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Lessons from a Typical Farm Survey

THE farm management demonstration now in progress in Saginaw county under the direction of the Saginaw County Farm Bureau, with the assistance of an agent of the Michigan Agricultural College and the United States Department of Agriculture is of particular interest to a large number of farmers of the state because the area in which this work is being done is a region where general farming, with some live stock, is the prevailing type and this is probably the dominant type in Michigan.

This area can be inscribed in a circle of four miles radius, with the village of Chesaning as the center. Running out from the village through this territory are three important roads, one extending east, one west, and the other a short distance south, and several dirt roads, which puts every man in the area in close touch with a market. The general appearance of the farms is good. Nearly all are well fenced and large attractive farm buildings are the rule.

The Purpose of Demonstration Work.

This demonstration work is done for the purpose of showing each farmer of the community how the fundamental principles of farm management apply on his own farm and in his own community. These fundamental principles are recognized by the successful farmers from their own experience and observations, although in most cases they fail to realize that these ordinary, every-day observations of theirs are scientific facts of greatest importance.

Each farmer in this area has been visited at his home and a detailed study of his farm business for one year has been made. Seventy-six farms were visited in this way and the ten farms which are most successfully putting into practice the recognized principles of good farm management were selected as models. Each farmer in the area has been given a written report which not only summarized his own farm business for the year, but showed him how his business compares in the more important details with the average of these ten best managed farms and also the average of the entire number. With these comparisons and the summary chart before him, he can easily see weak spots in his own farm business. This work will probably be continued for a series of years with the idea that those things which show as the weakest spot in the organization of the farm business can be strengthened and improved and as these weak places become remedied the next weak spots will be discovered and remedied in their turn. It is indeed an exceptionally well managed farm where no weak spots can be found in the farm business.

Methods and Results of Work.

In making this detailed study of the farm business a complete list of all farm expenses and farm receipts is made. The expense column includes taxes and all the cash expense of the

farm but none of the family or personal expense. It also includes a charge for the estimated extra cost of board and washing for the hired help as well as the estimated charge for any unpaid farm work done by members of the family, other than the farmer himself. The receipts column includes all the cash sales of the farm and any increase in the value of the farm property. In case the inventory shows a decreased value of farm property, that decrease is included in the expense column. Subtracting from the total receipts all the farm expenses and interest (five per cent) on the total investment, we have the labor income of the farmer. This and

neighborhood. Even some of the ten most profitable farms had weak places in the organization of the farm and the owners after studying the comparison were convinced that there is a need of some changes and these when made will probably still further increase their income.

The important factors that influence labor incomes of the farmers in Saginaw county are size, quality and diversity. The following charts illustrate how size of the farm business affects labor income. In preparing these charts the 76 farms were first sorted according to the number of acres of crops per farm, then according to the number of animal units, and then ac-

Farm property not including Real Estate.	Average Labor Income.
\$ 700—\$1500	26 farms \$184
1500—2200	25 farms 481
2200—6700	25 farms 839

The last chart shows how necessary it is that a farmer have a fairly large investment in live stock, tools and supplies necessary to equip and operate a farm. The average farmer who did not have sufficient equipment of this kind did not make hired man's wages last year. This suggests that a young man had better not begin general farming for himself until he can own or secure on credit a reasonably large equipment.

The following charts illustrate some of the ways used to measure quality on the farms in this series of demonstrations.

Receipts per Animal Unit.	Average Labor Income.
\$21—\$54	18 farms \$192
55—62	19 farms 641
63—79	19 farms 667
80—125	20 farms 477

Yields as compared to average on all farms.	Average Labor Income.
32—84%	20 farms \$237
85—99%	21 farms 441
100—115%	16 farms 392
116—137%	19 farms 878

Crop acres per horse.	Average Labor Income.
7—15	24 farms \$323
16—21	24 farms 344
22—36	28 farms 564

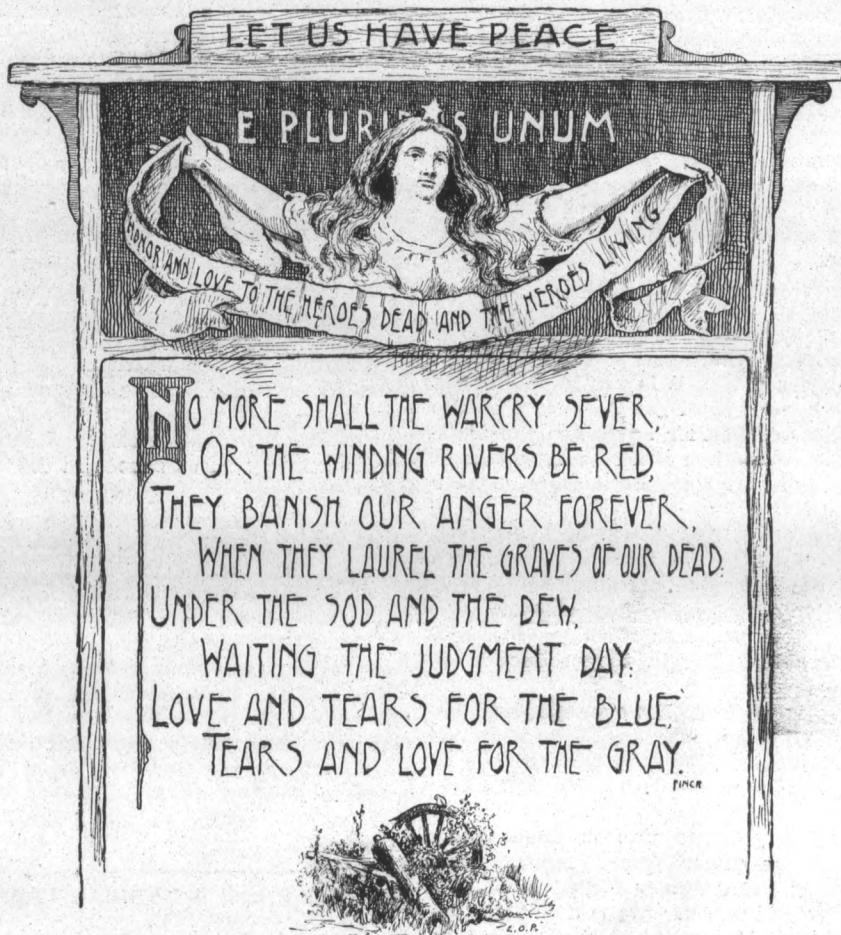
Crop acres per man.	Average Labor Income.
15—34	23 farms \$316
35—49	28 farms 414
50—88	25 farms 757

Farming in the Saginaw Valley is generally much diversified, and seems to be the most profitable type to follow. Evidently specialized farming does not pay under Saginaw conditions, as the farmer who had only two or three important sources of income failed to realize satisfactory returns the past year, while those with as high as six to ten important sources of income averaged \$988 for their labor income. A comparison of the labor incomes of these 76 farms shows that those farmers whose incomes were about half from cash crops and half from animals, had much larger net receipts than did those depending almost entirely on either crops or animals. The unusual high price prevailing the past winter for cash crops and the low prices for farm animals proved very much to the disadvantage of the live stock farmer. Heavy rains in June damaged the hoed crops on low land and, of course, was felt more keenly by the cash crop farmers than those depending in large part upon stock for their income.

The Best Records.

The highest labor income in the area studied is \$1,914 and was made on a 210 acre farm. Crop acres on this farm were 107, total animal units 30.9, receipts per animal unit \$56.00, crop acres per horse 24, crop acres per man 53, crop yield somewhat above the average, and diversity splendid, there being ten important sources of income. The labor income of the best

(Continued on page 611).



the living which the farm has furnished the family is what the farmer receives for his year's work.

The ten best organized farms in this area made an average labor income this year of \$1,410, while the average of all farms studied was only \$497, and one-third of the farms did not make hired man's wages for the farmer himself. It can readily be seen that the paying farms are good object lessons for the farmers who are not making interest and good wages. It is not the purpose of this farm management demonstration work to show which farms are paying and which farms are not paying, but rather to show each farmer in the community how his farm compares in each of the important factors that determine farm profits with the standard maintained by the profitable farms of his neigh-

borhood. Even some of the ten most profitable farms had weak places in the organization of the farm and the owners after studying the comparison were convinced that there is a need of some changes and these when made will probably still further increase their income.

Acres of Crops.	Average Labor Income.
15—44	27 farms \$260
44—70	28 farms 530
70—154	21 farms 749

No. of Animal Units.	Average Labor Income.
4—12	28 farms \$189
12—17	23 farms 602
17—48	25 farms 745

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DETROIT MAY 29, 1915.

Decoration Day

WITH each passing year a lessened number of the veterans pass in review on the day that is dedicated to the honor of national valor.

Years and years ago, the last of those who took part in the Revolution, and following them, those of the War of 1812, passed into the shadows. There yet remain a very very few who survive the struggle with Mexico in the middle forties. A small percentage of the hosts of the great Civil conflict are still with us, and as long as any remain, they will have the "right of the line," to be followed in turn by the soldiers of the Spanish conflict, of a hundred days, and the turbulent period of Philippine occupation.

This year sees all of the period of the Great Rebellion pass the half century mark, the fiftieth anniversary of its every battle and history-making event, has been celebrated.

As "Sleep—tired nature's sweet restorer Gathers up the ravelled sleeve of care,"

so time will heal the deepest wounds of the human heart, and this day the American historian can record no more splendid spectacle than the patriotic unity that finds North and South—the veterans of the blue and the veterans of the gray—following the same flag.

The thought of our memorial design in this Decoration Day issue is obvious—the passing of the last vestige of the rancor and hate of the great struggle between the North and the South in the early sixties.

Never before in earth's history has such widespread, deadly enmity been transformed into such genuine friendship.

It is the American spirit. It is typical of the Great Republic—the Land of Peace.

"Peace always rules the day
When reason rules the mind."

CURRENT COMMENT.

There is no more profitable line of study for the average farmer than that embraced in the broad problem of farm management. There is no better available source of information on this subject, outside of one's own limited experience and observations, than the farm surveys which are being conducted by the Department of Agriculture in co-operation with the various agricultural colleges.

Of these investigations those conducted in Michigan unquestionably afford the best source of information for

Michigan farmers who would study farm management problems in the abstract. The leading article in this issue deals with the results of a farm survey conducted in Saginaw county in a section which is typical of general farming as practiced over a large section of our state. The facts set forth and the conclusions arrived at by the investigators cannot but be of interest to every farmer who operates under similar conditions to those described in this article. Like other farm surveys conducted in our state, this survey emphasizes the fact that our diversified agriculture is a valuable asset to the farmers of the state, since, other things being equal, the farmer who has a number of sources of income averages making a larger labor income than the farmer who depends on one or two special sources of income only. In like manner this survey shows in common with those which have preceded it that for satisfactory results so far as labor income is concerned, it is essential that the farm be well equipped with live stock and other personal property required in carrying on the business, this being of relatively greater importance than the size of the farm. It is also important that the crop acres per man and per horse be proportionately high in order to secure a satisfactory labor income, granted always that the quality of management is such that the labor is well distributed throughout the season so as to avoid the neglect of any crop.

These surveys should be carefully studied by every Michigan Farmer reader to the end that the solution of personal farm management problems may be simplified by the application of some of the general principles revealed by these investigations.

In another column of this issue will be found the first of a series of articles on the general subject of stockless farming. In order that the reader may not misunderstand the purpose of these articles, we take this opportunity to explain that in giving prominence to the facts which will be brought out in this discussion it is not intended that the reader shall get the idea that the Michigan Farmer advocates the abandonment of live stock as a prominent factor in Michigan agriculture. Under normal and average conditions there is no doubt that it will be found both beneficial to the farm and profitable to the owner to maintain some kind of live stock on the farm and to make live stock products of some sort a considerable factor in the production of the farm.

It is desired, however, to disabuse the minds of many readers of an erroneous idea that the maintenance of live stock on the farm is necessarily a factor in the conservation of soil fertility. While this is undoubtedly the case under proper management, yet as the ordinary farm is managed there is room for grave doubt on this point, and when this fact is taken into consideration in connection with the important fact that a very considerable portion of the live stock maintained upon our farms is not of a quality or kept in a manner which will pay its owner a profit, the importance of a better understanding of this question of the relation of live stock to soil fertility becomes apparent.

The first essential step in the discussion of this question is to emphasize the fact that soil fertility cannot only be maintained without live stock but as well that to secure the maximum of desirable results on the farm where live stock is maintained the same principles and practices must be observed and followed as in maintaining soil fertility without the keeping of live stock on the farm. Given the same quality of management, live stock farming will become proportionately more profitable, hence the im-

portance of an impartial discussion of those principles and practices. General contributions on this subject will be welcomed, as it is one upon which successful experience is more creditable than mere theory.

An inquiry recently conducted by the U. S. Bureau of Education revealed the fact that out of some 3,000 teachers covered by the inquiry, 73 live in homes provided by the community. Other information secured in this inquiry indicated to the officials of the bureau that teachers having such homes apparently become more permanent community leaders than is possible under other conditions. This investigation showed that the average time for which public school teachers remain in any given school is less than two school years of 140 days each. The average age at which teaching is begun is 19 years, and the average number of years in which teachers follow the work is six and one-half. This inquiry substantiates the general idea that public schools of the country are largely taught by young unmarried people who have no intention of following the business as a profession.

Apparently as a result of the facts developed by the inquiry, Mr. Foght of the bureau, in commenting upon the desirability of permanent homes for rural teachers, favored the compulsory provision of a teacher's cottage in close proximity to every school plant, believing that thereby the tendency to make teaching a permanent profession would be stimulated. This suggestion would seem to be entirely impractical under present conditions in our own state, yet it is probable that average school conditions in Michigan are not much, if any, above the standard found to prevail throughout the country. There is unquestionably room for improvement in our rural schools, and it needs only the interest and attention of school patrons and public spirited citizens generally to bring about a desirable degree of such improvement. It is not too early to take cognizance of our duty and obligation in this regard to the end that when the annual school meeting is held in July steps may be taken to make some degree of improvement in the conditions surrounding every rural school in Michigan.

ALWAYS SIGN YOUR NAME.

Frequently we receive inquiries to which the sender has failed to sign his name. We cannot give service in reply to inquiries where the name and address of the inquirer is not given. The name will not be published when request to this end is made, but both name and address must be given in order to receive attention when addressing an inquiry to the Michigan Farmer.

LESSONS FROM A TYPICAL FARM SURVEY.

(Continued from first page).

paying 80 acres was \$1,469. Although this farm is somewhat lacking in one important essential for a most successful farm business, viz., crop acres, yet it is so well organized in every other respect that a remarkable labor income was secured. This farm had 57 crop acres, 17.9 animal units, receipts per animal unit \$79, crop acres per horse 19, crop acres per man 52, yields much above the average and diversity the best, there being nine important sources of income.

This kind of demonstration work is a new feature of agricultural extension work in Michigan which is proving of great benefit to the individual farmer and to the whole community. It is also thought that reports like this given to the press from time to time as the work progresses in the various counties will be of great value

to the thoughtful farmer who wishes to organize his own farm in a manner to secure the highest efficiency of both capital and labor in its management, which in turn will bring the largest net returns without impoverishing the farm.

R. J. BALDWIN,
Supt. of Extension Work.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—Italy has finally decided to cast her fortune with the belligerent nations of Europe and last week declared war against Austria to take effect on Monday. It had been fully expected that the Italian government would ultimately join with the Allies in the big conflict and there seems to be an opinion among business men that the war will be shortened by reason of her participation. Fighting in the western war zone has been largely confined to the line from Arras in northern France to the Belgian coast. While each side seems to have made slight advances at different points the positions are practically as they were a week ago. Over the remainder of the line to the border of Switzerland nothing of importance has come to our notice. In the east the Russians seem to have stemmed the advance of the Austro-German army into Galicia and are now hopeful of the success of offensive flank movements in southern Poland; large Russian forces have been concentrated at Warsaw to reinforce the drive. Minor successes of the land forces of the Allies along the Dardanelles are reported and a submarine has sunk two torpedo boats and two transports, one of which was loaded with soldiers. A furious attack on the British forces entrenched at Kaleb Tepe by two divisions of Turks was repulsed with heavy losses to the latter, according to news from Paris.

The British government has been reorganized to better unite the various parties during the war. Internal friction appeared to be hampering military activity and to put the country in a position of greater security demanded that a coalition government take public matters in hand till the present crisis is over.

A triple collision which occurred near Carlisle, England, resulted in 158 persons being killed and nearly 200 injured. Most of the victims were soldiers of the Royal Scots regiment.

National.

The verdict in the libel suit brought by Wm. Barnes, of Albany, New York, against Colonel Roosevelt on a charge of slander during the campaign of 1912, resulted in a verdict for Mr. Roosevelt.

Just what effect the entering of the war by Italy will have upon business in this country is difficult to state. Generally speaking, concerns whose activities would likely be influenced by the war had discounted the effect beforehand. Wall street appeared to consider the move favorably, as stocks took on a more active tone with prices going upward following the announcement of Italy's cabinet. The belief is that the war will be terminated sooner, which is considered an improvement in our business outlook. Trading continues to improve and the steel market is such as to attract speculators to take hold of that market. Our relations with Germany, while not settled, appear to be less of an obstacle than they seemed a week ago. Crop conditions in this country have suffered a little by reason of damage to wheat in Missouri, Kansas and Oklahoma, where the crop is now declared to be about 13 points below conditions a month ago.

State Superintendent Keller is sending to all of the school boards of the state a circular impressing the need of cleaning and repairing school buildings and premises during the summer vacation period.

The amount of war munitions shipped abroad from the United States is reported by officials at Washington as being comparatively very small. Enough cartridges have been sent out to last 480,000 men one day, and the powder exported would furnish 2,000 guns with that explosive for ten minutes.

Michigan legislators, after being called back to Lansing to correct an error in the highway bill, took advantage of their presence at the capitol and passed several measures over the Governor's veto. Among the measures made law by a two-thirds vote was a bill to make Lapeer county a separate judicial circuit and another which gives the owner of a garage a lien on an automobile where he has made repairs thereon.

The trustees of the Michigan Anti-Saloon League will meet in Lansing June 10 to take up the matter of the submission of petitions for a constitutional amendment to provide for state-wide prohibition.

Stockless Farming

THERE was a time not long ago when writers were nearly all saying that soil fertility could not be maintained without live stock.

But, fortunately, experience has shown that there are other ways, not only to conserve fertility but to increase it as well. More than that, the stock sometimes does harm as well as good at other times, so we cannot afford to keep stock unless we get more returns in that business than in other lines. My first lesson in this line came as a great surprise to me. I had sown a piece of new ground to clover and timothy and mowed part of it and sold the hay for a number of years without putting a thing back on the land and at the same time I pastured the other part. As the clover had been gone out of the land for some time and timothy is considered to be hard on land, I expected that the next crop would be much the best on the pasture land and was much surprised to find that the old meadow produced much the best crop.

Then I remembered that the stock had eaten the grass so close that there was but little top left and that the

everything back on the farm but it is certain that all cannot do that as there are many things that must be raised that must be sold for use elsewhere so there is a constant going out from the farm of fertility that must be replaced and I think the legumes with the clovers at their head will do the work if given a fair chance.

I have seen hundreds of acres of poor land made productive by the use of common clover and in many cases more than pay all expenses in other crops while the improvement was being made and I feel sure the improvement is not due entirely to the nitrogen gathered and the better mechanical condition of the soil. The ground is more or less filled with water that is soaking down to lower depths or being brought back by capillary attraction, and as this water contains mineral substances in solution, the clover in elaborating the plant food from this water keeps the mineral substances in it near the surface, ready for the next crop as soon as the clover decays.

