronze Turkeys. Champion strain, large and vigorous; copper bronze color. Mrs. B. Smatts, R. 1, East Jordan, Michigan.

GIANT Bronze Turkeys. pure bred, large type; toms \$8.00, hens \$6.00. E. J. Love, Bloomingdale, Michigan, R. 1.

NARRAGANSETT TURKEYS. Toms \$10 up, hens \$8. Get your order in early while choice is good. Ernest Clement, Ionia, Mich.

GIANT BRONZE TURKEYS. Vigorous purebred stock. Best strains, large type, fine coloring. Unrelated stock. Write Mrs. Perry Stebbins, Saranac, Mich.

200 GIANT S.C. Black Minorca cockerels none better \$2.25 each. Mike Schaefer, R. 1, Essexville, Mich.

PURE BRED Mammoth Bronze Toms \$10. Mrs. Irving Charlton, R. 7, Hastings, Mich.

TURKEYS. Mammoth Bronze Beauties. Mrs. Eugene Ramsdell, R. 1, Hanover, Mich.

PURE Bred Mammoth Bronze Turkeys. Write me. Johnson's Turkey Farm, R. 1, Six Lakes, Mich.

PEAFOWLS. Pheasants, Bantams, Pigeons, Guinea Pigs. John Hass, Bettendorf, Iowa.

Write Your Advertisement Here

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THE MICHIGAN FARMER

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Detroit, Mich.

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LATEST MARKET REPORTS

GRAIN QUOTATIONS

Tuesday, November 28.

Wheat.

Detroit.—No. 2 red \$1.33½; No. 2 mixed \$1.31½; No. 2 white \$1.31½.
Chicago.—No. 2 red at \$1.28; No. 2 hard \$1.18½@1.19; December \$1.17½.
Toledo.—Cash \$1.34.

Corn.

Detroit.—Old, Cash No. 2, 78c; No. 3 yellow 77c; new, Cash No. 2, 76c; No. 3, 75c.
Chicago.—No. 2 mixed 72¼@73c; No. 2 yellow 72¼@72½c.

Oats.

Detroit.—Cash No. 2 white 48½c; No. 3, 47c.
Chicago.—No. 2 white 44¼@45½c; No. 3 white 43@45c.

Beans.

Detroit.—Immediate and prompt shipment \$6.75.
New York.—Choice pea at \$7.75@8; red kidney \$8@8.25.
Chicago.—Michigan choice hand-picked \$8.50; red kidneys \$9.50.

Buckwheat.

Clean milling grain \$2.25 per cwt.

Rye

Detroit.—Cash No. 2, 90½c.
Chicago.—85c.
Toledo.—Cash 88c.

Seeds.

Detroit.—Prime red clover cash at \$12.75; March \$13; alsike \$10.75; timothy \$3.40.
Toledo.—Prime red clover cash at \$13.05; alsike \$10.60; timothy \$3.42.

Hay

Detroit.—No. 1 timothy \$17@17.50; standard \$16.50; light mixed \$16.50@17; No. 2 timothy \$15@16; No. 1 clover \$15@15.50; rye straw at \$11.50@12; wheat and oat straw \$11@11.50 per ton in carlots.

Feeds.

Bran \$32@33; standard middlings at \$32; fine do \$34; cracked corn 35.50; coarse cornmeal \$32.50@33; chop at \$28.50 per ton in 100-lb sacks.

Fruit.

Apples, Jonathans \$5@5.50 per bbl; Wageners at \$4@4.25; Greenings \$5@5.50 per bbl; Kings \$5; Northern Spies \$4@4.50; Baldwins \$4@4.50; cranberries, eastern boxes \$7@7.50; late reds \$6.25@6.50.

WHEAT

The advance in the wheat market which has progressed irregularly for five weeks has been checked in the last few days. Although milling demand in the northwest continues brisk, at southwestern points it has subsided noticeably. Foreigners are absorbing wheat quietly right along, especially Manitobas, with wheat for immediate shipment at a sharp premium in spite of the enormous Canadian movement. Italy has bought durum and it has advanced sharply in the last two weeks. Italy needs about 72,000,000 bushels in the next eight months. Germany remains the leading buyer of wheat and rye.