Other plants can do the same and all of them help keep the vegetable

department has no assistance to fall back upon and when the electrical storms of the hot weather smite his property he has to see it go, when often some simple thing might have prevented it at the start.

Fire protection on the farm is a consideration which I am sorry to say, is overlooked by most farmers, but there are various ways of installing rural fire protection, for example, an overhead water tank may suffice, or a steam or gasoline force pump, one run by gasoline being the better.

The first thing to be looked to during a barn fire is the animals. They should have first right of consideration. Man's imagination can only picture what a fate burning to death would be, by the comparison of small burns on the body.

It might be well to remember that lightning is more likely to follow a path identical with a draft of air. For instance, there are two windows, both open opposite each other in such a way as to form a draught of air. This is why it is not safe to be near an open window during an electrical storm. Opposite windows and doors should at once be closed during an electrical storm.

Wayne Co.

M. E. MORET.

MANURE ON PASTURES.

On most farms there are more or less piles of half-rotted manure lying around the barnyard that are in the way at threshing time but would be valuable if well scattered over the pastures. Usually in the spring of the year the pastures yield an abundance of feed but require lots of manure to maintain the supply for the long summer time and keep it thriving till the fall period of flush feed. While the cattle will not take to these top-dressed plots for a time after they are covered, the manure-covered places will yield a good supply of food at the very time of the season when pasture is most needed. And again the stock will eat more closely in these places and therefore the grass will go through next winter in much better shape and afford pasture several days sooner than had it not been top-dressed.

When one hauls manure on a grass field, he has the assurance that nothing is wasted. The manure gets mixed with the soil that is to grow the crop the following season, when the vegetable matter is in such a condition that it can begin its work of conserving moisture without the danger of destroying capillary union at the bottom of the furrow slice and cutting off subsoil moisture in a dry season, as is often the case when a coating of coarse manure is plowed under.

Lapeer Co.

M. A. CRAWFORD.

ALFALFA AFTER CLOVER.

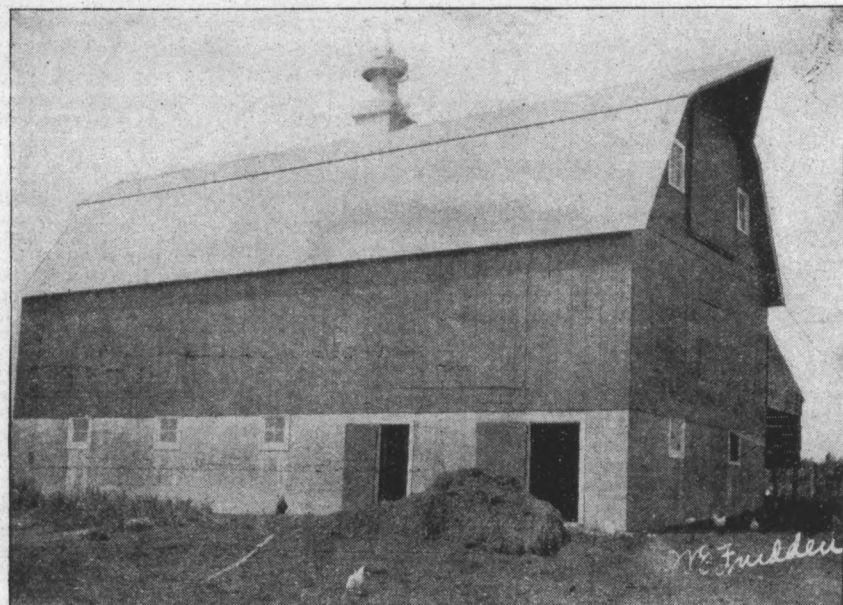
I have a field of five acres now in clover. Would you advise cutting the clover the latter part of June, then plowing and working the land to prepare a good seed bed and seed the field to alfalfa without a nurse crop?

Huron Co.

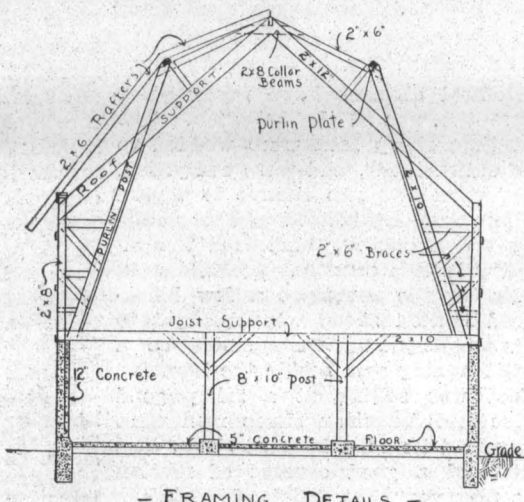
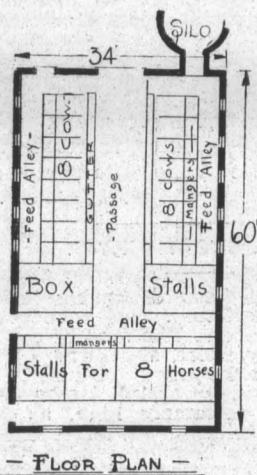
J. W. R.

While there could be no objection to the plan proposed from the standpoint of getting a seeding of alfalfa, yet from the standpoint of best farm management, this would not in the writer's opinion, be a good plan. From the standpoint of maximum results from this land, it would be better to follow the clover with some cultivated crop and then sow the alfalfa, using supplementary fertilizers if necessary. Land which now carries a good stand of clover is admirably adapted for use in the crop rotation, and the alfalfa can be successfully seeded following the growing of a cash crop.

Opinions of growers differ as to the proper amount of seed to use. The writer has secured as good stands with seven to ten pounds per acre as by using more seed, although some advise twice that amount.



Plank Frame Barn, with Floor Plan and Details of Frame Construction.



roots were very short, too, so there was not near so much to turn under as there was in the meadow. Since then I have seen many fields that were pastured so close the sod got light and did not amount to much to turn under and though nearly everything was put back on the ground that grew there, yet they did not produce as well as other fields that were farmed without any fertilizer only the sod that grew on them.

My observations have convinced me that green manure is one of our best sources of fertility and it is a waste of fertility to pasture our grass land too close, especially in the fall or early winter. One of the best uses I have found for farmyard manure is to put it on the thin sod to make it grow thicker and thus get a double benefit from it. Let those who choose feed

mold in the soil, and when the ground is full of vegetable mold the nitrogen fixing bacteria combine and do some work even when the clover is plowed under and other crops growing, and they will be ready for business as soon as the clover is sown again. In this manner the soil is permanently benefited and I do not believe that most good soils will run out if kept well clovered.

Isabella Co.

F. G. SMITH.

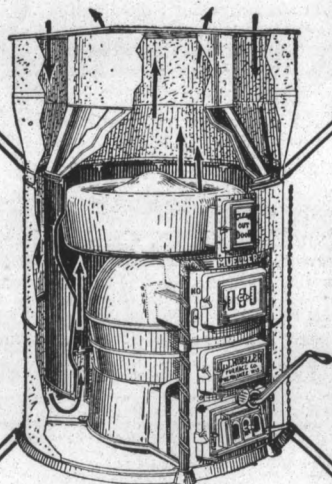
(This is the first article of a series on the subject of Farming Without Live Stock, the thirtieth special topic to be discussed in consecutive issues. —Eds.)

FIRE PROTECTION ON THE FARM.

Next to the destruction by war comes destruction by fire. The farmer who lives away from the city fire

A New Kind of Furnace

No pipes--No waste heat
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Mueller Pipeless Furnace

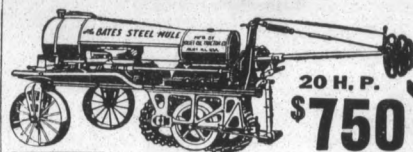
Here's the furnace you have been looking for—one that you can put in any kind or size of house, no matter how old, where located or how small the cellar, and keep every room warm as toast. No pipes to take up space—no alteration or tearing up necessary. Even if you have no cellar you can use the Mueller Pipeless.

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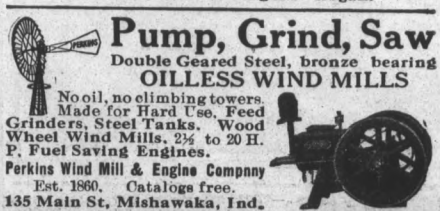
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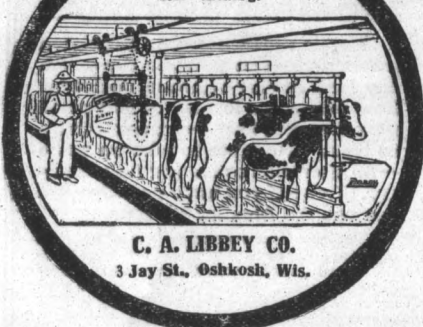
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You do not have to take our word for it—The Dairy Queen will come to you on 30 days' approval, ready to submit to any test to prove its unusual value as a

Guaranteed separator of large capacity and improved design at a reasonable price.

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Simple
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Sanitary
Light running
Enclosed gears
Tinware on opposite side from operator.



The Dairy Queen is a 500 pound, close-skimming separator, fully guaranteed, for \$40. Let us tell you more of its many good points—just ask for our booklet "The Dairy Queen."

Dairy Cream Separator Co.

Makers of Separators for 14 Years
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Cleveland Cream Separators get all the cream. They are guaranteed. They run easier. They last longer. Fewest parts to clean. They cost less because they get all the cream. Agents wanted.

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Made from special 5 oz. duck—sizes about 3 1/2 x 3 1/2 ft. to 5 x 5 ft.—larger sizes and stock covers at correspondingly low prices. Send 50c in stamps for sample cover.

Cow and horse blankets, Dr. Mary Under Protector, wagon and machine covers, tents, awnings, etc.

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FOR SMALL SIZE

WANTED: Competent man to manage large Stock and Dairy Farm. References required. Estate of L. Cornwell, Saginaw, Mich.

Profit from Sheep

FROM time immemorial the sheep has been a companion of, and a contributor to, the needs and comforts of man. The sheep has been a source from which man has secured palatable, healthful and nutritious food, and has also secured material from which comfortable, durable and beautiful clothing has been made. The wool of the sheep has been a blessing and a necessity for the infants that were wrapped in swaddling clothes, the people of middle life to protect them from the cold, and the octogenarian who requires the woolen clothes to assist in maintaining the heat of the body to a comfortable degree.

The sheep in ages past have yielded a beneficial influence in aiding to develop civilized man to his high degree of excellence in character. The mature male sheep has been recognized as the embodiment of strength and courage; even worshiped and claimed as a totem and ancestor. The little lamb has been considered the emblem of innocence, and like a helpless child has awakened within the minds of the human kind genuine pity, love and sympathy. It must be admitted by thinking ones that the finer feelings and sensibilities of the human kind have been increased and improved by associating with, and caring for, the lambs of the flock.

Sheep in America.

From the time our forefathers landed on the shores of America, and began the task of clearing away the forests, tilling the fields and supplying the necessities of their families, sheep have constituted an important part of the live stock kept on the farms. The wool cards, the spinning wheel and the loom once constituted a part of the necessary equipment in the farm home, for it was from the wool of the sheep that the clothing for the people of the northern states was made. The flesh was utilized as food and the fat (tallow) was the material from which the candles were made for lighting the homes at night.

As people used their wits to save their hands and increase the possibilities of accumulating wealth, machinery was invented and factories sprung up and cities were built. The making of cloth and clothing was taken from the home to the factories. The workmen and their families required the products of the farms on which to live and markets were established, wool being among the things produced and sold to meet the requirements of the trade.

For many years the demands of the markets for the wool waxed and waned within short periods of time. For a period of a few years the prices for wool were satisfactory to the farmers, and the numbers of sheep were increased to be followed by a decline if there was anything arose that interfered with the regular movements of trade. I well remember the rapid decline in the values of sheep and wool during the few years that followed the panic of 1857. Sheep were slaughtered by the thousands, and only the pelts and tallow saved. The war of the rebellion came on and after a period of five years of depression the demand for wool for army clothing stimulated and increased prices until in 1864 clothing wool sold for a dollar a pound. The war closed in 1865, the demand for wool fell off and in 1867 the sheep were slaughtered by the thousands, the pelts saved and the better class of carcasses were sold on the markets of our large cities at 25 cents each. At that time the actual value of mutton as food, was not known or appreciated.

Since the Civil War Period.

Since the close of the war of the rebellion the sheep industry has had a remarkable growth in several portions of the world. The doubling of

the population in the temperate regions of the globe has caused a great demand for textile fabrics to meet the needs of humanity. To meet the demand sheep raisers throughout the world have passed through varying conditions, speculative and natural in order to gather a reasonable remuneration for the labor and expenses which they were obliged to bestow upon their flocks.

In our own country the ups and downs of the business have come quite regularly in a see-saw manner, a period of growth and profit gathering, followed by a period of depression and discouragement.

It has been claimed by a portion of the farmers and political economists that some protection should be thrown around the industry which would enable it to develop without being crushed by ruinous competition from countries where cheap labor cares for the sheep, and they are reared on cheap lands. When we have had a good degree of protection by a tariff adequate to meet the difference in conditions which exist in our own and other countries, sheep men have prospered. Free trade, or a tariff so low that competition from Australia and Argentina had to be met in an open market, decline in prices, destruction and disaster has followed.

Notwithstanding discouragements sheep men have clung to their business of raising sheep, sometimes more for the love of it, than for the profits that could be gathered from it. Our great west has been used as a pasture field which has brought severe competition at home. The business of open ranching in Australia and Argentina has developed to great proportions. When the sheep business is at its normal condition throughout the world there is a total of over five hundred millions of sheep of all classes and ages. The sheep of our own country represent about one-tenth of the world's supply. When we have had to meet the competition from the entire world we have struggled at a disadvantage. These statements refer to the sheep business largely as a wool producing business. It may look a little queer to the younger members of the sheep growing fraternity.

The Modern Era in Sheep Raising.

Radical changes have taken place since the war of the rebellion. The old time sheep men were wedded to the old methods, and were compelled, very reluctantly, to change to a plan of lamb raising instead of sheep raising which has revolutionized the industry in this country.

During the seventies a few black-faced mutton sheep were brought to this country and were tested as a profit-making sort beside the Merinos. Wool was selling at a fairly good price and American sheep men were slow to take to a kind of sheep that produced a good carcass of mutton the first year, but a light fleece when compared with the heavy, oily fleeces of the American Merinos. A readjusting process was necessary with both the producers and the consumers.

When there was a wholesale reduction of the tariff rates on wool during the eighties, sheep men were compelled to think of something else to sell from their flocks than just the fleeces. Coarse wool rams were used to cross on the Merino ewes, and lamb raising and feeding for market was freely indulged in by many who had valuable flocks from a wool growing standpoint. The fleeces of wool were produced the same as before, but the income from that source was materially reduced. But few fine woolled lambs were raised.

At the time mentioned fat lambs around a year old sold for five and six dollars per hundred. Many farmers acted as though they had really discovered a gold mine when the year's

crop of lambs could be reared and sold at five and six dollars per head. The old flock of ewes were worn out by continuous lamb raising. Ewes of the mutton breeds were used to take the place of the Merinos, giving good satisfaction as they were very prolific, and excellent mothers.

The business of lamb raising has been continued and as people who desire a palatable meat that is nutritious and healthy have turned their attention to lamb mutton. A very large percentage of the mutton sold in our markets is lamb mutton, and the demand is increasing. The supply though large during the last year, has not met the demands of the consumers and prices have reached points unknown before. During the second week of May, the present year, a high mark of \$11.25 per hundred pounds was reached in the Chicago market. According to government reports the average price to the farmers during the month of April for lambs was \$7.90 at home, the best selling some higher than that figure.

The Outlook for the Business.

I do not profess to be a prophet, but when we analyze the conditions, it seems as though there are better prospects for sheep men to make money from their sheep than ever before. It is a fact well known that the world's supply of sheep is short, very short. Although speculators may accumulate and hold and control the prices to a great extent for wool, it is not so with the supply of mutton. People have cultivated an appetite for good mutton which they will gratify as long as their means hold out. People of accumulated means will buy what they want if they can secure it, even if the price is high. As long as our manufacturing industries flourish, laboring men will have and will use their money for the best that the market affords.

Even with special efforts bent toward sheep breeding and lamb raising, it will take several years for the possible increase in the flocks to catch up with the demand. There is a great opportunity to make money while the present conditions prevail.

It will certainly be worth the while to give more attention to the flocks and bend every effort toward making them produce more lambs, and of a better quality, than ever before. Raise more of the right kinds of feeds on the farms and market them through the lambs, and the profits will bring satisfaction to the owners, and make it possible to greatly increase the comforts of life in the farm homes.

Wayne Co. N. A. CLAPP.

LIVE STOCK NEWS.

Limited numbers of spring lambs are being marketed, and prime lots bring fancy prices. The crop of spring lambs is very short, and owners who make their flocks prime are sure to be liberally rewarded. Fed lambs are also selling extremely high, as are sheep and yearlings. An unprecedented demand for breeders and feeders later on is expected, with nowhere near enough to go around.

During the recent fifteenth annual bull sale in Alberta, Canada, 332 Hereford, Shorthorn and Aberdeen-Angus bulls were auctioned off in two days for the sum of \$53,135. One bull sold for \$515 and two for \$500.

The Chicago packers are reported to have purchased beef cattle in Lexington, Ky., recently paying just before the recent boom in prices \$7.75 per 100 lbs. for steers that averaged a little over 1,400 lbs. One of the packing firms is reported to have contracted Canadian distillery-fed cattle for June delivery at \$9.

Industrial conditions are responsible for much of the recent depression in the cattle and beef trade. Shipments of beef by the Chicago packers to Gary, Indiana, the plant of the steel trust, during the first three months of this year were 57 per cent less than a year ago.

Oklahoma has been fortunate enough in getting hold of a good many stock cattle, and Montana, Minnesota and Dakota stockmen are scouring the northwestern Canadian provinces in search of young stockers.

Dairy.

CONDUCTED BY COLON C. LILLIE.

LILLIE FARMSTEAD DAIRY NOTES.

We have discontinued milking three times a day. While the cows gave more milk and would make greater records it was an awful inconvenience. In fact, under our conditions it was not much less than a nuisance. It is very inconvenient for a man to milk at 4:00 a. m., again at 12:00 m., and then at 8:00 p. m. During the middle of the day is the only time it is convenient for us to let our cows out of the barn, and if a few are kept in while the rest are turned out, then they are very uneasy and do not do well. It is not convenient to keep them all in the stable until noon and so there you are. We cut the practice out when only nicely started. We found one thing, though, and that is that a cow will give more milk, when milked three times daily, than when milked only twice.

Is Frequent Milking Practical?

There is another question, however, to consider, and that is this, is a test produced by milking three or four times daily practical? That is, do we want a record made in that way, or do we want to know what our cows will do when handled under ordinary conditions? No dairyman will milk his cows three or four times daily. It is not practical. Most of them think to milk twice daily is drudgery enough, Sundays and all, and when you come to three and sometimes four times a day, it resolves itself into so near a nuisance that it is not to be thought of.

This being the case, is a record made under such a practice practical? Does the average dairyman want to pay larger prices for breeding stock because they have made extra records by being milked more often than it is practical for him to do? I think he wants to know what he can expect of his animals under practical conditions. I have made up my mind that I want to know what my cows will do under normal first-class conditions, and am not particularly interested to know what they will do under abnormal conditions. I want dairy cows that will make economical records when milked twice each day and I believe every other practical dairyman wants the same.

Pastures.

The few hot days the last of April (92 degs. in the shade), started the pastures, but there is not sufficient moisture to carry them along. The grass today, May 3, is practically at a standstill. Some people have turned their stock, even their cows, to pasture already. I am confident they have made a mistake. To feed their early growths closely now will permanently injure the grass. It is so dry it can not recover readily. One thing, however, is to the advantage of the cattle; this early growth of grass has more substance than the first growth of spring usually has. There is more heart to it; usually the first growth is so watery that it fairly weakens the cows.

The man with insufficient ensilage, and high-priced grain, is sorely tempted to open the gate and let the cows and especially the young stock, help themselves. I know what the temptation is. But in my judgment a man might better borrow the money and buy a little more feed and keep the cows in for a week or ten days. Besides, the weather is now liable to go to the other extreme and give us a cold wet spell, even frost, (though I hope not), and then the stock actually suffers if they have been turned out

to pasture. Better keep them in and feed them till you feel the weather is such that you would risk planting corn. The pastures will be enough better later on to pay for the extra feed you use now. Fortunately we have plenty of good silage and can get along without the pasture. Before our present supply of silage is gone we will have a new supply of peavine silage. And besides, we will have new cut alfalfa hay before long.

The Alfalfa Stand.

The alfalfa stands about ten inches high now and of a rich healthy color. Red clover is just nicely started, while alfalfa is eight to ten inches high. It seems to be a wonderful plant. But then the red clover did not get 500 pounds of commercial fertilizer per acre, and also a light top-dressing of stable manure last summer as the alfalfa did. I want to try this on new seeding red clover this summer if possible. Soon after wheat is harvested I will apply 500 pounds of fertilizer and a light top-dressing of manure. I wonder if it will respond as the alfalfa has. If it will then I am sure it will pay. We can only starve on poor crops, while on good ones we can grow fat. We can much more easily decrease the cost of a pound of butter five cents by cheapening the cost of food than to sell the pound of butter for five cents more. In fact we haven't much control over the selling price, but the cost price is largely within our control. We can lessen the cost price with poor crops and we can not grow good crops unless we feed them well, no more than our cows will produce well unless we feed them liberally.

A RATION FOR COWS.

Kindly make up a ration of the following feedstuffs at the prices named: Oil meal \$1.95; cottonseed meal \$1.75; hominy feed \$1.50; corn meal \$1.70; bran \$1.35. The roughage consists of clover hay, of which I have about a ton, after which it will be mixed hay, and corn silage, the silage having practically no grain as it was planted closely in drills. I am milking five cows, three of which are heifers, weighing from about 750 to 1,000 lbs., giving from 14 to 35 lbs. per day per cow, testing from five to six per cent, excepting one Holstein heifer which tests below four per cent. The lactation period is from November, when the first one freshened, until March 6, when the last one freshened.

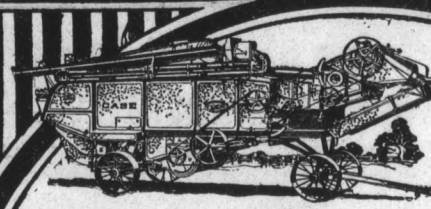
Newaygo Co. S. S.

Hominy feed analyzes 6.8 per cent of digestible protein, 60.5 per cent of carbohydrates and 7.4 per cent fat, while corn meal or corn contains 7.8 per cent digestible protein, 66.8 per cent carbohydrates and 4.3 per cent fat. It will be noted that hominy feed has a much wider nutritive ratio than corn and is a good feed to balance cottonseed meal. But in this case the roughage fodder in the ration also has wide nutritive ration and we need concentrates with narrow nutritive ratios. I would recommend equal parts of bran and hominy feed and then two pounds of cottonseed meal per day for each cow. Feed what hay and silage the cows will eat without waste and then two pounds of cottonseed meal sprinkled on the ensilage, and in addition enough hominy and bran to make one pound of grain for every pound of butter-fat produced in a week. That is, if a cow produces 10 pounds of butter-fat in a week, give her two pounds of cottonseed meal and eight pounds of bran and hominy per day, or if you do not know the production of fat, then give on epound of grain for every three pounds of milk produced per day, but in either case only use two pounds of cottonseed meal per day.

It is quite a help for the boys to do the milking during the busy farming season, but it is a good plan for father to keep his eyes open and see that the boys do a good job. This is quite important.

Penn.

H. W. SWOPE.



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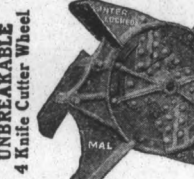
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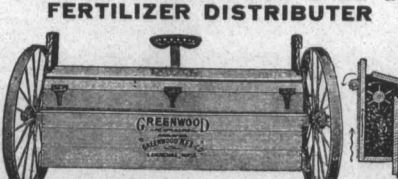
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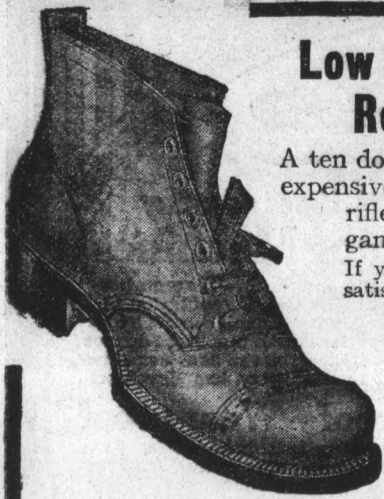
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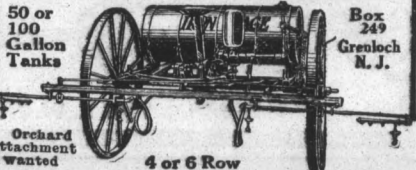
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How many acres of cucumbers can be grown and cared for by three men besides the usual work of mixed farming on a 200-acre farm? What price is paid? How often is it necessary to pick? How about soil and fertilization? Do you know of literature anywhere I can get?

N. C.
With only three men to do the work on a 200-acre farm I don't believe that I would go into the cucumber business. I have had some experience in raising cucumbers and I know that it is very exacting work. It takes a lot of help. Cucumbers must be delivered to the factory every single day, the day they are picked, or else they will wilt and be of no account. As long as you have to take cucumbers to the factory every day you ought to have sufficient acreage so that it would pay to take them down. With just a small patch of cucumbers you would have to go to town practically for nothing, or for a small amount. You ought to raise at least an acre or two anyhow. If you did this the three men could hardly do the picking in a season, let alone doing any other work on the 200 acres of land. If you could get extra help to do the picking, perhaps you could handle a small acreage of cucumbers. The first picking or two don't pay either the pickers or the farmer. There will only be a few, and yet they must be picked off or it will injure the vines for future production. Cucumbers must be picked clean or else the next day you will have large cucumbers that exhaust the vines and bring poor prices. They ought to be picked carefully every day.

Careful Picking Necessary.

One firm pays \$1 a bushel for No. 1, or three-inch cucumbers, and 40 or 50 cents for the other cucumbers suitable for making dill pickles. With a good year, good soil, properly handled, there is good profit in the pickle business, but the trouble comes when you begin to pick. It is hard work for children to pick cucumbers. They won't stick to it or do it thorough enough, and the next time you will have No. 2 pickles, or they will be so large that they will not be accepted. You can get literature on the growing of pickles, from any factory that contracts for pickles or cucumbers.

The best soil for pickles is a sandy loam containing a good amount of vegetable matter so it will hold the moisture. Any good brand of commercial fertilizer is profitable to use on cucumbers. If the land is quite rich apply it in the hill, about a tablespoonful well worked into the soil. If the land is not in very good shape then a larger amount must be used, and a portion of it at least should be put out broadcast before the cucumbers are planted.

Pickles Profitable.

The first time I ever grew cucumbers or pickles I planted three acres. We had a fairly good crop. When the cucumbers got to bearing good, many days we had two wagon loads of cucumbers to take to the factory. Off this three acres I marketed something like \$400 worth of cucumbers and at that time we only got 40 cents a bushel for the small pickles and 20 cents for the large ones. Since then the price has been advancing until they pay \$1 for the small pickles, although the small pickles now are a little smaller than we had to sort them then. Now you can imagine that it takes a lot of work to pick two wagon loads of pickles. Not only this, but everybody's cucumbers come at the same time and there is always a rush in the hurrying part of the season to get the pickles to the factory. Sometimes my team would stand waiting its turn to be unloaded at the factory

for two or three hours, and many nights the man did not get home until 10:00 or 12:00 o'clock. If one could take care of the picking I don't know of any crop more fascinating than the growing of cucumbers for pickles. At 90 cents or \$1 a bushel, with favorable soil and with a favorable year, it would be one of the best paying crops that I know of.

However, if the season happens to be cold and with no warm nights, the cucumbers will not do well. Instead of growing nice and straight pickles they will be nubs and crooked ones with no value at all. You want a good even distribution of moisture during the summer time and good warm weather, with warm nights, to have the best yield of cucumbers for pickles.

COLON C. LILLIE.

TROUBLE DEPARTMENT.

The Cherry Leaf Spot.

I have some cherry trees which were set two years ago last summer; the leaves turned yellow and dropped off about mid-summer. Can you tell me the cause and the remedy; and intend to take the berries out this spring.

B. F. W.

The cause of the cherry leaves turning yellow during late June or July, and dropping prematurely, is a disease called the "leaf spot." This disease is of a fungus nature and therefore can be readily controlled by spraying. Ordinarily the usual sprayings of the cherry trees just before the blossoms, after the blossoms and ten days after that, will keep this disease in check, but there are seasons in which varieties such as the English Morello, which is quite susceptible to this disease, need another application later in the season. On bearing trees this is usually done immediately after the crop is harvested. Bordeaux mixture or lime-sulphur are effective remedies for this disease. The Bordeaux mixture should be used at the rate of four pounds of copper sulphate and six pounds of lime to fifty gallons of water. The lime-sulphur should be used at the strength of one gallon of the concentrated lime-sulphur to fifty gallons of water. On young trees which have not come in to bearing an application or two of either of these mixtures after the leaves are fully developed will usually keep the disease in check.

THE CULTURE OF CARROTS.

A light, warm, deep and rich soil is suitable for carrots. The seed may be sown any time from the middle of April until late in June, sowing for the main crop usually being made in June. One ounce of seed is sufficient for an hundred feet of drill and from three to four pounds for an acre.

Where hand culture is given the seed may be planted in drills a foot apart, scattering the seed thinly in the drill, covering and pressing down firmly with the foot. For field culture sow from two and one-half feet to two feet apart in the rows.

Hand-weeding is absolutely necessary for carrots and great care must be given that the carrots themselves are not pulled up with the weeds. Thin out the plants to stand from three to four inches apart in the rows according to the variety and cultivate freely, drawing the earth towards the plants.

IDA D. BENNETT.

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield, but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.—Adv.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND *LIVE STOCK*
PUBLISHED WEEKLY.
JOURNAL.
ESTABLISHED 1843.

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

This Magazine Section forms a part of our paper every week. Every article is written especially for it, and does not appear elsewhere.

MR. PHILLIP DEVILLEDIEU, or Uncle Phillip, as he was called in the Pineknott Chapter of Confederate Veterans was, by birth, a South Carolinian. (Pronounced i as e following the table of long measure. You will then be using the pronunciation preferred by the owner of the name and like him you will give the word a distinction that long i could never achieve).

The affectionate prefix to the title doesn't imply that Uncle Phillip was a son of Ham, acting either as valet to any comrade or major-domo to any club.

On the contrary our friend traced his lineage back to a devout old Huguenot who landed on the coast of cotton away back in—well, no matter when—and dying left to his heirs a rattling good number of Ham's descendants.

But the Rebellion came on and most of the latter-day scions of the house went to war and those who returned came back fleeced of everything save their manners and their tattered coats of gray. Young Phillip was among the number.

Southward the star of comfort takes its way and soon after his return he left his own balmy clime for one still more so, and pitching his tent on

The Blue and The Gray

(Memorial Day Story)

By M. B. RANDOLPH

the white sands of Florida grew up with the country.

Here he prospered and in the course of time claimed the cattle on a thousand hills—or rather a big bunch of them on the flatwood ranges, to say nothing of the razor backs whose ears bore his device and whose number was legion.

In spite of his prosperity Uncle Phillip was both likable and liked. No one ate sour grapes under his vine, nor made disparaging remarks concerning his domicile which gloried in the possession of two good brick chimneys, and red windows of real glass, whereas his neighbors had to get a along with flues of mud and sticks and openings in the sides of their cabins whose swinging doors let in the light of day. Neither were envious eyes cast at the motley array of books that graced his shelves or smiled in red and blue bindings from under his reading lamp.

All of this because Uncle Phillip had cast in his lot with a settlement

of Crackers, who, it goes without saying, were both poor and illiterate, but who, nevertheless, seemed glad to associate on terms of equality with one of another rank—and Uncle Phillip never condescended.

It is with a twinge of self-reproach that the writer uses the term Crackers, although the people with native independence frankly spoke of themselves as such, and even the aspirants for public honors fell into the way of claiming a Cracker origin, whether for political effect or otherwise, this deponent saith not.

However, though slow and easy going, lacking enterprise and push, even lazy, as a Yankee would say, they were by no means an inferior people.

Old English and Scotch names were constantly met with among them, and, on the whole, they were a shrewd, kindly lot with exceptionally bright children who promised well for the race.

This digression having ended the real interest of this chronicle now be-

gins. As before remarked, southward the star of comfort takes its way, and one frosty fall Aunt Amanda, as she was called away back in Maine—let go of the forty-fifth parallel on which she had been hanging most of her life, and packing her grip set out for the land of Leon.

The alluring headlines, not to say the enticing filling of a shrewdly worded ad, had passed its wand of enchantment over her and inside of 48 hours after her adieu she found herself in a dreary expanse of gall-berry and ti-ti-bushes with a few deluded mortals who, like herself, were wandering about in quest of the lots they had purchased "site unseen," or if you like it better, "sight unseen," (with no regard for orthography as some put it) for as Aunt Amanda indignantly declared, it was "a sight to behold."

In the graphic language of the south she at once saw that she had made a "plumb fool" of herself and hiked back to the small station in the pine woods from which she had emerged, and after due inquiries and instructions hired a conveyance and took herself off in another direction.

Toward nightfall with characteristic "down east" energy and thrift she dismissed her driver and set out on foot

WORLD EVENTS IN PICTURES



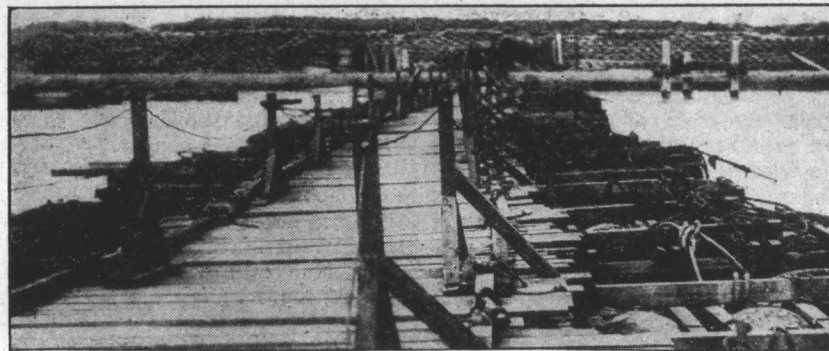
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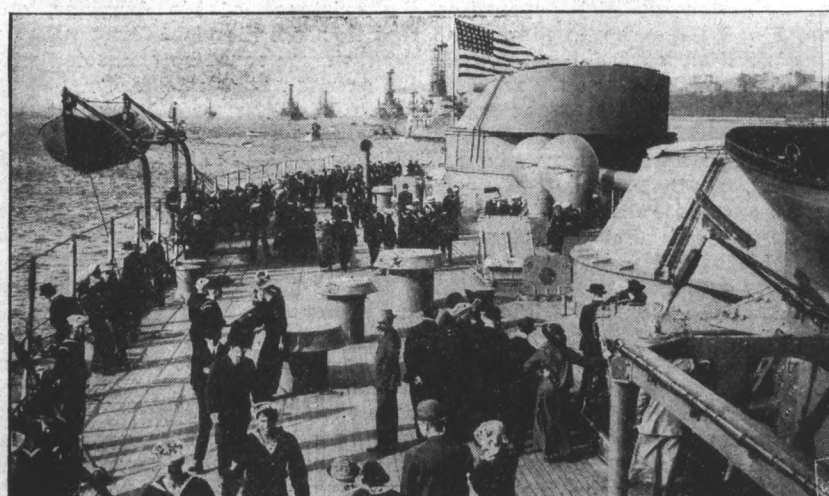
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Mrs. Paul Crampton and Family, Victims of Lusitania Disaster.



German Front Lines as seen through Periscope of a French Outpost.

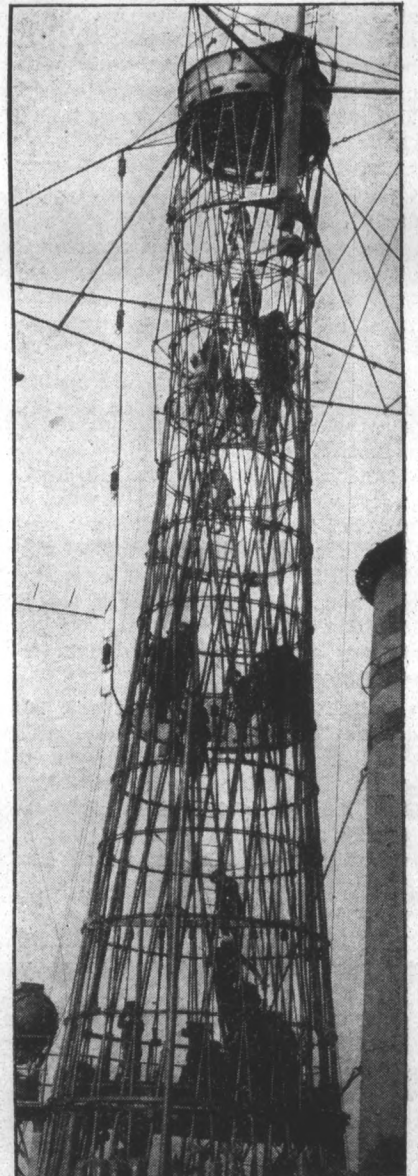


Bridge Built Over Yser within 400 Yards of German Trenches.



Deck of U. S. Battleship "New York," with Other Fighters in Background.

Copyright by Underwood & Underwood, N. Y.



Modern Type of Mast Used on Battleships.

for her near-by destination. But alas! for the plans of mice and men—and women, too, sometimes—she missed her way and at the close of the short twilight found herself on the "Trail of the Lonesome Pine." Blundering around, first taking this pathway, then that, all strewn with needles from the trees above and looking for all the world like great brown serpents trailing through the woods, she at last sat down on an inviting log, lost, frightened, disheartened, and burst into tears. Yes, Aunt Amanda, the intrepid, the invincible, as she was known in her native township, was overcome with the sense of her strange situation, and, bending over like a tired child, with face downward on the unresponsive log, gave vent to audible grief. The tremulous cry of a screech owl gave an uncanny reply, and disheveled hair almost on end, she looked up and saw a pair of gallant coat-tails flying in the breeze as Uncle Phillip alighted from his carriage. With a chivalrous touch of his hat he accosted her: "Madam, what can I do to assist you? You seem to be in deep distress."

A few words explained all and Aunt Amanda soon found herself in the carriage at her rescuer's side. There was nothing to be done but to accept the hospitality graciously offered for the night and forthwith they proceeded to Uncle Phillip's comfortable home where his colored housekeeper had a delicious supper waiting.