CORN

The west from Colorado to the coast, the southwest and the south have continued to buy freely in the corn belt, outbidding Chicago in Iowa and Illinois as they have done for several weeks, but eastern demand has tapered off. Export-buying has been negligible, although it now shows signs of revival. Shortage of feed in the area affected by drouth, and the unusual number of cattle to be wintered in Nebraska and adjacent territory together with the record number of lambs in Colorado feedlots are some of the factors underlying the situation. Freight rate reductions to the coast and in Mississippi barge lines have helped sales.

OATS

Although primary receipts of oats are above the average for this time of year, it is necessary to draw upon the visible supply right along, showing that the rate of disappearance is above normal.

SEEDS

About fifty per cent of the red clover seed and sixty-five per cent of the alsike to be sold by growers had left their hands by November 1, according to a recent survey by the department

of agriculture. The movement has been at about the same rate as a year ago. Prices are materially higher this year with seedsmen anxious to buy. Producers now show a disposition to hold.

FEEDS

The feed market is unsettled, with price changes small, but advances seem to predominate. Cold weather has caused another spurt in demand but heavier offerings, especially of wheat feeds, have largely offset it. Production, particularly of corn feeds, is rather heavy.

HAY

Small advances in hay prices occurred last week. Receipts and country loadings are light in spite of an easier car situation and local demand is fairly good.

POULTRY AND EGGS

Sudden expansion in the receipts of fresh eggs caused a sharp setback in the market last week. It is probable that consumption has been curtailed also. No sustained increase in the supply is probable, however, for another month so that the market may recover the loss, although the fact that prices are near the top should be recognized. Receipts of poultry have not

expanded yet this fall in proportion to the reported increase in production, and with holiday demand at hand, the

Chicago.—Eggs, checks at 20@21c; fresh firsts 45@47½c; ordinary firsts 35@40c. Live poultry, hens at 18c; springers 17c; roosters 12c; ducks at 18c; geese 18c; turkeys 35c.

Detroit.—Eggs, fresh candled and graded 50@53c; storage 25½@29½c. Live poultry, heavy springers at 20c; heavy hens 22c; light hens 14c; roosters 15c; geese 20@22c; ducks 22@23c; turkeys 40c.

BUTTER

Current receipts of butter at the leading markets in the last two weeks dropped to the lowest level in a year. Although the market is encountering more opposition right along, it advanced into new high ground with gains ranging from two to three cents per pound. Production is decreasing as shown by reports to the American Creamery Butter Manufacturers' Association and the decline in receipts of about twenty-five per cent compared with two weeks ago has more than offset the falling off in consumptive

Prices on 92-score fresh butter were as follows: Chicago 53c; New York 53c. Fresh creamery in tubs sells in Detroit for 44@46c.

POTATOES

Although shipments of potatoes from producing sections have fallen off sharply in the last four weeks, arrivals at the principal consuming markets continue heavy, although there has been a moderate falling off in the last ten days. Prices are beginning to recover in midwestern cities and at northern shipping points although weakness prevails in the east. Further recovery seems probable in the next sixty days. Northern whites are quoted at 75c@\$1.25 in city markets, and 65@75c f. o. b. shipping points.

WOOL

The London wool auction opened last week with merinos quoted five per cent lower, fine cross-breeds a shade higher and coarse and medium cross-breeds five to ten per cent higher than at the October sale. Australian markets also show strength. Prices in this country were affected by the trend abroad although country stocks are practically all cleaned up except Texas fall-shorn, which have sold as high as forty-seven cents, or about twice as high as last year.

APPLES

Cold storage holdings of barreled apples on November 1 comprised 4,012,000 barrels, the largest number ever reported on that date. Boxed apple holdings were 4,094,000 boxes, as compared with 5,464,000 last year and a five-year average of 3,463,000 boxes. With boxed apples reduced to their equivalent in barrels, total holdings were 5,377,000 barrels, the largest for that date on record. The five-year average is 9,938,000 barrels. Receipts of apples remain liberal with prices practically unchanged for the week. Baldwins are quoted at \$3.50@4.50 in midwestern cities, with Greenings at \$3.75@4.50.

BEANS

The bean market has been more stable recently with choice hand-picked whites holding close to \$6.90 per 100 pounds f. o. b. Michigan shipping points. Growers are not pressing the market and the period of urgent selling is over while demand shows no special snap, although the weather is favorable for bean consumption. The approach of tax assessment date in California caused a little pressure from that section for a while.

DETROIT CITY MARKET

Potatoes, pumpkins, squash and onions are still slack on the market. The demand, however, for apples has become more active since the big orchard hauling is over. The vegetable market generally is easy. Apples sell for 50c@\$2.50 per bushel; celery 30@50c per dozen; cabbage 30@75c per bushel; eggs 75@80c; horseradish \$2@4 per bushel; dry onions 75c@\$1.50 per bushel; potatoes 55@65c; popcorn \$1.25@1.50 per bushel; poultry 23@25c per pound.

GRAND RAPIDS

Improvements in the refrigerator car situation is aiding the movement of potatoes. Somewhat better market prospects are reported. Farmers here are receiving 35@40c per bushel. Dry onions bring 50@60c; apples, Greenings 70@85c; Baldwins 50@75c; Jonathans 50c@\$1.75; Northern Spies \$1@1.50; No. 1 dairy butter 35@40c; eggs 55@56c; white beans \$6@6.25; red kidney beans \$6@6.75; No. 1 red wheat \$1.22; rye 75c; barley 78c; oats 50c; corn, No. 2 yellow 80c.

Live Stock Market Service

Wednesday, November 29.

DETROIT

Cattle.

Receipts 223. Good butcher grades active; all others slow.
Best steers \$ 7.25@ 8.00
Handyweight butchers ... 7.00@ 7.50
Mixed steers and heifers 6.00@ 6.50
Handy light butchers 5.00@ 5.50
Light butchers 4.25@ 4.75
Best cows 4.50@ 5.00
Butcher cows 3.25@ 4.00
Common cows 2.75@ 3.00
Canners 2.00@ 2.75
Choice bulls 4.50@ 5.00
Bologna bulls 3.50@ 4.50
Stock bulls 3.00@ 3.75
Feeders 5.50@ 6.50
Stockers 4.00@ 5.75
Milkers and springers...\$ 40@75.00

Veal Calves.

Receipts 419. Market strong to 50c higher.
Best \$13.00@13.50
Others 4.00@12.00

Sheep and Lambs.

Receipts 1,652. Market steady.
Best lambs \$14.25@14.75
Fair lambs 12.50@13.25
Light to common 5.00@ 9.00
Fair to good sheep..... 6.00@ 7.00
Culls and common 2.00@ 3.00

Hogs.

Receipts 2,096. Market 10c higher.
Mixed hogs \$ 8.60
Roughs 7.25
Pigs and lights 8.60@ 8.75
Stags 4.50@ 5.00
Heavies 8.00@ 8.50

CHICAGO

Hogs.

Estimated receipts today are 24,000; holdover 9,601. Market is 10c higher. Bulk of sales \$8.10@8.35; tops \$8.50; heavy 250 lbs up \$8.20@8.40; medium 200 to 250 lbs \$8.25@8.40; light 150 to 200 lbs \$8.25@8.50; light lights 130 to 150 lbs at \$8.25@8.50; heavy packing sows 250 lbs up \$7.60@8; packing sows 200 lbs up \$7.35@7.75; pigs 130 lbs down \$8.30@8.50.

Cattle.

Estimated receipts today are 11,000. Market active, all killing classes are strong to unevenly higher; beef steers strong to 25c higher. Beef steers, medium and heavy weight 1100 lbs up \$12@13.60; do medium and good \$7.25@12; do common at \$5.50@7.25; light weight 1100 lbs down \$9.85@12.90; do common and medium \$5@9.65; butcher cattle heifers \$4.50@10.75; cows at \$3.75@8; bulls bologna and beef at \$3.60@6.60; canners and cutters cows and heifers at \$2.75@3.75; do canner steers \$3@3.55; veal calves light and handyweight \$8.75@9.50; feeder steers

\$5.25@7.75; stocker steers \$4@6.75; stocker cows and heifers \$3@5.25.

Sheep and Lambs.