Here it becomes necessary to remark that Uncle Phillip, at the susceptible age of sixty-five, had been left a childless widower. However, with commendable judgment he had resisted the charms of the pretty Cracker girls about him and was still living a lonely single life. As for Aunt Amanda, she had been a widow since her young husband fell at Cold Harbor, and the situation, if not romantic, was at least interesting and full of platonic possibilities.

With the aid of her new friend Aunt Amanda was soon located in a cabin a few hundred yards from his premises. That it was a dilapidated old structure it must be admitted, but with the energy and inherent "faculty" of her race both it and its surroundings ere long took on a new aspect, and here, after exploring the woods for cattle and swine, Uncle Phillip might often be seen on warm afternoons chatting and resting in one of her comfortable porch rockers.

On one of these occasions he casually mentioned a Confederate re-union that was to take place some thirty miles distant in an adjoining county, adding that as there was a large number of Union veterans living in the locality that they had been invited to join them in their camp fires and other festivities.

Noting the deep interest his hostess appeared to take in the matter, and knowing "good and well" what an enjoyable companion she would make, Uncle Phillip graciously offered to take her in as a passenger, remarking that she would undoubtedly enjoy the scenery along the famous river road that they would take.

Delighted with the prospect, Aunt Amanda's mind stuck at one point: What should she wear? The long warm ride made black unthinkable. Dust and possible rain made white equally so. At last an old but still wearable blue silk suggested itself. This with a white blouse and a good duster would fill the bill.

The long stretches of fragrant pine, the beautiful avenues of moss-hung oaks, now a hammock, then a silent cypress pound, under foot troops of white lilies, overhead the velvety palpable blue of the sky, and through all the shining river, and over all the anodyne of Florida's air, made the ride a never-to-be-forgotten incident—as also did a very pertinent question and answer.

At its end new pleasures were in

store. Veterans of both causes were at their hospitable best. Camp fires, suppers, speeches, stories and songs were the rule of the day, and when on the last night all in the great tent were wondering over a new arrangement of the Stripes and Bars, Uncle Phillip in his old uniform of gray, and

Aunt Amanda in her antiquated blue, stepped out and following the lead of the two chaplains marched down the long aisle to the double strains of Lohengrin, and taking their places under a great bell of gray moss and blue flowers, pledged themselves to a life-long union of the two famous colors.

THE RED MIST.

By RANDALL PARRISH.

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CHAPTER VIII.

The Mistress of the House.

THERE was no keyhole through which I could peer, and the opening above the floor was the merest crack. I stood with ear pressed against the panel, fingers gripping the butt of my revolver. Not a movement within could be distinguished. What might be the meaning of all this? What would I encounter when I dashed that door open, and faced the occupant of the room? Who could the fellow possibly be? For what purpose should he shut himself up here alone? Two answers to this last query occurred to me—he might be asleep; or, if by any chance this had been the Major's room, he might be busy rifling his desk. But there was no rustle of papers, no movement of any kind. I stood there for what seemed to me a long while, listening vainly for any sound which would indicate life within, the conviction constantly growing on me that the man slept. An ordinary latch held the door closed, and I pressed this, opening the barrier slightly. The movement made not the slightest noise, and gave me a glimpse within. A narrow bed, unoccupied, undisturbed, its coverlet white and unwrinkled, stood against the wall. At the foot a small stand held a few books, and above this hung the picture of a gray-haired woman. This was all the view the narrow opening revealed, but served to render me even more cautious.

Yet I could not stop then, could not safely retreat. Even if someone sat there, hidden from view, patiently waiting to gain glimpse of me to kill, I must go on and discover the truth. My revolver was at the crack, ready, and my left hand slowly opened the door wider. Now I could see the opposite wall, and the space between, and I stood there motionless, breathless, yet feeling my very flesh quiver at the unexpected revelation. In front of a small grate fire, her back toward me, snuggled comfortably down in the depths of an easy chair, sat a woman, reading. I could see little of her because of the high back of the chair rising between us—only a mass of dark brown hair, a smooth, rounded cheek, and the small white hand resting on the chair arm. I knew vaguely her waist was white, her skirt gray, and I saw the glimmer of a pearl-handled pistol lying on a closed chest at her side. Still she was only a woman, a mere girl apparently, whom I had no cause to fear. The sudden reaction caused me to smile with relief, and to return my revolver silently to the belt. Her eyes remained on the page of the book. I think I would have withdrawn without a word, but, at that instant, a draft from the open door flickered her light, and she glanced about seeking the cause. I caught the startled expression in her eyes as she first perceived my shadow; the book fell to the floor, her hand gripping the pistol, even as she arose hastily to her feet. The light was on her face, and I knew her to be Noreen Harwood.

"Who are you? Why are you here?" she asked tersely, a tremor in the voice, but no shrinking in those eyes that looked straight at me.

I moved forward from out the shad-

ow into the radius of light. It was only a step, but the girl recoiled slightly, the pearl-handled pistol rising instantly to a level with my eyes.

"Stand where you are!" she ordered. "What are you doing, creeping about this house in the dark?"

"Not in the dark exactly," I answered, seeking to relieve the strain, and holding my hat in one hand, as I bowed gravely, "for my lamp is on the stairs."

I marked the quick change of expression in her eyes as they swept over me. There was no evidence of recognition; scarcely more than a faint acknowledgement that my appearance was not entirely unfavorable. Yet surely that alone was all I could hope for. Except for that one encounter on the road we had never met since we were children, and she would not likely associate the son of Judge Wyatt with the man now confronting her, attired in the wet and muddy uniform of a Federal Lieutenant. Indeed it was better she should not; and a feeling of relief swept over me as I realized the past. No memory of my features found expression in her face, as her eyes fell from mine to the clothes I wore.

"You are Union, an officer of—of cavalry? I—I can scarcely comprehend why you should be here." Her attitude no longer threatening, the gleaming pistol lowered. "There are Federal troops at Lewisburg, but—but I do not recall your face."

"My being here is wholly an accident," I explained quietly. "I supposed the house deserted, and sought entrance to get away from the storm. There was a broken window—"

"Yes," she interrupted, her eyes again on mine questioningly. "I found that when I came; someone had broken in."

"Robbery, no doubt."

"I am not sure as to that. I have found nothing of any value missing. Indeed we left nothing here to attract vandals." She hesitated, as though doubtful of the propriety of further explanation to a stranger. "I—I belong here," she added simply. "This is my home."

"Yes; I supposed as much; you are Miss Noreen Harwood?"

Her blue eyes widened, her hand grasping more tightly the back of the chair.

"Yes," she admitted. "You knew my father?"

"Slightly; enough to be aware of the existence of his daughter, and that this was his plantation."

"Then you must be connected with the garrison at Charleston?"

"No, Miss Harwood; I belong to the Army of the Potomac, and am here only on recruiting service. A word of explanation will make the situation clear, and I trust may serve to win your confidence. I do not have the appearance of a villain, do I?"

"No, or I should not remain parleying with you," she responded gravely. "The war has taught even the women of this section the lesson of self-protection. I am not at all afraid, or I should not be here alone."

"It surprises me, however, that Major Harwood should consent to your remaining—"

"He has not consented," she interrupted. "I am supposed to be safely

lodged with friends in Lewisburg, but rode out here this afternoon to see the condition of our property. Word came to me that the house had been entered. The servants have all gone, and we were obliged to leave it unoccupied. I was delayed, seeking to discover what damage the vandals had done, and then suddenly the storm broke, and I thought it better to remain until morning."

She laughed, as though amused at her own frankness of speech.

"There, I have told you all my story, without even waiting to hear yours. 'Tis a woman's way, if her impulse be sufficiently strong."

"You mean faith in the other party."

"Of course; one cannot be conventional in war-times, and there is no one here to properly introduce us, even if that formality was desired. So I must accept you on trust."

"My uniform alone should be sufficient guarantee."

She laughed; her eyes sparkling.

"Well, hardly. I imagine you fail to comprehend its really disreputable condition. No doubt, sir, it was at one time a thing of beauty, for I cannot justly criticize the rather fashionable cut, or the quality of cloth, but it has evidently passed through both stress and weather. "No," shaking her head solemnly, yet with frank good humor in her eyes, "the uniform is no recommendation whatever, and but—well, you—you look like an officer and a gentleman."

"For which compliment I sincerely thank you. That is far better than a dependence on clothes alone, yet never before did I feel that my face was my fortune. However, Miss Harwood, my story can be quickly told. I am a lieutenant, Third United States Cavalry—see, the numeral is on my hat—attached to Heitzelman's command, now at Fairfax Court House. I have recently been detailed to the recruiting service, and ordered to this section. If necessary to convince you of my identity you may examine the official papers in this packet."

She shook her head, her glance straying from the official buff envelope back to my face. The look in her eyes was expressive of some slight bewilderment.

"No; that is not necessary. I believe your word."

I found it strangely difficult, fronting her calm look of insistence, to go on. But there was no way of escape. Beyond doubt the sympathy of this girl was with the cause of the North, and if I was to confess myself as Tom Wyatt, and a Confederate spy, all hope of the success of my mission would be immediately ended. Besides I lacked the will to forfeit her esteem—to permit her confidence in me to become changed into suspicion.

"Then I will go on," I said more slowly, endeavoring better to arrange my story. "I picked up a guide at Fayette but the officer in charge there could spare no escort. The man who went with me must have been a traitor, for he guided me south into the Green Briar Mountains. Last night at dusk we rode into a camp of guerillas."

"Who commanded them? Did you learn?"

"A gray-headed, seamed-faced old mountaineer, they called Cowan."

She emitted a quick breath, between closely pressed lips.

"You know the man?" I asked.

"Yes; old Ned Cowan; he lived over yonder, east of there in the foot-hills. He and—and my father had some trouble before the war. He—he is vindictive and dangerous." She stopped, her glance sweeping about the room. "I—I have some reason to suspect," she added, as if half doubting whether she ought to speak the word, "that either he, or one of his men, broke in here."

"In search of something?"

"A paper, yes—a deed. Of course I may be mistaken; only it is not to be

found. The desk in the library was rifled, and its contents scattered over the floor when I came. I put them back in place, but found nothing of value among those that remained. My father must have removed those of importance."

"Possibly he carried them with him?"

She leaned her head on her hand, her eyes thoughtful.

"I think he once told me they were left in charge of a banker at Charleston—an old friend. It would be too dangerous to carry them about with him in the field. You see I do not know very much about his affairs," she explained. "I was away at school when the war broke out, and we have only met briefly since. My father did not talk freely of his personal matters even to me. I learned of his feud with Cowan by accident."

"It was a feud then?"

"On one side at least. My father was shot at, and several of our out-houses burned. The trouble arose over the title to property. 'Cowan,' she explained, 'was a squatter on land which has belonged to our family ever since my grandfather first settled here. We had title from Virginia, but the tract granted had never been properly surveyed. My father had it done, and discovered that Ned Cowan and two of his sons occupied a part of our land with no legal right.'

Her eyes upturned to my face, and then fell again, one hand opening and closing on the back of the chair. She laughed pleasantly.

"I hardly know why I am telling you all this family history," she continued almost in apology. "It is as if I talked to an old friend who was naturally interested in our affairs."

"I am interested, although I can scarcely claim the distinction of old friend."

"Really. I supposed your attitude was that of mere politeness. But I may as well go on now, although I am not at all inclined to confide so suddenly in a stranger. People, I believe, usually find me rather secretive."

"Perhaps the manner of our meeting accounts for the change," I ventured. "But truly I am more deeply interested than you imagine. It may prove of mutual advantage for me to know the facts. Did Major Harwood try to force them from his land?"

"Oh, no," hastily, "my father had no such thought. He tried to help them to purchase the property at a very small price, and on long time. His intention was to aid them, but he found himself unable to convince either father or sons of his real purpose. They either could not, or would not, understand. Do you realize the reckless, lawless nature of these mountain men?"

"Yes, to some extent; they trust no one."

"That was the whole trouble. Seemingly they possessed but one idea—that if my father was killed they could remain where they were indefinitely. Their single instinct was to fight it out with rifles. They refused to either purchase or leave."

There was silence, as though she had finished, and I was endeavoring to connect this revelation of affairs, in my own mind, with the known occurrences of the past few days. She had seated herself on the wide arm of the chair, still facing me, and I could hear the rain beating hard against the side of the house. Suddenly she looked up into my face.

"How odd that I should talk to you so freely," she exclaimed. "Why, I do not even know your name."

"It was written in the papers."

"But I did not look—what is it, please?"

"Charles H. Raymond."

I could not be certain that the expression of her eyes changed, for they suddenly looked away from me, and she stood again upon her feet.

"Raymond, you say!" the slightest hardening of tone apparent, "on recruiting service from the Army of the Potomac?" She drew a quick breath. "I—I think I have heard the name before. Would you mind if I did ask to see your orders?"

"Not in the least," I answered, not wholly surprised that she should have heard of the other, and confident the papers I bore would be properly executed. "I prefer that you have no doubt as to my identity."

She took them, and I noted a slight trembling of her hands as she held the paper open in her fingers, her eyes glancing swiftly down the written lines. She had doubtless heard of this Raymond, some rumor of his coming—perhaps Fox had mentioned it as he rode through Lewisburg on the way east. It was merely curiosity that caused a desire to peruse the papers, a mere wish to thoroughly satisfy herself. Her eyes were clear of suspicion as they glanced at me over the paper.

"I have become quite a soldier of late," she said, and handed the package back to me. "And I cannot doubt your credentials. I am very glad to meet you, Lieutenant Raymond," and she held out her hand cordially. "As I have admitted already, I am Noreen Harwood."

"Whom I shall only be delighted to serve in any manner possible," I replied gallantly, relieved that she was so easily convinced.

"Oh, I think the service is more likely to be mine. You confessed you broke in here seeking after food and a fire. Down below we may find both, and it will be my pleasure thus to serve a Federal officer. You have a lamp without?"

"On the stairs."

She led the way like a mistress in her own home, and I followed. There was a force of character about the girl not to be ignored. She chose to treat me as a guest, uninvited, but none the less welcome, a position I was not reluctant to accept. I held the lamp as we went down the stairs together, the rays of light pressing aside the curtain of darkness.

(Continued next week.)

OUR FLAG.

BY Z. I. DAVIS.

Of all the banners East or West,
Our noble country's flag seems best;
Its colors red and white and blue,
Stand for the loyal and the true;
Its stars their nightly vigils keep
Where soldier heroes silent sleep.
O'er many honored, nameless graves,
Caressed by every breeze, it waves,
For freedom, and for weal and truth,
It stands the hope of age and youth.
Wave on, wave on, flag of the free,
For glory and for liberty.

FOR PAPA'S BIRTHDAY.

BY CORA A. MATSON DOLSON.

I think I know just what I'll do,
At home here, by myself;
There isn't any cake at all
Upon our pantry shelf.

And as 'tis Papa's birthday
And Mamma gone, I see
He'll have no birthday cake today
Unless it's made by me.

I'll make a nice cream sugar cake
And bake in Grandma's tin;
The one that when he was a boy
His Mamma baked cake in.

I have no birthday candles
But there's the golden glow;
I'll put the yellow blossoms
All round it in a row.

Another, and another,
They cover all the top;
But Papa is so very old
It seemed I'd never stop.

It's all a glow of golden glow:
But thirty-five is old!
And Papa says the cake and I
Are worth our weight in gold!

Speak fair—and think what you will.
—The Talmud.

I am thankful for small mercies. I compared notes with one of my friends who expects everything to the universe, and is disappointed when anything is less than the best, and I found that I begin at the other extreme, expecting nothing, and am always full of thanks for moderate goods.—Emerson.

The Verdict

— convincingly and overwhelmingly for Goodrich

The B. F. Goodrich Company alone through the daily press of *January 31st* gave to the consuming public the *most sweeping reduction* ever made in tire prices. This established the *only genuine Fair-List* in existence on non-skid tires today.

Goodrich prices were dated February 1st, in ordinary course. Other tires were reduced in prices a few days later and the reduction dated back to February 1st.

Every real price-reduction on tires has followed the lead of Goodrich.

We knew we were right. We knew that the dealers would know it as soon as our plan was put to the test.

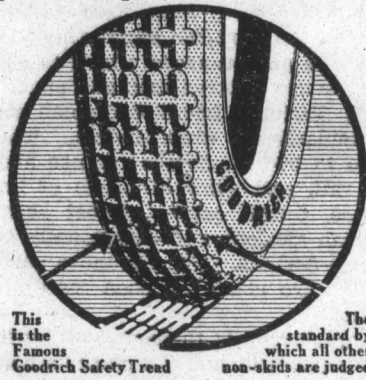
Hundreds of dealers who have been dividing their business have notified us that they have decided to sell Goodrich "Fair-Listed" Tires exclusively.

Tire Standards have from the first been set by Goodrich Products.

Goodrich Safety Tread Tires are today, as they have always been the *Standard* by which the merits of all Non-Skid Tires are measured.

Only 5% PLUS for the Best Non-Skid

Goodrich Safety Treads give more mileage than our own (or any other) smooth tread tires, at only the 5% more cost to you. Note comparative table of prices on Non-Skid Tires showing other brands costing from 10% to 30% more than Safety Treads.



Size	Goodrich Safety Tread	OTHER MAKES			
		"A"	"B"	"C"	"D"
30 x 3	\$ 9.45	\$10.55	\$10.95	\$16.35	\$18.10
30 x 3 1/2	12.20	13.35	14.20	21.70	23.60
32 x 3 1/2	14.00	15.40	16.30	22.85	25.30
34 x 4	20.35	22.30	23.80	31.15	33.55
36 x 4 1/2	28.70	32.15	33.60	41.85	41.40
37 x 5	33.90	39.80	41.80	49.85	52.05

Goodrich "Fair-Listed" Prices constitute the *standard* by which the prices of other tires must be judged.

Goodrich Leadership is more firmly established today than it has ever been in the past.

Goodrich Tires are *better* this year than we have ever been able to make them before.

You know the superiority of Goodrich Tires. You also know about Goodrich "Fair-Listed" Prices—the prices that have knocked out the padding for the *Benefit of Tire Buyers*.

You know, too, that the verdict is overwhelmingly in favor of Goodrich Safety Tread Tires.

THE B. F. GOODRICH COMPANY, Akron, Ohio

Makers of Everything that's Best in Rubber

THE NILES IRON & STEEL ROOFING CO., NILES, O.

MANUFACTURERS for THIRTY YEARS of

The World's Best

Galvanized and
Painted Roofing

which is PROOF AGAINST FIRE, WIND, LIGHTNING and RAIN. This alone is worthy of your consideration. It is much cheaper than slate or shingles, and will give better satisfaction than any other kind of roofing you can possibly buy. WRITE us today for our FREE CATALOG AND PRICES.

SATISFACTION GUARANTEED

THE NILES IRON & STEEL ROOFING CO., Dept. 14, NILES, OHIO.

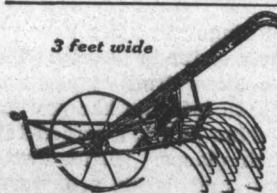
WE OFFER MUNICIPAL BONDS, 6%

MANY ISSUES TAX FREE, YIELDING 4% TO 6%

All paid from taxes—by coupons collectable through any bank.

We absolutely own every bond we offer and have spared no time and expense to make sure of their security and legality. They are FAR SAFER THAN HIDING PLACES AND BANK VAULTS in addition to yielding an excellent and certain income. The U. S. Government accepts them as security for Postal Savings Deposits, why not avail yourself of this security and income. They are in \$100, \$500 and \$1,000 bonds and can be bought either for cash or partial payments. Write TODAY for lists and booklet, "Bonds of Our Country" FREE.

BOND DEPARTMENT,
THE NEW FIRST NATIONAL BANK, COLUMBUS, O.