Estimated receipts today are 12,000. Choice lambs 25@35c higher; others slow and about steady. Lambs 84 lbs down \$13.25@15.25; do culls and common \$9.25@13; spring lambs \$9.25@12.50; ewes \$4.75@7.75; ewes cull and common \$2.55@5; yearling wethers at \$12.25@14.

BUFFALO

Cattle.

Receipts fifteen cars. Market is slow. Choice to prime shipping steers 1,400 lbs and up \$11@11.75; good to choice shipping steers \$9.50@10.50; heavy grass steers, good quality \$8@8.50; medium to good at \$7@8; fat, coarse \$6.50@7.50; light native yearlings, fancy quality \$11@11.50; medium to good \$7.50@8.50; best handy steers \$7.50@8; plain at \$6.50@7.50; handy steers and heifers at \$6.25@7; western heifers at \$5.50@6.50; light Michigan butchering heifers \$5.50@6; best fat cows at \$5.50@6; medium to good \$4.25@5; cutters at \$2.25@2.75; canners good weight \$1.75@2.15; common to old rims at \$1.25@1.75; best heavy bulls \$4.75@5.50; heavy bologna bulls \$4@4.75; common bulls at \$3@3.50; best feeders 700 to 800 lbs \$6.50@7.25; medium feeders at \$6@6.50; stockers good \$5.50@6; light common \$4@5; milkers and springers \$6@100; common and medium \$35@50.

Calves, receipts 15 cars; tops \$12.50.

Hogs.

Receipts 40 cars. Market is lower. Medium and heavy \$8.80@8.85; yorkers and pigs \$8.90@9.

Sheep and Lambs.

Receipts 12 cars. Market is slow. Top lambs \$15.25@15.40; yearlings at \$9@12; wethers \$8@8.50; ewes at \$6@7.25.

Do Not Forget to Visit the First FAT STOCK SHOW

at Detroit Stock Yards, Dec. 11-12-13, 1922

Special invitation is extended to farmers and feeders of lives tock. Come and see what the consuming public demands in lives tock.

ADMISSION FREE

THE BUSINESS OUTLOOK.

GRAIN prices reached the highest level of the season last week and held the gain fairly well, butter reached the best figure since early in 1921, lamb prices remained but little below \$15 at Chicago, the wool market was



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HEMMETER'S CHAMPION CIGARS

Have more friends today than ever because they are strictly hand made from good old ripe tobacco without blending or flavoring.

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10 Cents

worth of common kerosene or coal oil will keep this Sunray lamp in operation for 30 hours. Produces 300 candle power of the purest, whitest and best light known to science. Nothing to wear; simple; safe; 15 Days' Trial

FREE Lantern

As a special introductory offer, we will give you a 300 Candle Power Sunray Lantern FREE with the first purchase of a Sunray Lamp. Lights up the yard or barn like a search light. Write today for full information and agency proposition.

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No Wicks to Trim
No Smoke
No Smell

SHIP YOUR DRESSED CALVES TO DETROIT BEEF CO.

In business at the same location and under the same management for thirty-three years. Our capital and surplus of \$250,000.00 insures financial reliability and sure returns. We deal honestly with every shipper and handle his goods as though they were our own.

Write us for instructions how to dress calves and prepare them for shipment. It is very simple. Quotations and shipping tags furnished on application.

DETROIT BEEF CO.
Detroit, Mich.



Fancy Large Dressed Herring 4c per lb. Remit with order. Box Charges Extra, 35c.
CONSUMERS' FISH CO., Green Bay, Wis.

CANARIES & PARROTS A singing Canary or a talking Parrot is the best Christmas gift. Write for my interesting prices.
MRS. HARVEY HAYNES, Coldwater, Mich.

POULTRY

Bred-To-Lay White Wyandottes
Special sale of cockerels from 200 egg hens for \$5.00 if taken early. **EVERGREEN POULTRY FARM,** Blanding & Sons, Greenville, Mich.

Michigan's Best Giant Bronze Turkeys
Healthy range-bred birds from world's best strains. Unrelated stock furnished. N. Evalyn Ramsdell, Ionia, Mich.

White Wyandotte Cockerels. Finest Bred-to-Lay Stock.
HOWARD GRANT, Marshall, Mich.

Bourbon Red Turkeys We have them. Order your Birds and Eggs now.
SMITH BROS., R. 3, Augusta, Mich.

buoyant, hogs had a smart recovery and thus far have held above the money losing level, all finished cattle arriving are showing excellent returns, cotton after a moderate setback started upward again, the hay market began to climb out of the rut, and potatoes, which have been in the worst condition of any important farm product this fall, began to show real improvement.

The car shortage is being relieved. The latest statistics, which are for nearly two weeks ago, show a small decline in the number of unfilled orders for cars and a falling off of about six per cent in freight car loadings from the peak of the year.

General business and industry are prospering. Steel mills are operating at about eighty per cent of capacity and consumption is keeping pace, auto output for November is about the same as in October when a record for that month was attained, building activities are well sustained, and textile mills are using up raw material about as fast as they ever do. In these lines further improvement is not to be expected but any reaction may be offset by advances in other directions.

Foreign conditions are not growing worse, although there is little betterment to record. However, sterling exchange is at nearly the highest level of the year, francs are sixteen per cent higher than two weeks ago, and Italian lira are near the best level since June.

Proposed government aid to extend the markets for farm products is receiving much attention. Some benefit may be hoped for although it will be slow in arriving. Facilitation of export trade through extending the powers of the War Finance Corporation to permit discounting drafts probably on a ninety-day basis on sales abroad when endorsed by a reliable foreign importer and the government of the foreign country, seems to be a most feasible plan.

M. A. C. AT THE INTERNATIONAL.

EIGHTY head of live stock will be sent by M. A. C. to the International Live Stock Exposition, to be held at Chicago on December 2-9. They will comprise the largest entry ever made by the college. Sheep and swine will be exhibited, as well as the steers that won high honors last year.

The college will also be represented at the International Hay and Grain Show, held simultaneously, by a special educational exhibit, featuring the caption, "Michigan Cheapens Production," and showing work with alfalfa and other crops raised in the state.

MR. OWEN, NOT MR. OWEN.

In the article entitled, "Clinton Farmer Has Model Hog House," published November 18, the owner was referred to as Mr. Owen, when it should have been Mr. Owen. This we regret very much. Mr. H. C. Owen is a graduate of the Michigan Agricultural College, and is doing real constructive work in the agricultural circles of central Michigan. He deserves all the credit.

FARM MEETINGS.

Michigan State Association of Farmers' Clubs, Lansing, December 5-6.

International Live Stock Exposition and Grain Show, at Stock Yards, Chicago, Ill., December 2-9.

Michigan State Apple and Potato Show, Grand Rapids, December 5-8.

National Silver Fox Breeders' Association, Muskegon, December 6-8.

State Grange meeting, Kalamazoo, December 12-15.

National Farmers' Exposition, December 7-15, Toledo, Ohio.

Michigan Horticultural Society, Grand Rapids, Mich., December 5-7.

Michigan Potato Growers' Association, Grand Rapids, December 6-8.

American Farm Bureau Federation, Chicago, December 11-14.

AMERICA'S LEADING FUR HOUSE

TRAUGOTT SCHMIDT AND SONS

RAW FURS Established 1853—our plant has grown to cover two city blocks—the greatest plant in the world devoted to the handling of furs.

Ship your Raw Furs to Traugott Schmidt & Sons—America's Leading Fur House. Why take chances when you can ship to this big, strong, dependable fur house with a record of over a half century of square dealing? For 69 years we have been the fur shippers' best friend. Our reputation for prompt remittance and our resources of over \$1,000,000 is your guarantee of satisfaction.

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Our enormous foreign market with our own direct branches enables us to pay you MORE CASH. Ship to us for TOP PRICES. Fair, liberal assortment always by expert graders assures you big returns. Remember—nothing is deducted—we pay all shipping expense—charge no commission and send your money same day furs are received.

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Write for booklet. Tells how to get most money for furs. Also price list, market report and shipping tags all sent free. Write at once—NOW.

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If you appreciate honest returns, quick service, and courteous treatment you will consign your poultry, dressed veal and hogs and eggs to
Gunsberg Packing Co., Inc.
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Write for tags and quotations.