A New Seeder—Between Rows

Reduces Labor and Assures Better Results Than From Any Other Method or Machine

For seeding and covering seed between rows of corn, etc. Sows clover, alfalfa, timothy, rye, wheat, oats, buckwheat, etc. 17 flat teeth cover the seed to any depth desired and leave the field level. Wind does not interfere. Seeder mechanism and teeth same as used on our large machines for 11 years. Accurate and adjusts for various quantities. Shipped from branch near you.

Eureka One Horse Mulcher and Seeder

also forms dust mulch and kills weeds. It is an ideal cultivator for farm or garden. Works close to small plants. Any of the teeth can be removed. Light weight with greatest strength—all parts of steel or malleable iron, except handles. Easily operated. Low price. Send for free catalog.

EUREKA MOWER CO., Box 1226, Utica, N. Y.



Woman and Her Needs

At Home and Elsewhere



The New Things In Wall Paper

THE man who wrote "there is nothing new under the sun," was certainly not acquainted with American manufacturers, for these versatile individuals manage to dig up something new every spring even though they have to stretch the imagination to the breaking point, and the result is at times more startling than artistic.

The wall paper men had to have something new. Oatmeals and Tifanys and grass cloths had been done to death and the trade demanded a change. Some genius hit upon the brilliant idea of photographing the frost on a window pane and reproducing the picture in a wall paper pattern, and, like the boys at "Dotheboys Hall," he "went and did it." The resulting paper is "something different" all right, though whether one would care for it on one's walls for more than six weeks is a mooted question, even with the men who sell the paper. If you can imagine Jack Frost's delicately traced pictures done with a heavy brush in strong colors you will have a good idea of what this paper looks like.

Another genius not to be outdone, by the frost man, photographed some floor mattings and made a matting paper. This goes much better, for it simply looks like an extra heavy grass cloth. It comes in the new colors, gray, blue, tan and brown and is very effective for living-rooms and dining-rooms, libraries and halls. With this matting paper are used two borders, a

to be decorated. On the same order of these papers, is Saxony fibre, a heavy paper in both plain and blended effects in grays, old rose and green.

An unusual parlor paper is carried out in black and white, a color combination which seems good in everything this spring. This is a bird of paradise pattern, in large bold lines, which must be seen to be appreciated. It is very good in a parlor with white enameled woodwork, but could be used as well in a dining-room or a large hall. Pictorial papers are in demand, as well as the plain and blended papers which have been used so long. Besides the paradise paper there is a Japanese garden scene which is effective for use in large rooms in panel effects. Pictorial friezes are much used, particularly in dining-rooms. These come in 30-inch depths for use above the rail, and show all sorts of landscapes, feudal castles, forest scenes, English gardens and occasionally geometric designs. The Japanese garden papers are usually chosen for dining-rooms.

Aerochrome is the name of another new paper which is not unlike a heavy oatmeal. It comes in mottled effects, in combinations of the popular colors, and is used with heavy cut out borders made from reproductions taken from photographs of old Egyptian ruins. These Egyptian borders are new, and unusually effective. The color combinations are very striking, browns relieved by a suggestion of old rose or greens, old blues, brightened by a

fully to analyze the picture. With these papers are used the cut out borders at top and bottom, and, where the walls are large enough to stand the treatment, the narrow bottom border goes up either side in panel effect. For the living-rooms the Egyptian and geometric borders are used entirely, floral borders being relegated to sleeping-rooms.

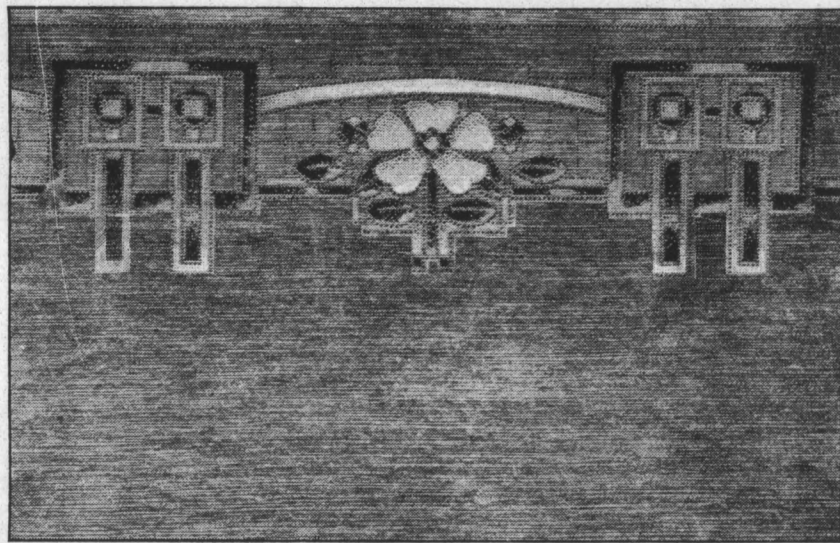
For the sleeping rooms there is not much change in papers. Nothing seems to satisfy so well as stripes, and there are stripes of every width and color. There are plain pin-line stripes and

come from 25 cents the roll to \$1.00 and more. Of course, the cheaper papers do not look so good as the higher-priced one, any more than a print gown would look as rich as one of silk. But the same effects are carried out, only in cheaper colors.

VALUE OF RHUBARB IN PRESERVING.

BY MRS. E. O. SWOPE.

For many years I have combined rhubarb with pineapple for preserving purposes. The result is delicious, as



An Attractive Border Design.

stripes of posies, and for every paper the cut out border of floral or geometric design, with the favors all to the floral patterns. If you do not want a stripe and are anxious for a riot of colors there are some very good copies of English chintzes, with the bright colors faithfully reproduced. One bedroom in English chintz wouldn't be a bad idea in every house, the bright colors have such a cheering effect. For an invalid or a person afflicted with chronic blues a bedroom in chintz with window hanging to match, should be most wholesome.

The up-to-date wall-paper house shows draperies as well as wall hangings, and for every paper shown the salesman will show you the correct curtain material. Madras seems the favored material for the lower rooms, and cretonne for the bedrooms. Not a color shown in the paper but has its drapery to match. Cretonne for bedroom hangings, curtains, spread, and dresser covers, seems as good today as when it was first introduced. Some prefer chintz, but either is good.

If you do not care for any of the papers mentioned, there are still many others from which to choose. Basket weave, looks like the basket weave cloth, so popular for suits a few seasons ago. It comes in plain colors or blends, in gray, brown and tan, as does artists' canvas, which, as its name implies, is a reproduction of the the oatmeal papers, the grass cloth papers, the leather and Tiffany effects which have been used so long, are still good. Leather for the dining-room is always good, as is Tiffany in the parlor. Tapestry papers in grays, blues, tans and browns could be chosen for dining-room or hall, especially in a room of spacious proportions, and one never tires of the tapestry papers if the colors are well chosen.

All of these papers are shown in prices to suit every pocket-book. They

perhaps a great many housekeepers know. Until last year, however, I had never realized the full value of rhubarb in preserving and canning. I experimented with many kinds of fruit and found that the addition of rhubarb made a marked improvement in flavor over the old way. Another advantage, of course, is the reduced expense, as the rhubarb is cheaper than almost any of the fruits with which it may be combined.

With currants, gooseberries, or any others that are acid, I use half-and-half, a little water, and sugar enough to sweeten to taste. With the milder fruits, such as strawberries, raspberries, blackberries, sweet cherries, etc., I use in about the proportion of one-third rhubarb to two-thirds of berries. Watermelon preserves made with rhubarb are better and a great deal more delicious than when made with lemons alone. Using both rhubarb and lemons make a decided improvement on watermelon preserves.

A delicious marmalade is made of rhubarb and pumpkin as follows: Over six pounds of finely cut pumpkin and two pounds of rhubarb, also finely cut, pour five pounds of granulated sugar and let stand over night. Next day let the mixture simmer slowly until it becomes of the desired consistency. This will require most of the day. It is then ready to seal in jelly tumblers or in small jars, whichever you may choose.

A bit of salt added to any kind of preserves, jams or jellies, is a decided improvement over the older methods.

Before laying a carpet after house-cleaning, it is a good plan to wash the floor with a strong solution of salt and water. This will keep away moths. It is also a good idea to sprinkle salt on the carpet occasionally when sweeping.—Mrs. J. J. O'C.



A Bird of Paradise Design for Parlor Walls.

cut out border at the top of Egyptian design, and a narrow border at the bottom. If you wish to secure a particularly pleasing room you panel your walls with the narrow border.

Australian grass cloth is another new paper in blended effects, for use in the lower rooms of the house. It resembles the matting papers in general appearance, but it has a coarser blend. One piece in blended pinks and blues looked like nothing so much as an old-fashioned hit-and-miss rag carpet. It comes in blends of brown and tan, gray shot with blue, and other color combinations to suit the room

touch of complementary colors, and grays shot with blue or rose. They must be seen to be appreciated, as mere word painting gives no idea of their charm.

It is in colorings that the new papers make their claim to beauty. The old colors we have tired of seem to have been pushed into the background and gray, old blue and a glorified tan have taken their places. Blended with the cold grays and blues are warm tints of yellow, rose, pink and golden brown, blended so skilfully that you are only conscious of a beautiful background and must look long and care-

Grange.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

A NOVEL IDEA.

To Mrs. George S. Ladd, Lecturer of the Massachusetts State Grange, and to Chairman R. J. Gregory and Secretary Mrs. E. O. Marshall, of the State Bird Committee, belongs the credit for successfully carrying out one of the most unique plans for aiding the birds ever seen in the United States.

On Saturday, April 24, at Grafton, Massachusetts, there was held a Children's Bird Field Day and more than 500 children took part in the exercises that followed the marching from the center school to the town commons. Miss Helen Warren, representing the Goddess of Liberty, stood beneath a double arch decorated with bunting and she was saluted by those children who then pledged their allegiance to their flag and country. Patriotic and bird songs were sung, games were played, bird puzzles were solved and 50 bird houses were given out to as many children as prizes for excellent work done in bird work during the winter and spring.

Then the successful ones were taken in automobiles to different parts of

Farmers' Clubs

CLUB DISCUSSIONS.

Laying Out the Farm.—The Washington Center Farmers' Club was very pleasantly entertained at the home of Mr. and Mrs. W. W. Mette, May 13. The meeting was presided over by Vice-president Mrs. F. L. Cook. Roll call was responded to by naming a noted place in Michigan. A select reading, "Wanted—a Minister's Wife," by Mrs. Cudsen, was much enjoyed. "Convenient arrangement of fields on the farm," was opened for discussion by Mr. Heinlen, who favored long fields so that in plowing he would not have to turn so often. Others thought ten-acre lots about right, with a lane through the center of the farm. Mr. Curren has one 40 acres laid out in ten-acre fields, and one in eight-acre fields, and does not think he has too many, which goes to show that there is quite a difference of opinion as to convenience. The next subject taken up, "The value of Good Roads," was opened by C. N. Curren and thoroughly discussed by all voters present. The Farmers' Club believes in keeping this subject before the people, and it usually has a place on the program once or twice every year. The June meeting of the Club will be held at "Shadelands," with Mr. and Mrs. O. J. Campbell.—Mrs. S. N. French, Cor. Sec.

The Wells-Dayton Farmers' Club met and were entertained at the home of Mr. and Mrs. Everitt Ross in Caro, May 5. It being a half-day meeting and a long distance for some of the



Children's Bird Field Day Exercises in Massachusetts.

the town so that they might put up their houses properly, under direction of the state ornithologist, E. H. Forbush and Chairman R. J. Gregory, of the State Bird Committee.

In the afternoon more than 700 people gathered in the town hall to listen to talks about birds by various well known and representative people. Among the speakers were State Ornithologist E. H. Forbush, Winthrop Packard, secretary of the Massachusetts Audubon Society, T. J. DeCoudres, Superintendent of the Grafton Schools, three members of the State Bird Committee, Mr. R. J. Gregory, Chairman, Mrs. E. O. Marshall, Secretary, and Mrs. Eleanor Mellen, W. K. Putney, lecturer and writer of nature work, John H. Thompson, Master of Grafton Grange, and Mrs. George S. Ladd, Lecturer of the Massachusetts State Grange, who on account of her activity is often spoken of as the "biggest little woman in Massachusetts." Mass. W. K. PUTNEY.

AMONG THE LIVE GRANGES.

Peach Plains Grange, of Ottawa county, met at the home of Mr. and Mrs. August Rank, of 1142 Fulton avenue, the evening of May 1, with a good attendance. After the business session all enjoyed the literary program as prepared by the lecturer, Mrs. Borck, and which consisted of papers on farm and household topics, songs by the Glee Club, recitations by the younger members, more songs by the Glee Club. Then came the refreshments, after which the Grange closed, all declaring it to be one of the very best evenings ever spent.

COMING EVENTS.

Monroe County Pomona Grange No. 51, will meet with Ash Center Grange, Tuesday, June 15.

members to drive, there were only about 30 visitors and members present. A short program by the entertainment committee was furnished and a good talk by Mr. Wm. Mudge, manager of the Thumb Creamery Company, which brought out the testing and different grades of cream, which was appreciated by the Club. Several selections were given on the phonograph. The question box brought out a lively discussion. Miss Malsbury being chef, served an excellent supper to which all did justice. Mr. and Mrs. Alfred Walls will entertain the Club June 2, at East Dayton.—Mrs. S. G. Ross, Cor. Sec.

Short Cuts to Housekeeping.—The May meeting of the Columbia Farmers' Club, which was held at "Oak Grove," the home of Mr. and Mrs. Frank Ball, was an interesting meeting. The newly elected president, Clarence Cook, presided. A paper on "Farm Pests and how to control them, and diseases of crops," was read by Luther Cook. Birds and the skunk was mentioned as a means of combating some pests. Treatment of seed for some crops was given, and of the soil for others. Miss Matie Lowry gave two readings and Mrs. E. H. Loomis also gave one on "Keeping One's Balance." Mrs. Edw. Donaldson gave some short cuts to housekeeping, followed by others from the Club ladies, as follows: Use a bread mixer; drop your cookies instead of cutting them; use hot water instead of cold for pie crust; make your biscuit in the morning, put in cold place, and bake when required; try baked suet pudding, instead of steamed; put fruit in cans, fill with hot syrup, and stand in hot water until it is cold; can plant in cold water. Mr. and Mrs. Ball, Mr. and Mrs. Loomis, and Mrs. Hayes furnished vocal numbers for the occasion and roll call was responded to with many humorous incidents. The pleasant home was beautiful, with its decorations of lilacs and wild violets. A large coffee boiler was used for the first time, that was purchased by the Club for the use of the entertaining hostess.—Maude Smith, Reporter.

Prevent House Flies

Those Carriers of Typhoid and Other Dangerous Diseases.

While fly swatters, sticky fly paper, fly traps and other devices are effective on the adult fly, the best safeguard against this pest is to prevent the fly eggs from hatching.

The United States Department of Agriculture, after extensive tests, recommends Powdered Borax as the most effective, economical and practical substance for this purpose. (See Bulletin of the United States Department of Agriculture No. 118).

The fly lays its eggs in garbage, stable manure or other refuse.

20 Mule Team Borax

Prevents Fly Eggs from Hatching

Directions

Apply through a fine sieve or flour sifter, 2 ounces of 20 Mule Team Borax (the same Borax you have always used in your home) to the can of garbage, daily. Apply in the same way, 10 ounces of 20 Mule Team Borax to 8 bushels of fresh manure, and sprinkle with 2 to 3 gallons of water.

Sold by Dealers Everywhere



"OUR DAINTY MAID"

The Best Bread

Cakes, Pies and Delicacies are made from

NEW CENTURY FLOUR

because we use only highest quality Spring Wheat and exercise every possible care in milling. Housewives are enthusiastic about "New Century." It is economical—making more and better bread, pound for pound, and our guarantee goes with every sack.

Not bleached. Insist on the sack with "Our Dainty Maid." Most grocers sell it.

General Sales Agents:

NEW CENTURY CO., Detroit

With Branches at
PORT HURON, BAY CITY, GRAND RAPIDS
SAGINAW (4)

PLASTER BOARD
NEAT—CLEAN—EASY TO APPLY. We deliver to any part of the country.
H. H. DICKINSON CO., 1140 14th Ave., Detroit, Mich.



EXTRAORDINARY OFFER—30 days free trial on this finest of bicycles—the "Ranger." We will ship it to you on approval, freight prepaid—without a cent deposit in advance. This offer absolutely genuine.

WRITE TODAY for our big catalog showing our full line of bicycles for men and women, boys and girls at prices never before equaled for like quality. It is a cyclopedia of bicycles, sundries and useful bicycle information. It's free.

TIRES, COASTER-BRAKE rear wheels, inner tubes, lamps, cyclometers, equipment and parts for all bicycles at half usual prices. A limited number of second-hand bicycles taken in trade will be closed out at once, at \$3 to \$6 each.

RIDER AGENTS wanted in each town to ride and exhibit a sample 1915 model Ranger furnished by us.

It Costs You Nothing to learn what we offer and how we can do it. You will be astonished and convinced. Do not buy a bicycle, tires or sundries until you get our catalog and new special offers. Write today.

MEAD CYCLE CO., Dept. M77, CHICAGO, ILL.

INTEREST 5% SAFETY 100%

This Bank issues certificates of deposit bearing 5% interest, issued any day for any length of time, over 90 days desired.

Individuals, Churches, or Societies having savings accounts, or who are accumulating building funds, or who have money that will not be needed until a certain date may earn 5% in the meantime.

Remit by money orders or checks on your local bank. Maturity certificates payable in New York exchange.

The First National Bank, of Cheraw, S. C.



Brightest and Cheapest of All Lights
Makes and burns its own gas from coal oil without a wick. Gives light of twenty wick lamps. Uses less oil than any. No chimneys to wash. No wick to trim. Safe. Sure. Reliable. Try a Kero Gas Lamp in your home FREE. Write for one now. Agents wanted everywhere.
The Incandescent Light & Store Co. CINCINNATI, OHIO

DAISY FLY KILLER



placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't split or tip over; will not soil or injure anything. Guaranteed effective. Sold by Dealers or 6 cent prepaid for \$1.

HAROLD SOMERS, 180 DeKalb Ave., Brooklyn, N. Y.

It SAVES the Farmer's Thresh Bill

What saves it?

THE RED RIVER SPECIAL

Why?

Because it saves enough more of grain and time to pay it.

Why does it save more grain?

Because it has the only true and correct principle of taking the grain out of the straw. It beats it out just as you would do by hand with a pitchfork, while other threshers depend upon the grain falling out. It has the Man Behind the Gun which is in no other thresher.

Why does it save the farmer's time?

Because it runs steadily all the time. It runs and does good work when conditions will not permit other kinds to run at all. It is less liable to breakdowns and other troubles than other machines.

BUY OR HIRE

A RED RIVER SPECIAL

And Save the Farmer's Thresh Bill

What advantage is this to the Thresherman?

It is the most popular machine among farmers, and will get the best jobs and the longest run. It threshes when other kinds will not. It threshes faster and threshes more and saves more.

Buy a Red River Special and

GET THE BIG RUN

Send for new Red River Special Paper, FREE

NICHOLS & SHEPARD CO.

(In continuous business since 1848)

Builders of Red River Special Threshers, Wind Stacks, Feeders, Steam Traction Engines and Oil-Gas Tractors

(10) BATTLE CREEK, MICH.

\$15.95 Upward ON TRIAL

AMERICAN CREAM SEPARATOR

A SOLID PROPOSITION to send fully guaranteed, a new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk; making heavy or light cream. The bowl is a sanitary marvel, easily cleaned.

ABSOLUTELY ON APPROVAL

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address: AMERICAN SEPARATOR CO. BOX 3961 Bainbridge, N. Y.



Reliance Separators

are by far the most economical to buy because they get the greatest amount of cream; are easily operated; built of the best material and will give longest service.

Enquire of your local dealer or write main office for particulars.



Reliance Engineering Co., Lansing, Mich.

Hy-Rib Concrete Silos



Are low in cost, easily built, and give satisfaction everywhere. Built with out forms, with only the usual scaffolding and ordinary farm labor. Walls not injured by silage juices. Water-proof, fire-proof, nothing to rot or wear out. Need no painting or repairs. For farm buildings of every kind, use Hy-Rib construction. Hy-Rib combines within itself reinforcement, forms, lath and studs. Silo Catalog Free. Containing useful information, and examples of farm buildings. Write today. Agents Wanted.

TRUSSED CONCRETE STEEL CO.

688 Trussed Concrete Building, Detroit, Mich.

Government Farmers Wanted—\$60 to \$125 monthly. Age 21 to 50. OZMENT 17 F. St. Louis.

Farm Commerce.

Better Opportunities with Motor Trucks

As we consider the advantages of farm marketing by motor trucks as compared to the advantages of city gasoline delivery, it is hard to see why the city man beat his country brother to the method. The man in town has better streets and shorter hauls, yet he was first to adopt motor truck delivery. Would we not think that the farmer with long hauls and poor roads would have been the first to invest in these labor and time saving vehicles?

But the difference is fast disappearing. Rural competition is more keen and ways and means for increasing the speed and decreasing the cost of delivery are becoming as popular among the orchards, fields, gardens, berry patches and poultry farms of the countryside, as they are among the manufacturers, wholesalers and retailers of the city.

But Few Backsliders.

No one need be surprised then, to observe an increase in the number of motor trucks purchased for farm use. As the kind of materials marketed change, the means of marketing naturally will differ. The more farmers become engaged in specialized farming of any sort the more farm owners of motor trucks will there become. The convincing thing about it is that motor truck delivery holds as it grows. More than 90 per cent of all who take up motor truck delivery keep it up and never go back to the ways of their forefathers. The motor truck builds up the very businesses which demand it, and therefore increases and perpetuates the reason for its purchase.

The man who raises berries and fruit soon comes to wonder how he ever managed to stay in business with his old-fashioned methods of delivery. His motor truck enables him to rise later in the morning and get to market at the customary time. It enables him to gather his tender fruit, such as berries and peaches, in the cool of the day, and get it to market or ship-

ping point before they have broken down. It not only moves him up closer to his customary market but puts him within easy striking distance of other and perhaps better markets.

For the Truck and Dairy Farmers.

These conditions apply with equal force to the producer of truck and garden vegetables. The motor truck makes the raiser of radishes, green peas and roasting ears master of his early morning marketing. It lets him get as much sleep as every man deserves, and yet enables him to get into market before it is already glutted. It makes him independent of local buyers, he goes where he can get the best prices and conditions. Furthermore, it enables him to get there more easily, quickly and economically.

Every man who produces, milk, cream, butter, or cheese to any extent is, or soon will be, the owner of a motor truck. It gives him the power and speed necessary to make quick deliveries in the cool of the day and to cover, if necessary, long distances. The motor truck as now built will travel over all kinds of roads in all kinds of weather, and will encounter any hill. The motor truck has become an all-year institution, and one which will relieve the dairyman of the tortures of slow and tiresome delivery.

The poultry farmer is a natural member of the motor truck club and finds that his business can be handled with alacrity and economy by the aid of gasoline. It enables him to market daily, when desired, and to answer and to fill special orders on short notice. It makes a full fledged business man out of the otherwise handicapped poultry farmer.

A farmer need not be an all-fruit, all-vegetable, all-dairy or all-poultry farmer to come in under the classification of those who need specialized delivery. Being engaged in several lines of specialized farming does not keep a man from being a candidate for specialized delivery. Here is a report

WHO GETS THE MONEY?

THE COST OF MANUFACTURING AND MARKETING A POUND OF WISCONSIN CHEESE—IN CENTS

	DIVIDED AMONG	AMERICAN	SWISS	BRICK	LIMBURGER
PRODUCTION	FARMER	10.00	10.00	10.00	10.00
	CHEESE MAKER	1.00	1.00	1.00	1.00
	DEALER	1.00	1.00	1.00	1.00
	SHIPPING	1.00	1.00	1.00	1.00
DISTRIBUTION	WHOLESALE & BROKERS	1.00	1.00	1.00	1.00
	STORAGE & SHRINKAGE	1.00	1.00	1.00	1.00
	RETAILER	1.00	1.00	1.00	1.00
TOTAL COST TO CONSUMER		25.05 CENTS	29.25 CENTS	25.85 CENTS	26.40 CENTS

A careful survey of the cheese industry of the state of Wisconsin has been made. This work extended from the farm where the milk was produced to the final consumer and a detailed record of the expenses and charges for each operation was kept. The accompanying illustration shows how much of the price paid by the consumer of the different varieties of cheese goes to each of the different persons or concerns in the chain connecting the man who makes with the man who eats. After completing the survey the investigators offer the sugges-

tion that the farmers' co-operative cheese factories and other private concerns, develop brands of cheese of superior quality. These men seem confident that if this is done many of the links in the chain above referred to can be eliminated and the producer would not only receive a larger portion of the consumer's money but the consumer would be satisfied to pay more for a better product. The suggestion is one that Michigan farmers interested in cheese factories can afford to take up with the directors of the local factory.

of a typical day's errands of a farmer owning an auto truck: Delivered milk at station, went on to town and got a half ton of fertilizer, returned and took same to field where it was wanted. Threw on a cultivator needing repairs and carried to blacksmith shop. In afternoon delivered a sheep to a farmer living seven miles away, called at neighbor's on way home for eight bushels of seed potatoes. Took some posts and boards to farm a mile away and repaired fence. In the evening the boys and their neighbor friends went in truck to the river three miles away to fish. G. F. WHITSETT.

ACCOUNTING SYSTEM FOR GRAIN ELEVATORS.

The marketing specialists of the department of Agriculture have devised a complete accounting system and set of fifteen forms especially adapted to the business of co-operative elevators. This system and the forms for its installation were developed after a thorough study of all accounting systems now in use in the grain trade. It also includes suggestions made by a number of elevator managers and grain men throughout the country. Before publication, the system recommended and the forms were submitted to careful practical tests in representative elevators in seven of the grain states. As a result of this practical business use of the forms, the system has been adopted by the Farmers' Union of Kansas, the Grain Dealers' Association of Illinois, and the National Council of Grain Dealers' Associations. In developing the system the specialists had in mind two objects, first the devising of a complete system of accounts for grain elevators, and secondly the developing of a system adapted to all elevators which might encourage these enterprises to keep their accounts in a uniform way. The specialists believe that the adoption of some uniform accounting system, besides standardizing accounting practice will enable employees to become more proficient in accounting, give stockholders confidence, and make possible the exchanging of elevator statistics. The system has been so devised as to accommodate itself to all the conditions common in the grain states. Its use as a loose-leaf system, however, enables it to fit the different requirements of various elevators, which in most cases will not need to use all the forms of the system in keeping accurate accounts. The system is described in bulletin 236, entitled "A System of Accounts for Farmers' Co-operative Elevators."

Crop and Market Notes.

Michigan.

Cheboygan Co., May 15.—Pastures and meadows are short on account of dry weather. Wheat and rye are looking well. More than the usual amount of oats and corn has been planted this spring, also more beans and less potatoes will be put in. Fruit prospects are good and a number of large commercial orchards are being planted. More spraying being done than formerly. Not as many spring pigs as usual. Butter 30c; eggs 20c; potatoes 18@20c.

Delta Co., May 17.—Hay and pastures in good shape. Spring grain is about all in and a large acreage of oats and peas planted. Not many potatoes will be planted owing to low prices. Outlook for fruit crop good. There is the usual amount of pigs and lambs. Wool is selling for 25@26c; butter 25c; eggs 20c; potatoes 25c.

Gratiot Co., May 18.—At present there is an inch of snow and more is falling. The temperature is close to the freezing point. Meadows are well advanced and promise a good crop of hay. Rye is heading wheat is promising. Pastures good. Some corn is in, but the greater portion still to be planted. There will be a large acreage of beans. Fruit trees blossomed profusely, but spraying is somewhat neglected. There seems to be a large crop of pigs and lambs. Milk \$1.20@1.25; butter-fat 25c; eggs 17c; potatoes 25c; wool 28@30c.

Monroe Co., May 17.—Pastures are poor, due to dry weather. Meadows (Continued on page 626).

Poultry.

A CHIX CROOK.

The other day a business errand took me for the first time into the back yard of a certain neighbor. While we talked, I found my hand touching a long narrow strip of wood with a small wire hook nailed to the end. "Oh," I exclaimed, "you use chix crook, too, do you?" "Yes, indeed," was the hearty response, "I couldn't have gotten along without it very well this summer, and raised the 400 chickens that I did."

This simple little poultry convenience which we two women found of common service, would be in every hen house if people knew of its usefulness. There is no excuse for not having one; four to six feet of stiff wire and a pair of pliers are the only necessities for making this device which I choose to call a "chix crook." An inexperienced child, or even a woman, can make one in ten minutes or less—as I have demonstrated. At one end of the wire turn a narrow hook about three inches long with the wire point bent back, and bend the other end of the wire into a handle.

With it in hand, after a little practice, there is no need for swooping down upon a flock of pet fowls in order to catch one to look at its color; no need to set the dog on one for dinner; no need to wait till the flock goes to roost to pick out the culls—no longer any of these frightening methods in the poultry flock. JENNIE BUELL.

"FAKERS AND VICTIMS."

On receiving our mail a few days since, an article under the above heading attracted my attention, and should be read by every poultry raiser.

It ran as follows: "Word reaches us that a bunch of fakers are going about the country selling a so-called poultry remedy at \$1.50 per quart, spot cash. With each quart is promised a setting of eggs of pure-bred fowls."

As this is the day of free gifts, and almost everybody expects a gift or tip of some sort, the sale of the so-called poultry remedy is readily made. The diluted copperas water at \$1.50 per quart and a setting of eggs make a very attractive offer and the fakers are making good money—especially when the free setting of eggs are never delivered. Evidently there are several old hens sitting on door knobs, little gourds and artificial eggs waiting for the free pure-bred eggs promised with the quart of copperas water at \$1.50 per quart. Just how these fakers are able to find so many victims is past our understanding—but they find them every day.

Why purchase stock and poultry remedies from fakers going about over the country? Why not buy from the local dealers and direct from advertisers who use this and other reliable and trustworthy publications? It is a good plan to make everyone show first-class letters of credit from parties you know to be reliable, if you must buy from them." J. M. W.

NO MORE WHITE DIARRHEA.

Dear Sirs:—I have been very successful this year raising my chicks, since I sent to the Wight Company, P-43, Lamoni, Iowa, for a 50c box of Chictone. For several years I have lost my share of chicks with bowel trouble and have tried various remedies without effect. Chictone stopped it after a few doses. I think it is fine.—Hattie Allen, McLean, Ill.—Advertisement.

BREEDERS' DIRECTORY.

POULTRY.

ROSE COMB BROWN LEGHORN EGGS from Mad. Sq. winners. \$1.00 per setting. \$5.00 per 100. M. Pekin ducks \$1.00 per setting. CLAUDIA BETTS, Hillsdale, Michigan.

RHODE ISLAND REDS and PLYMOUTH ROCKS. Males 5 to 12 lbs. according to age \$2 to \$5; P. R. hens weight 5 to 9½ lbs. eggs 15 for \$1.00; P. R. eggs \$5 per 100. Mammoth Bronze Tom Turkeys, 8 to 38 lbs. according to age \$3 to \$25, 10 eggs \$3. A. E. Crampton, Vassar, Mich.

S. C. White Leghorns: Bred to Lay. Barron Strain. Eggs \$1.25 per 15 postpaid, \$4 per 100, not prepaid. Breeding hens for sale after June 1st. Bruce W. Brown, R. No. 3, Mayville, Mich.

White P. Rocks. Pekin and white runner ducks. White guineas, eggs and day old ducks and chicks. H. V. HOSTETLER, St. Johns, Michigan.

WHITTAKER'S ROSE COMB REDS. Eggs and Chicks. Write for Mating List and The Whittaker Guarantee. Interlakes Farm, Box 39, Lawrence, Mich.

EGGS for hatching from Mammoth White Holland Turkeys, White Runner Ducks, B. P. Rocks, R. C. White Leghorns, S. S. Hamburgs. Write for circular and guarantee. Riverview Farm, Vassar, Mich., R. 3.

BARRED ROCK eggs for hatching, from full blood stock. \$1.50 per 13, \$10 per 100. J. A. BARNUM, Union City, Michigan.

SILVER Laced Golden and White Wyandotte Eggs for hatching. Ten cents each or 30 for \$2.50. I pay parcel post charges. C. W. BROWNING, Portland, Michigan.

STANDARD Bred Rose and Single Comb R. I. Reds. Eggs \$1.50 per 15 and \$2.50 per 30 delivered. Also Pearl Guineas, B. Andalusians, Belgain Hares, and Poland China Swine. Stock very reasonable. Quality high. W. T. FRENCH, Ludington, Michigan.

BARRED ROCKS. Parks 200-Egg strain. A strain with egg records to 271 eggs a year. \$1.50 per 15. Delivered by Parcel Post. Fred Astling, Constantine, Mich.

ROCK COCKERELS (All varieties). Eggs for hatching. Baby chicks and Pekin Duck eggs. SHERIDAN POULTRY YARDS, R. 15, Sheridan, Mich.

Pine Crest White Orpingtons—After May 15th, stock price, also pedigree Belgian Hares. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Michigan.

Buff Rocks, 3 out of 4 firsts Chicago, 1914. Eggs hatched season \$1.50-15, \$6-100. S. C. Buff Leghorn eggs \$1-15; \$6-100. Pen of 12 Buff Leghorns \$10. 30 Buff Rock Hens, 75 cents to \$2.50, including Chicago and Minneapolis first prize winners. Bird Lawn Farm, Lawrence, Mich.

Chicks: We ship thousands, different varieties, prices right, order now for spring delivery, free booklet. Freeport Hatchery, Box 12, Freeport, Mich.

Lillie Farmstead—A. C. Barred P. Rocks, R. C. Rhode Island Reds and S. C. White Leghorn Eggs for sale, \$1 for 15, \$1.50 for 24, \$2.50 for 50. Colon C. Lillie, Coopersville, Mich.

BARRED PLY. ROCKS First prize winners at Chicago, Cincinnati, Indianapolis, etc.

Eggs from fine Utility Marriages that are bred to lay. \$1.50 per 15, \$4 per 50, \$7 per 100. From best exhibition pens \$10 per 15, \$25 per 50. Prompt delivery and good hatch guaranteed. G. Earl Hoover, R. 7, Matthews, Ind.

White Leghorns Day-Old-Chicks. Write for circular. We guarantee satisfaction to all our customers. MAPLE CITY POULTRY PLANT, Box C, Charlotte, Michigan.

S. C. White Leghorns—Bred for size, shape, vigor, experience breeding leghorns. Hatching eggs \$4.50 per 100. Baby chicks \$10 per 100. A. O. Howard, Tecumseh, Mich.

Barred Rock Hens \$1.50 each, eggs with the kick in them 15 for \$1.25, 100 \$6, baby chicks 100 \$15. W. C. COFFMAN, R. No. 6, Benton Harbor, Mich.

Barred Rock Eggs—Start right with your Barred's Bradley Bros. Yards. A. A. Pattullo, Deckerville, Mich.

White Wyandotte Eggs—50c for 15, \$4.00 for 100. My two best pens \$2.00 per 15, \$3.75 for 30. DAVID RAY, 202 Forest Ave., Ypsilanti, Mich.

R. C. & S. C. Rhode Island Red Eggs, \$1.50 per 15 postpaid; \$6 per 100 by express. Year-old hens \$1 each. JENNIE BUELL, Ann Arbor, Mich.

Half Price from Now On Eggs from some of the best Barred and White Rocks in Michigan. \$1.50 per 15. Heavy laying strains. Riverview Poultry Farm, Box 708, Union City, Mich.

BUFF Leghorns—Great layers from prize winners Madison Sq. Garden Eggs \$1.50 per 15; \$6 per 100. Day old chicks. Dr. William A. Smith, Petersburg, Mich.

Orpingtons—S. C. White Kellerstrasse. Special prices Eggs, Chix. Fine grown stock for your new flock. M. E. THOMPSON, Redford, Michigan.

BIG Beautiful, Hen Hatched, Farm Raised Ringlet Barred Rock Eggs, settings \$1, \$2, 3; 100 \$5. Photos circulars. JOHN NORTON, Clare, Michigan.

"MADE IN AMERICA" S. C. W. Leghorns only—large, great layers, pure white. Strong day-old chicks now \$10 per 100. Guaranteed delivery. Hatch every week. Everfresh Egg Farm, Box F, Ionia, Mich.

WHITE WYANDOTTE EGGS HALF PRICE NOW HOWARD GRANT, Marshall, Michigan.

RINGLET BARRED ROCKS—the winning and laying strain. Eggs \$1.50 per 15, from mated pens also M. B. Turkey eggs from choice birds, \$2.50 per 10. Charge made payable by parcel post. PLAINVIEW STOCK FARM, Romeo, Michigan.

S. C. White Leghorns. Farm raised, heavy laying now, \$3 per hundred. Also white Pekin ducks, eggs and ducklings. Sunnybrook Poultry Farm, Hillsdale, Mich.

BEE-SUPPLIES. We buy and sell Bees, Beeswax, Honey, and everything used by Bee Men. Our FREE CATALOG tells you the best hive to use. Send your name today for one. It is FREE. S. J. GRIGGS & CO., Dept. D, Toledo, Ohio.

DOGS.

Trained Running Fox Hounds—30 Fox and Coon hound pups. Ponies. Send stamp. W. E. LECKY, Holmesville, Ohio.

Belgian Hares Pay—Guaranteed pedigree stock, for sale reasonable. Write us for prices. Stalter's Habbitry, North Lewisburgh, O.

FOR SALE—Thoroughbred Scotch Collie Puppies, pedigree certificate to register. Farm trained, 45 and \$9. E. H. HALLER, Box 127, Hillsdale, Mich.

CATTLE.

Aberdeen-Angus Bulls.

We are offering 12 extra good bulls, among them prize-winners at the Michigan State Fair 1914. Some of them by Black Monarch 3rd, Grand Champion Bull of the State 1914. Others by the Great Sir Blackbird, sire of prize-winners, ages from 9 to 20 months old. Prices from \$100 to \$250 each. Come and look them over; they will please you. U. L. Clark, Hunters Creek, Mich. Sidney Smith, Manager.

ABERDEEN-ANGUS

HERD FOUNDED IN 1900. Strains represented consist of Trojan Ericas and Blackbirds only. Black Quality 1st, a bull of rare individuality and merit, heads the herd. WOODCOTE STOCK FARM, Ionia, Mich.

AYRSHIRES—One of the foremost dairy breeds. The most economical milk producers. Calves for sale. White Leghorn cockerels; Duroc Jersey swine. Michigan School for the Deaf, Flint, Michigan.

Four Registered Aberdeen Angus Bulls, from ten to seventeen months old. Prices reasonable. GEO. HATHAWAY & SON, Ovid, Michigan.

THE VILLAGE FARM,

Grass Lake, Michigan,

GUERNSEY CATTLE.