HAY AND PRODUCE SHIPPERS. Ship to E. L. CO., Detroit, Mich. 30 years in business.

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Special discount given when used in combination with 7 other Capper Publications. Write for special real estate advertising rates on these papers which reach over a million and a half families

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3 turkeys, gobbler, ducks, geese, Kentucky foxhound, 100 bu. potatoes, 9 tons hay, ensilage in silo, corn in crib, 100 bu. oats, straw and long list farm tools. Everything in readiness for you and your family to step right in and start with a good income. In the heart of prosperous farming section, on improved road, 5 railroad towns handy; 65 acres excellent clay loam, with some sand and gravel loam; 15 acres wood and pasture, wire fenced, stream watered; 2-story 8-room house, painted; fine cellar; mail delivered; milk and cream collected; 50-foot barn, ties 12 head; poultry house, granary, hog house, tool shed, cattle shed. Owner's failing health forces him to retire and he sacrifices at \$5600; to quick buyer \$2000 secures everything; balance very easy terms; quick possession. Milton Hopkins, Coopersville, Mich.

Aged Owner Must Sell 85 Acres—Fully Equipped

Near fine R. B. town, close State Capital; all advantages; productive farms this section making Michigan agriculturally famous; successful farmers all around; splendid markets, easy transportation over improved roads; you should make money from 70 acres loamy tillage; pasture, woodlot, 100 apples, pears, cherries, peaches, berries, nuts; excellent 2-story 7-room house, overlooking lake bordering property; barn, granary. If taken now, only \$7,500; cows, heifer, 3 horses, brood sows, full implements, tools, season's crops included, less than half needed. Don't delay. Geo. B. Ros 326 M. A. C. Ave., East Lansing, Mich.

\$900 Gets So. Mich. Farm Stock, Equipment, Crops

Your future will be your own on this fertile "40"; close depot; stores, schools, churches; convenient big city markets; 30 acres productive tillage, pasture, wood lot; woven wire fences; apples, peaches, grapes, berries, nuts; good 7-room house, barn, granary, poultry house, garage. Owner called away. \$4,000 gets it, horses, cows, poultry, full implements, tools, crops included, only \$900 needed. Details page 62. Big Illus. Catalog Selected Farms—160 pages. Copy free. Strout Farm Agency, 814-BC, Ford Bldg., Detroit, Mich.

A Beautiful Dairy Farm for sale of fine dark loam ground. Located 7 miles so. of Grand Rapids, Mich. on cement road. Has large dairy barn, milk and well house, chicken and hog house, tool shed, corn crib and good 8-room house. Electric light plant, grinding mill. Everything in fine shape for \$15,000, buildings are worth \$10,000, location perfect. Reg. Jersey cows and heifers for sale. Price of milk at farm \$3.80 per 100 lbs., retails at 14c per qt. The low price will sell this farm quickly.
GEO. E. WALKER & SONS, Burton Heights, Grand Rapids, Mich.

18 Head Stock; Equipped New York Farm

Level, rich, loamy soil, fine spring watered pasture, one mile to schools, churches, easy drive to city of 28,000, wood for home use; 8-room house, basement, barn, silo, granary, milk house, chicken house, other outbuildings; ill health causes quick sale; 18 head stock, milking machine, gasoline engine, all equipment included; small payment down, easy terms. Richard Hughes, Mexico, New York.

900 A. Eastern North Carolina land, deep, extremely rich soil. At sacrifice price. Owner **N. H. HARRISON, Jr.,** Pinetown, N. Car.

Municipal Lands For Sale By The District.
No agents, no commission; interested only in getting home-builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation District No. 4, Burbank, Washington.

For Sale 80 acres clay loam, some fine timber, good buildings close in, \$3500, \$500 down and easy terms. 40 acres, \$300 to \$500 down. 10 acres close in, fine house, water, lights, furnace, small basement barn, \$500 down and \$100 per year. Any size farm; unimproved land at \$12 per acre, some timber land, all kinds of trades. Write, **Strang Real Estate Agency,** Lakeview, Mich.

SOUTHEAST MISSOURI—

"WHERE EVERYTHING GROWS"
Mild climate, long growing season. Alluvial black soil—ideal livestock country. All kinds of feed and cotton seed meal produced at home. Southeast Missouri Agricultural Bureau, Dept. H. Union Sta., St. Louis, Mo.

FOR SALE 160 acres clay loam soil, \$20 per acre, all fenced, 40 acres cleared, house, barn, on 16-ft. gravel road No. M. 76. **EDW. THEOBALD,** Riverside Farm, Roscommon, Mich.

Must Sell At Once to settle an estate, buildings. Alfalfa and fall grains. Further particulars, write Box 443, Ithaca, Mich.

80 ACRES fertile soil with good buildings. Flowing well, good orchard. Five acres timber. Two miles from town. Liberal terms. **OTTO WIRTH,** Ewart, Mich.

Poor Man's Chance \$5 down, \$5 months ly buys 40 acre productive land near town. Some timber. Price \$225. Other bargains. Box 425-Z, Carthage, Mo.

I Have Cash Buyers for Salable farms. Will deal with owners only. Give description and cash price. **MORRIS M. PERKINS,** Columbia, Mo.

Farms Wanted Give full description and cash price. Quick sales. **Leaderbrand Sales Agency,** B-40, Cimarron, Kansas

If you want to buy, sell or exchange property, write Jerome Probst, Ann Arbor Mich.

We Have Cash Buyers for farms at real bargain prices. **CENTRAL LAND BUREAU,** New Franklin, Mo.

Want to hear from party having farm for sale. Give particulars and lowest price. **JOHN J. BLACK,** Copper St., Chippewa Falls, Wis.

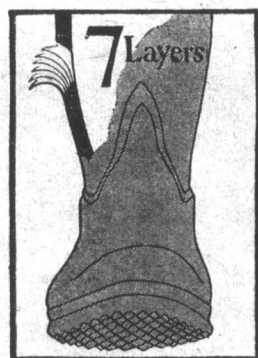
I Want Farms for cash buyers. Describe and state price. **R. A. McNow,** 324 Wilkinson Bldg., Omaha, Neb.

Improved farm 80 acres for sale or exchange on reasonable terms. **G. F. NEWBERRY,** Owner, Lapeer, Mich.

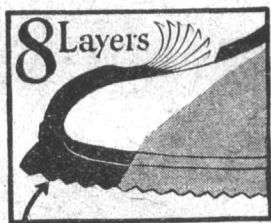
Wanted To hear from owner of land for sale **O. E. HAWLEY,** Baldwin, Wisconsin



BACK OF THE HEEL—Eleven layers of heavy duck and highest grade rubber make this one of the strongest points of the whole boot.



THE ANKLE—Here's where so many boots sag and crack. The "U. S." Boot has an extra "collar" that runs all the way round the leg, and on top of that is vulcanized a heavy side-stay.



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THE INSTEP—A boot has no lacing in front, like a shoe, to give as you walk. Every mile you go, the rubber bends and buckles 900 times. We've put a series of graduated reinforcing layers into the instep, combining unusual flexibility with surprising strength.



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—that's why "U. S." Boots give such long wear

SOLE, ankle, instep, heel—it's at one of these 4 places boots get their hardest strain.

And weakness at any one of them will rob you of wear you ought to get!

The big reason for the remarkable strength, long wear and "stand up" qualities of "U. S." Boots is the fact that their makers have built into them at every one of these 4 vital points the strongest kind of reinforcements.

Made throughout of the finest quality of fabric and tough rubber, U. S. Boots are backed up at the "wearing points" by 7 to 11 extra thicknesses. And they're so built that all this extra wear is gained without losing the ease and flexibility you need.

The diagrams at the left will show you the details of the finest boot construction experts have yet been able to devise. 75 years of bootmaking experience are behind it.

Other "U. S." Footwear—all built to give the utmost service

You'll find every type of rubber footwear in the big U. S. line. There's the U. S. Walrus, the famous all-rubber overshoe—the U. S. lace Bootee, a rubber workshoe for spring and fall—U. S. Arctics and Rubbers—all styles and sizes for the whole family. Look for the "U. S." trademark—the honor mark of the oldest and largest rubber organization in the world.

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Ask for
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Trade Mark