MILO D. CAMPBELL CHAS. J. ANGEVINE

BEACH FARM GUERNSEYS

Combine the blood of the following great producing sires and dams:—

Masher Sequel	57 A. R. Daughters
Glenwood Boy of Haddon	23 A. R. "
May Rose King	21 A. R. "
Dairymaid of Pinehurst	910 lbs. fat
Dolly Bloom	836 "
Emp. Eichen Daisy	714 "
Solma of Pinehurst	702 "
Stanford's Princess	725 "

Bulls for sale only.

A Dairy Show Every Day.

CAMPBELL & ANGEVINE, Coldwater, Mich.

Purebred Guernseys. 2-year-old bull from A. R. stock, good individual, not registered, 1200 lbs. Beef price. Also registered females and bred heifers. G. A. Wigent, Watervliet, Mich.

For Sale—Registered GUERNSEY COWS, HEIFERS and BULLS of choice breeding. H. W. WIGMAN, Lansing, Mich.

REGISTERED GUERNSEY BULL CALVES for sale cheap at R. Windermere Farm, Watervliet, Mich. May Rose breeding. Address, J. K. BLATCHFORD, Auditorium Tower, Chicago, Ill.

REGISTERED GUERNSEY BULL, 5 years old, for sale cheap on account of inbreeding. He is sure and gentle. JOHN EBELS, R. 10, Holland, Mich.

GUERNSEYS—REGISTERED Containing blood of world champions, HICKS' GUERNSEY FARM, Saginaw, W. S. Mich.

GUERNSEYS—Write for prices and particulars. 2 bulls 1 year old. Several bull calves, all from A. R. cows and cows on test. Geo. N. Crawford, Holton, Mich.

HEREFORD; Three bull calves and one two year old. ALLEN BROS., Paw Paw, Michigan.

Do You Want A Bull?

Ready For Service.

From a grand daughter of The King of the Pontiacs. Sired by a bull that is more than a half brother to the Champion Holstein Cow of the World, and whose dam is a 30 lb. 6½% fat daughter of Pontiac Aggie Korndyke who has more 30 lb. daughters than any other living bull. If you do write for pedigree.

EDWIN S. LEWIS, Marshall, Mich.

ESPANORE FARM, LANSING, MICHIGAN.

Home of the great Holstein Bull "PLEDGE SPORFORD CALAMITY PAUL" with 33 A. R. O. daughters, including a 5-year-old with a 35-pound record. Others from 30 to 32 pounds.

FOR SALE—A Bull Calf sired by this Great Bull.

CHASE S. OSBORN, } Owners.
ADAM E. FERGUSON, }

HOLSTEINS FOR SALE

5 Good Bulls, ready for service.
10 Very Choice Bull Calves.

2 Two-year-old Heifers, bred.
1 Six-year-old grand-daughter of King Segis, due in December.

L. E. CONNELL, Fayette, Ohio.

Bigelow's Holstein Farms

Breedsville, Michigan.

Highest Class Registered Stock For Sale.

FOR SALE—Three young, Reg. Holstein cows, are safe in calf. No culls. Price \$175 each. Also 3 heifer calves \$125 each, 2 bull calves, \$50 each, choice breeding. PINE HILL FARM, R. 6, Lakeview, Mich.

Bull Calf—3 sisters from 30.08 to 34.31 lbs. Sire's sire brother to Pontiac Korndyke. Dam 22.92 lb. her dam has 2 30-lb. sisters. M. L. McLAULIN, Redford, Mich.

HOLSTEIN BULL CALF, 5 mo. old, good individual, well grown from A. R. O. dam. Sire's dam has 7 day record 30.78 lbs. butter and a large yearly record. W. B. READER, Howell, Michigan.

"Top-Notch" Holsteins. Extra large fine young bull, ¾ white, born Oct. 4, 1913. Dam has official record of 29.40 lbs. butter in 7 days, 117.50 lbs. in 30 days. Sire's dam is a 22.64 lb. 4 yr.-old daughter of a 30.59 lb. cow.

MCPHERSON FARMS CO., Howell, Michigan.

Reg. Holstein Bull calves and Heir Bull. Can supply all wants in Reg. Chester White swine. Ray E. Farham, Bronson, Mich.

FOR SALE—Registered Holstein bull ready for service, mostly white. One bull calf, born April 24th, mostly black. Price \$25. Dams have A. R. O. records. Charles I. Cook, Box 433, Fowlerville, Mich.

REG. HOLSTEIN BULL, 12 mo. old, dark in color. Dam's record 21.00 lbs. in 7 days, private record of over 17,000 lbs. milk in one year. Price \$100.00. DEWEY C. PIERSON, Hadley, Michigan.

REGISTERED HOLSTEIN BULL, 4 months old. R. dark markings. 20 lb. three-year-old dam, 30 lb. sire. Nice individual, well marked, \$50. Delivered with all papers. Safe arrival guaranteed. ROBERT W. FAY, MASON, MICHIGAN.

A "BARGAIN" "ONLY" \$50 Registered Holstein Bull Calf, Best blood and best A. R. O. backing on both sides, ¾ white. Perfect and handsome individual. Rougemont Farms, Detroit, Mich.

High Class HOLSTEINS My herd is headed by Smithdale Alcatraz Pontiac, whose dam is the famous Alcatraz Pontiac. Have few young bulls and females for sale at reasonable prices. Will buy a few heifers about 15 months, not bred. Farm ¼ mile from court house. SETH B. RUBERT, Howell, Mich.

A Great Opportunity—A \$300 HOLSTEIN calf for \$100. Write for breeding. Also some extra grade heifers and bull calves. HILLCREST FARM, Kalamazoo, Michigan.

FOR SALE Registered Holstein Bulls ready for service, and bull calves, also females. FREEMAN J. FISHBECK, Howell, Michigan.

Registered Holstein Bull Calf, whose sire is full brother to Lady Tobe DeKal, 35 yr. 30.59, G. D. 10 yr. 31.66. ELMER E. SMITH, Redford, Michigan.

HOLSTEIN BULL CALVES—Don't buy until you write us. No better breeding in Michigan. Long Beach Farm, Augusta, Kalamazoo Co., Mich.

Holstein-Friesian Breeder—The best families of the breed represented. D. D. AITKEN, Flint, Michigan.

REG. HOLSTEIN BULL, yearling. Dam an A. R. O. cow. Sire's dam made 30 lbs. butter in 7 days. Send card for price, etc. E. R. CORNELL, Howell, Michigan.

\$350 buys two yearling Holstein Heifers ¾ white and one bull, not akin, all registered. Choice breeding. B. B. REAVEY, Akron, Michigan.

MICHIGAN HOME AND TRAINING SCHOOL LAPEER, MICHIGAN

Breeder of High Grade Holstein Cattle. Lists and prices upon application.

JERSEYS FOR SALE

One Bull—Two Cows—One Heifer. All registered. One cow soon to calf. A bargain at \$450 for the bunch.

NIXON FARMS, Brooklyn, Mich.

Maple Lane Register of Merit Jersey Herd. Tuberculin tested by U. S. Government. For sale bull calves and heifer calves from R. of M. dams and grand dams, and Hood Farm Sires. IRVIN FOX, Allegan, Michigan.

The Wildwood Jersey Herd. Registered Jersey Cattle of Quality. Majesty's Wonder 90711 one of the best sons of Royal Majesty heads the Herd. We offer for sale a bull two years old and one 10 months old, both by Majesty's Wonder and from dams that are capable of Register of Merit requirements. Write for description and prices. They are right. Come and see. Alvin Balden, Capac, Mich.

Lillie Farmstead Jersey Cattle. Bull calves from R. of M. Cows, also heifer calves and several bred heifers for sale. Colon C. Lillie, Coopersville, Mich.

Jerseys. Bulls ready for service, extra quality sired by Jacobus's Fairy Emanon. No. 10711, from high producing dams. SMITH & PARKER, Howell, Mich.

JERSEYS—THE REGISTER OF MERIT KIND. BROOKWATER FARM, R. No. 7, Ann Arbor, Mich.

Jersey Bulls for Sale from high-producing dams, with testing Assoc. records, also on semi-official test. C. B. Wehner, R. 6, Allegan, Mich.

J. If you want the most beautiful cow get the

JERSEY

FISHERTON FARM JERSEYS—Some fine grandsons of Hood Farm Pegasus 9th, from Register of Merit dams. FISHERTON FARM, Pontiac, Michigan.

BIDWELL SHORTHORNS

For "Beef and Milk" Registered Bulls, Cows and heifers Scotch-topped, horns, reds and whites for sale. Farm at L. S. & M. S. Depot, also D. T. & I. R. y. BIDWELL STOCK FARM, Box B, Tecumseh, Mich.

Shorthorns For Sale—Young bulls sired by Bright-Sultan. Also cows and heifers. W. B. McQUILLAN, Howell or Chilton, Michigan.

MILKING SHORTHORNS—Young bulls sired by a Grand May & Otis bull for sale. DAVIDSON & HALL, Tecumseh, Michigan.

Shorthorn Cattle of both Sex for Sale W. W. KNAPP, Howell, Michigan.

Shorthorns—Dairy or beef bred. Breeding stock all ages for sale at farmers' prices. G. W. Cron. Secy. Cent. Mich. Shorthorn Breeders' Assn. McBride, Mich.

Dairy Bred Shorthorns of best Bates strains. My Pure Duke herd bull is for sale. J. B. HUMMEL, Mason, Michigan.

SHEEP.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS "The Sheppards of the East." I sell and ship everywhere and pay express charges. Write for club offer and price list. Oxford, Shropshire and Flock-Belton. PARSONS, Grand Ledge, Mich. R. 1.

Registered Oxford Down Sheep—Write your wants. M. F. GANSSLEY, Lennon, Michigan.

HOGS.

Durocs & Victorias—Grand bunch of Gilts due March and April. Comprising the blood of Superba, Defender, Much Col. Orions and others. A few young boars. M. T. STORY, Lowell, Mich.

Berkshire Hogs—Choice gilts bred to farrow in March and April. Also a number of Barred Plymouth Rock Cockerels. Chase's Stock Farm, R. No. 1, Marietta, Mich.

BERKSHIRES Choice spring boars and gilts, priced to move quick. Farmers stock. ELMHURST STOCK FARM, Almont, Mich.

Breeders' Directory—Continued from page 627

Markets.

WEATHER FORECAST.

For week beginning Wednesday, May 26, for the region of the Great Lakes. Thunder showers on Wednesday will be followed by generally fair weather during succeeding days of the week. Somewhat warmer Wednesday except in the Lake Superior region, but moderate temperature will rule.

GRAINS AND SEEDS.

May 25, 1915.

Wheat.—There has been a slightly easier feeling in wheat circles by reason of Italy's war policy. The expected downward trend of prices, however, has failed partially by reason of inconsistent reports of crop damage in the southwestern districts. Injury from the Hessian fly and black rust is quite general there, and the damage is considered of important dimensions. The world's exports last week were large and our visible supply shows a substantial decrease. There seems to be no reason for expecting large declines without a change in international politics. One year ago No. 2 red wheat was quoted at 97½¢ per bu. Prices for the past week are:

	No. 2 Red.	No. 1 White.	July.
Wednesday	1.52	1.48	1.24½
Thursday	1.53	1.49	1.24½
Friday	1.54	1.50	1.27
Saturday	1.53	1.49	1.26
Monday	1.53	1.49	1.26
Wednesday	1.54½	1.50½	1.27½

Chicago.—May wheat \$1.55½; July \$1.28½; Sept., \$1.22 per bushel.

Corn.—Primary receipts have been small and stocks at important points are reduced, the visible supply showing a decrease of 2,343,000 bushels. Prices are maintained at last week's figures. Rains have interfered somewhat with planting, but generally speaking, weather conditions have been favorable. One year ago No. 3 corn was quoted at 73¢ per bushel. Prices for the week are:

	No. 3 Mixed.	No. 3 Yellow.
Wednesday	75½	75
Thursday	76	75½
Friday	76½	77
Saturday	76	76½
Monday	76	76½
Wednesday	77½	78

Chicago.—May corn, 57.1c; July 76.6c; Sept., 77.1c per bushel.

Oats.—The new crop of oats is most promising; the cool weather having been in its favor. Interest in the old grain is normal and the American visible supply has decreased 2,812,000 bushels for the week. Standard oats were quoted a year ago at 44½¢ per bushel. Quotations are as follows:

	Standard.	No. 3 White.
Wednesday	55	54½
Thursday	55	54½
Friday	55½	55
Saturday	56	56
Monday	56	55½
Wednesday	57½	56

Rye.—This cereal shows a decline of 1c with cash No. 2 now quoted at \$1.17 per bu. The market is lifeless.

Beans.—Demand is small; trade steady. Detroit quotations: Cash \$3.05; June \$3.10. Chicago trade is ordinary and quiet. Pea beans, hand-picked, choice, quoted at \$3.20; common \$2.95 @ \$3.10; red kidneys \$3.25 @ \$3.65. At Greenville farmers are receiving \$2.80 per bushel.

DAIRY AND POULTRY PRODUCTS.

Butter.—Demand is good and offerings of high quality. Prices are 2c higher. Extra creamery 28c; firsts 27c; dairy 21c; packing stock 18c.

Eggs.—Market firm with demand good and receipts large. Quotation for the week 28c.

Chicago.—Market is unsettled and prices 1½¢ higher. Sudden advance checked speculative buying. Supply liberal. Extra creamery 28¢@28½¢; extra firsts 27¢@27½¢; firsts 25¢@26½¢; seconds 22¢@24½¢; packing stock 19¢@19½¢.

Poultry.—Market is steady with supply light. Fowls are 1½¢ lower, others unchanged. Live.—Broilers 1@1½ lbs. 32¢@35¢; hens 15½¢@16¢; ducks 15¢@16¢; geese 10¢@11c.

Chicago.—Market steady. Offerings light and demand good. Fowls, good weights 15c; spring chickens, large 28¢@30c per lb; small 22¢@25c; ducks 13c; geese 8¢@9c.

Eggs.—Liberal receipts caused a decline of 1½¢. Demand is good but not enough to prevent accumulations. Fresh stock sells at 18c per dozen.

Chicago.—The market is easy with prices favoring buyers. Supply large. Miscellaneous lots, cases included, 16½¢@17½¢; ordinary firsts 15¢@16½¢; firsts 16½¢@17½¢.

Veal.—Quoted steady at 11½¢@12c for fancy, and 10¢@11c for common.

FRUITS AND VEGETABLES.

Apples.—Market firm at unchanged prices. Supply is light and demand is satisfactory. Baldwins \$3.75@4 per bbl; Ben Davis \$2@2.50; Steele Red \$4@4.50.

Chicago.—Market steady for sound fruit of good color. Supply is light. Baldwins \$3.50@4.25; Ben Davis \$3@3.25; Northern Spy \$4@6.

Potatoes.—Market is easy and dull. Prices unchanged. Quoted at 35¢@38c per bushel in sacks. At Chicago the market is firm with demand fair. Receipts moderate. Michigan white in bulk quoted at 36¢@45c per bushel; at Greenville potatoes are selling at 25c per bushel with not many coming.

WOOL.

Boston.—Sales in Boston doubled last week and there seems to be a better general feeling among dealers. They now seem confident that the wool business should yield large profits the coming year. In the west the growers are asking good prices, and dealers are paying them. The farmers of the central states are also getting the prices they demand, notwithstanding the fact that fleeces are being neglected more or less, due to the great excitement in the territory deal. Farmers in Michigan, Indiana and Ohio report they are getting from 27¢@30c for their fleeces. At Boston Michigan unwashed delaines are quoted at 26¢@27c; do. combing 29¢@34c; do. clothing 24¢@30c.

GRAND RAPIDS.

Offerings are still light on the city market, except on Tuesday mornings, and will continue so until strawberry time. Frosts have hurt the early berries but a good crop of late ones is in prospect. Pieplant is 40c per bu; asparagus 90c per doz; lettuce 10c per lb; old potatoes 35¢@40c. Hay is worth \$12@14; live fowls 15¢@16c. Dealers are quoting the country trade 17½¢ for eggs and 23c for dairy butter. The mills are paying \$1.42 for wheat; 76c for corn, 58c for oats and \$2.75 for hand-picked white beans.

DETROIT EASTERN MARKET.

Tuesday morning's market was large and well supplied with green stuffs. Lettuce 65¢@75c per basket; spinach 25¢@35c; potatoes 55c per bu; onions 3 bunches for 25c; radishes 7 to 9 bunches for 25c; eggs 23¢@25c per doz; chickens 90c@\$1 each; no hay nor butter in sight.

LIVE STOCK MARKETS.

Buffalo.

May 24, 1915.

(Special Report of Dunning & Stevens, New York Central Stock Yards, Buffalo, N. Y.)

Receipts here today as follows: Cattle 135 cars; hogs 106 d. d.; sheep and lambs 32 d. d.; calves 2100 head.

With 135 cars of cattle on our market here today and 20,000 reported in Chicago, and the market reported a dime lower there, the good to prime cattle of good weight sold here from 5¢@10c per cwt. lower than the same quality of cattle brought last Monday. The market on butcher cattle was from barely steady to 15c per cwt lower than last Monday, but at the close about everything was cleaned up at the decline. Again we want to caution our shippers about buying in the country, as these advances have been anticipated for the last 60 days and have not come yet and it looks to us at present writing like it might be some time yet before we see much advance in the price of cattle.

We had a fairly liberal supply of hogs today and while the trade was fairly active, prices were 5¢@10c lower than Saturday's best time on all but pigs, the latter kind selling 10¢@15c higher. All good grades of hogs sold at \$7.85 generally; pigs and lights at \$7.75@7.85, as to weight and quality. Roughs and stags were rather dull; choice roughs quotable at \$6.50@6.60, and stags \$5@5.50. Market closed about steady and we do not look for much change balance of week.

The market was active today on lambs and sheep, with prices 15c higher than the close of last week; most of the choice handy lambs selling at \$10.85. Look for steady to strong prices last of week with moderate receipts.

We quote: Lambs \$10.75@11; cull to fair \$6@10.50; yearlings \$8@9.25; bucks \$3.50@6; handy ewes \$7.25@7.50; heavy ewes \$6.50@7; wethers \$8.25@8.50; cull sheep \$3@5.50; veals, choice to extra \$9@9.25; fair to good \$7@9; heavy calves \$5@7.

Chicago.

May 24, 1915.

Cattle. Hogs. Sheep. Receipts today. 18,000 47,000 10,000 Same day 1914. 20,546 53,189 22,225 Last week. 42,724 141,925 51,412 Same wk 1915. 41,716 107,953 88,050 Cattle were fairly active today, the

better class going at about steady prices, but others were slow and weak. Fat lambs sold a dime higher, with choice clipped at \$10.25. No woolled lots arrived.

Hogs suffered several sharp declines last week because of much larger receipts, with some rallies. The offerings averaged very fairly in quality, with a rather small percentage of pigs. Prime light shipping hogs continued to sell the highest, and the best hogs of heavier weight went at a discount of 10¢@15c. The bulk of the swine marketed sold within a range of 15c, and prices ruled higher than in most past years at this time. Late in the week prices rallied, with sales of hogs at \$7.20@7.80, being about 15c lower than a week earlier, while pigs brought \$5@7.25.

Sheep and lambs were marketed in meager numbers last week. Too much weight was objected to in ewes as well as in lambs. Late sales were made of Colorado woolled lambs at \$10@11.25, while clipped flocks sold as follows: Lambs \$7@10.15; yearlings \$7@9; wethers \$6.50@7.90; ewes \$6@7.25; cull sheep \$3.25@6; bucks \$5.25@6.25. Spring lambs brought \$7@12.75.

Horses were received last week in the largest numbers seen in a long time, but the general demand was so good that prices were generally well maintained. Farm horses, geldings \$1.00@1.40; do. mares \$1.15@1.70. Army horses \$1.70@2.00; commercial chunks \$1.90@2.40; drafters \$2.00@2.35; inferior animals \$75@95; expressers \$190@215.

(Continued from page 624).

making no growth and the hay crop will be very short if we do not get rain soon. Wheat and rye above the average with rye coming in head. The usual acreage of oats sown and growing fast. Farmers putting in a large acreage of corn, some having finished and some not commenced.

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Three sizes, 6 to 18 H. P., direct drive to main cutterhead shaft, 2½ in. in diameter, powerful 6-blade fan on same shaft. Emery wheel attached. Sold on trial

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STEEL CLAD STONEBOAT



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No. 36 Stoneboat Size 34 in. by 7 ft. 4 in. \$5.25
No. 30 " " 30 " " 7 " 4 " 4.52
No. 28 " " 28 " " 6 " 4 " 3.75

F. O. B. your R. R. station.

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Since 1908 we have held the "October Sale" annually at the State Fair Grounds at Detroit. Beginning with 1915 we will hold two sales a year, one in June and the other in October and our first

JUNE SALE

Will be held at the new

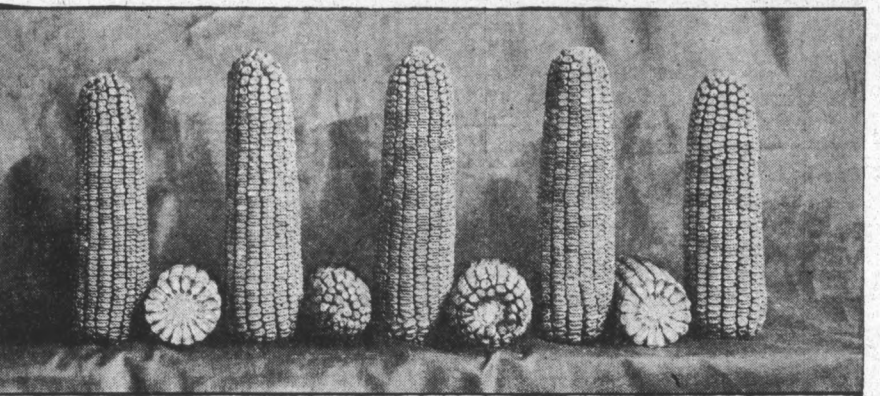
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110 Registered, Tuberculin-tested Holstein Friesian Cattle 110

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OUR GERMINATION 98 PER CENT

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Price \$2.50 per bushel, bags included with two bushels or more. Less than two bushels, bags extra at 20c each.

Quick shipment guaranteed.

YOUNG-RANDOLPH SEED COMPANY,

Owosso, Michigan.

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THIS IS THE FIRST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

May 20, 1915.

Cattle.

Receipts 1217. There was another good liberal supply in all departments at local yards this week. Especially in the hog department, where nearly ten thousand were unloaded. The three cattle placed here by the state to test the hoof-and-mouth disease are still wandering around the yards trying to catch it, but as yet nothing has developed and the prospects are that the yards will soon be open for milch cows, stockers and feeders as before the quarantine. This is the only place in Detroit where eastern standard time has not been adopted and it makes much confusion. Why the time should remain the same here is hard to understand.

In the cattle division there was a good trade on all grades at last week's prices, but at the close it was a trifle dull. Quite a bunch of outside buyers were here from Cleveland and other points and a good number of the better grades were picked up by them. Bresnahan also took hold freely and was a big help.

Best heavy steers \$8@8.50; best handy weight butcher steers \$7.40@7.75; mixed steers and heifers \$7.25@7.60; handy light butchers \$6.75@7.25; light butchers \$6.50@7; best cows \$6.25@6.50; butcher cows \$5@6; common cows \$4.25@4.50; canners \$3.50@4; best heavy bulls \$6.25@6.75; bologna bulls \$5.50@6.

Roe Com. Co. sold Mason B. Co. 5 stkr av 1016 at \$7.75, 2 cows av 1060 at \$5.25, 1 do wgh 1110 at \$5.25, 1 bull wgh 1780 at \$6.75; to Sullivan P. Co. 1 do wgh 1730 at \$6.50, 3 steers av 2380 at \$7.25, 1 cow wgh 970 at \$4, 1 do wgh 950 at \$5.50, 12 stkr av 742 at \$7, 2 butchers av 555 at \$5.

Sandel, S. B. & G. sold Mason B. Co. 2 heifers av 850 at \$7.50; to Buck & S. 1 cow wgh 1060 at \$6; to Thompson Bros. 1 canner wgh 690 at \$3.50; to Ohio P. Co. 7 steers av 971 at \$7.50, 2 bulls av 1290 at \$6, 2 do av 1010 at \$6; to Kamman B. Co. 1 do wgh 930 at \$6.50, 1 steer wgh 1240 at \$7.75; to Newton B. Co. 1 cow wgh 1050 at \$5.50, 1 do wgh 980 at \$6.25, 1 bull wgh 1180 at \$6.25, 22 stkr av 880 at \$7.55, 1 cow wgh 1110 at \$5.75, 1 do wgh 1680 at \$6.50, 1 do wgh 1180 at \$6.25, 2 do av 1100 at \$6.

Reason & S. sold Kamman B. Co. 1 bull wgh 740 at \$6, 8 steers av 991 at \$7.60, 4 cows av 1122 at \$6.50; to Bresnahan 2 bulls av 1540 at \$6.25; to Kull 6 butchers av 775 at \$6.90, 2 cows av 855 at \$5.50, 1 stkr wgh 680 at \$7.25, 1 co wgh 920 at \$6.25, 2 steers av 1000 at \$7.60, 2 cows av 720 at \$5.25, 2 do av 980 at \$6.

Veal Calves.

Receipts 950. Wednesday and Thursday were Jewish holidays and the absence of the Hastings street butchers made a great difference in the veal calf trade and they were dull and draggy from start to finish at last week's prices. Best \$8@8.50; common and medium \$6@7.50.

Sheep and Lambs.

Receipts 2025. The supply of sheep and lambs was small and the quality common; the general market was active at last week's close. Best lambs \$10@10.25; fair do. \$8.50@9.50; light to common do. \$6@7.75; fair to good sheep \$6.50@7.25; culs and common \$4@4.50.

Hogs.

Receipts 8979. In the hog department the trade on Wednesday was dull and fully 10c lower than on Monday; a few lights at \$7.50 but bulk of sales at \$7.55 and a few choice at \$7.60. Thursday's prices were the same.

Friday's Market.

May 21, 1915.

Cattle.

Receipts this week 1492; last week 2004; market steady. Best heavy weight steers \$8@8.50; best handy weight butcher steers \$7.40@7.75; mixed steers and heifers \$7.25@7.60; handy light butchers \$6.75@7.25; light butchers \$6@7; best cows \$6.25@6.50; butcher cows \$5@6; common cows \$4.25@4.50; canners \$3.50@4; best heavy bulls \$6.25@6.75; bologna bulls \$5.50@6.

Veal Calves.

Receipts this week 1196; last week 1218; market 25@50c higher. Best \$8.50@9; others \$7@8.

Sheep and Lambs.

Receipts this week 2259; last week 1619; market steady. Best lambs \$10.25; fair do. \$8@9; light to common lambs \$6@7.75; fair to good sheep \$6@7; culs and common \$4@5.

Hogs.

Receipts this week 12,204; last week 12,252; pigs \$7.50; other grades \$7.60@7.65.

GRIMM ALFALFA SEED

Grown at Chinook, Mont. the coldest section in United States.

Fancy Graded Seed.....\$15.00 per bushel
Fancy Imported Seed..... 9.80 per bushel
Fancy White Blossom Sweet Clover..... 18.00 per bushel
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The wonderful New Sensation Seed Potatoes 75 cts. per bushel.

A full line fancy farm and garden seeds. Quality guaranteed. Write today for wholesale price list.

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in your county for an article which is an absolute necessity and which will soon be in use on every farm and which will pay for itself twice over every year and also the sale of which will grow as the automobile business has grown? If so, write us first mail. Unless you mean business and have some financial responsibility don't answer. Address,

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For your stock get "MEDICO"—mix it yourself with common salt. Cheapest and most effective way to kill worms. Write for "Worm Destruction" free on request. WM. COOPER & NEPHEWS, 185 W. Huron Street, CHICAGO

WANTED—Married man as superintendent of farm and stock ranch of 5,000 acres, 700 acres improved, 136 acres orchard. Must be a practical, sober, energetic man. State age, nationality, references, experience you have had and wages wanted. All farm help is boarded by superintendent. Address E. W. ABBOTT, Land Commissioner B. C. G. & A. R. K. Company, Boyce City, Michigan.

FOR SALE—Guaranteed Blight Proof Potato Seed, while they last. No more spraying for blight, very prolific. Fine, white, smooth and meaty. T. B. WALTON, Edgewood Farm, Paw Paw, Mich.

WANTED—By a young lady, a place to board and room in a farm, with respectable family, during month of July, late terms. Bertha Delbert, 715 Artell St., Kalamazoo, Mich.

FRUIT Growers, we want your entire crop. Highest market price. Write for stencil. THE E. L. Richmond Co., Detroit, Mich.

FARMERS—We will pay you the highest official Detroit Market quotation for your eggs shipped direct to us by express. Write us for information. It will pay you. AMERICAN BUTTER & CHEESE CO., Detroit, Michigan.

HAY OUR NEW LOCATION—623-625 Wabash Bldg., Pittsburgh, Pa. Daniel McCaffrey's Sons Co.

BUY FEED—CAR LOTS AND LESS—Cottonseed Meal, Hominy Feed, Douglas Gluten, Bran and Middlings. J. E. Bartlett Co., Jackson, Michigan.

HORSES

PERCHERONS—Imposant, one of the heaviest horses in state, at head of stud. Brood Mares as good, young stock for sale. CHAS. OSGOOD & SONS, Mendon, Michigan

FOR SALE—Registered Percheron Stallion Mares and Fillies at reasonable prices. Inspection invited. F. L. KING & SON, Charlotte, Mich.

Registered Percherons. Brood Mares, fillies and young stallions. Priced to sell. Inspection invited. HILL CREST FARM, Eaton Rapids, Michigan.

Pigeon Pony Farm—Reg. Shetland Ponies, mostly spots, 1 spotted stallion and young stock for sale. Dr. W. T. Morrison, Pigeon, Mich.

Shetland Ponies—Closing out at low prices on account of selling my farm. Registered stock, J. M. BEDDOW, Birmingham, Mich.

HOGS—Continued

Royalton Bred Berkshires—No more bred sows. Fine old. Young sows and boars born last October. Prices right. D. F. VALENTINE, Supt., Temperance, Mich.

HAMPSHIRE SWINE—Breeding stock of all age from most popular strains. Write for breeding inspection invited. Floyd Myers, R. 3, Decatur, Ind.

Hampshire Swine, the kind that wears the belt. Spring pigs and two serviceable boars. Prices right. Papers furnished. S. C. MORT, Elsie, Mich.

WEST WINDS HAMPSHIRE SWINE. Booking orders for sow pigs immediate shipment. No sales to offer. E. P. Hammond, owner. N. A. Wiser, manager, Pontiac, Mich.

Chester Whites—Gilts bred for Aug. and Sept. farrow. March pigs, either sex. F. W. ALEXANDER, Vassar, Michigan.

Big Type, O.I.C's and Chester White Swine.

400 fall pigs either sex, special prices for the next 30 days, also bred gilts and service males and we are booking orders for spring pig, all our stock is good enough that I will ship O. I. C. and reg. free in the O. I. C. or Chester White Asso. We won, more prizes than all other breeders put together, at Ill., and Wis. State Fairs. Write for Show record.

ROLLING VIEW STOCK FARM

Cass City, Michigan.

O. I. C.—Spring boars all sold. We have some fine fall pigs ready to ship. JOHN BERNER & SON, Grand Lodge, Michigan.

O. I. C. Registered Pigs Write for photo and prices. J. CARL JEWETT, Mason, Michigan.

O. I. C's—Serviceable boars. Gilts bred for May and June farrow. I pay express. G. P. ANDREWS, Dansville, Michigan.

O. I. C.—Serviceable boars of Sept. farrow, also a few choice gilts bred for May farrow. H. W. MANN, Dansville, Michigan.

O. I. C's—One serviceable fall boar and a few bred gilts, also March and April pigs, pairs not akin. Reg. free and shipped C. O. D. J. W. Howell, Ovid, Mich.

O. I. C's—Spring pigs, pairs and trios, not akin, from state fair winners. AVONDALE STOCK FARM, Wayne, Mich.

O. I. C.—25 sows bred for Spring farrow. 75 Fall pigs, large and growthy. Write your wants. GLENWOOD STOCK FARM, Zeeland, Michigan.

O. I. C.—Choice Sept. pigs, either sex. Will take orders for March, April and May pigs, not akin. ALVIN V. HATT, Grass Lake, Mich.

O. I. C's—STRICTLY BIG TYPE. Have a few Gilts left bred for early May farrow. Also a good yearling sow bred for early May farrow. Will sell cheap to make room for my spring pigs. Sept. pigs either sex, good ones. Am booking orders for Spring pigs. Can furnish in pairs or trios, not akin. Sired by some of the largest Boars of the breed. NEWMAN'S STOCK FARM R. No. 1, Mariette, Mich.

O. I. C. SWINE—Are you on the market for a choice bred sow to farrow the last of Aug. or fore part of Sept.? If you are, write me, I have them. A. J. GORDEN, R. No. 2, Dor, Michigan.

O. I. C's—Two good boars 12 months old, good spring boars, 1/2 mile west of depot. OTTO B. SCHULZE, Nashville, Michigan.

O. I. C's—Fall and spring pigs, not akin, both sexes, satisfaction guaranteed. A. R. GRAHAM, Flint, Michigan.

O. I. C. Pigs, 8 to 10 Weeks Old \$10. Pairs not akin \$18. Registered free. C. J. Thompson, Rockford, Mich.

O. I. C.—Spring Pigs of both sex. Fine stock. Limited. LEWIS & FREIBERG, Johannesburg, Mich.

Way Brothers Stock Farm. The home of the big bone O. I. C. Hogs. Stock for sale. Registered free. J. R. Way, Pompeii, Mich.

DUROC JERSEYS—A few fall boars and 12 spring boars, all bred for sale. CAREY U. EDMONDS, Hastings, Michigan.

DUROC JERSEYS. From Prize-Winning Stock. Write, or better still, come.

Brookwater Farm, Ann Arbor, Mich., R. F. D. 7.

Capitol Herd Duroc Jersey Swine. Established 1888. Young boars and bred sows for sale. I pay the express. J. H. BANGHART, Lansing, Michigan.

DUROC JERSEYS—A few bred gilts, fall males ready for service. S. C. W. Leghorn and Buff Rock eggs for sale. J. MCNICOLL, Station A, R. 4, Bay City, Michigan.

HEAVY BONED DUROC JERSEYS FOR SALE. Some extra nice spring pigs ready to ship. M. A. BRAY, Okemos, Ingham Co., Michigan.

Duroc Jerseys. Big boned service boars: gilts for June farrow, bred to son of Volunteer, Gd. Champ. at 1912 International. F. J. Deed, R. No. 1, Monroe, Mich.

DUROC Jersey bred gilts, bred for Aug. and Sept. farrow from leading blood lines; also a few good boars. Write for circular and prices. W. C. Taylor, Milan, Mich.

STRICTLY B. T. Polands—Absolutely none larger or better. My herd represents best herds in U. S. Spring & fall farrow pigs at bargain prices. Satisfaction guaranteed. F. D. Kruger, Ravenna, Mich.

Duroc Jerseys: A few choice boars ready for service. From prize winning stock. Cliff Middleton, Idlewild Farm, R. F. D. No. 3, Olneyton, Mich.

Duroc Jersey—March pigs either sex, sired by a son of Vandalia Champion of 3 State Fairs and Chicago Show in 1912. E. H. Morris, Monroe, Mich.

DUROC JERSEYS—Fall and spring pigs either sex, from choice strains. S. O. STAHLMAN, CHERRY LAWN FARM, Shepherd, Michigan.

POLAND CHINAS—The type that wins, weighs, and pays—big with quality. Bred sows and pigs either sex. African goose. SPING BROOK FARM, Three Oaks, Michigan

ONG Bred Heavy Boned Poland China, yearling L and fall boars at Bargains. B. P. Rock Eggs \$1 per 15. ROBERT NEVE, Pierson, Michigan.

BIG TYPE P. C.—Two boars old enough for service. Bred by Big Smooth Jumbo. Pigs either sex sired by Hoosier Giant End. J. E. Braithwaite, Brant, Mich.

Poland Chi as, either sex, all ages. Something good at a low price. Barzains in boars ready for service. P. D. LONG, R. F. D. 3, Grand Rapids, Mich.

POLAND CHINAS of the big type. Boars bred for spring farrow. A. A. Wood & Son, Salina, Mich.

LARGE TYPE P. C.—Either sex, pairs and trios, not akin. Am booking orders for bred gilts. W. J. HAGELSHAW, Augusta, Mich.

Big Type Poland China Boars and Gilts plenty of size and great quality. I know I can please you. ROBERT MARTIN, R. F. D. No. 7, Hastings, Mich.

THIS **O.I.C.** SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

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I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN, R. No. 10 Portland, Mich.

MY OH MY! What an Opportunity.

Starting May 1st, we are going to give to the farmers and breeders an opportunity to get started right in the breeding industry. We are going to give you a chance to get hold of foundation stock that will give you a nucleus for one of the finest and best herds in your community. We are going to show you as we have others, that you will have greater success with our big type

POLAND CHINAS

than with any other breed. We want to place 'at least one pig, or a pair in every community, to advertise our herd. If interested, write for our plan and prices. HILLCREST FARM, Kalamazoo, Mich.

Large Strain P. C. Boars ready for service and sows with pigs. Am breeding sows for fall farrow of the best breeding, to be had at bargain prices for the next 30 days, must have the room for others. H. O. SWARTZ, Schoolcraft, Michigan.

Poland China—Am booking orders for male pigs to be shipped at weaning time. G. W. HOLTON, R. No. 11, Kalamazoo, Michigan.

FALL PIGS AT HALF PRICE

Bred from the largest strain of Poland Chinas on earth, none bigger. If you ever expect to own a registered Poland China, this is your opportunity. Get busy and order at once. Pairs and trios not akin \$15 each. J. C. BUTLER, Portland, Mich. Bell Phone.

BIG Type boars by Big Smooth Jumbo. Greatest Boar in State, 748 lbs at 17 mo. These boars are long, tall, big bone, sold at farmers prices, shipped C. O. D. Call or write. Wm. Waffle, Coldwater, Mich.

LARGE TYPE P. C.

Largest in Michigan.

Bred gilts all sold. A few extra good fall pigs priced to move them quick. W. E. LIVINGSTON, Parma, Mich.

50 YORKSHIRES—All ages. Red Polled Cattle, Oxford Down Sheep, W. P. Rocks, I. R. Ducks, E. S. CARR, Homer, Mich.

YORKSHIRE SWINE. Boars ready for service. A gilt bred for June farrow. Weanling pigs 6-10 weeks old. GEO. S. McMULLEN, Grand Lodge, Mich.

Mulefoot Hogs:—Weanling pigs, pairs not akin. Bred gilts and sows and gilts for fall farrow, two service boars. C. F. BACON, Ridgeway, Mich.

Little Farmstead Yorkshires. Boars ready for service. L. Gilts bred for Sept. farrow. Spring pigs, pairs and trios, not akin. Colon C. Lillie, Coopersville, Mich.

Registered Yorkshires

The World's Bacon Breed.

Imported Strain. Both Sexes.

Prices Reasonable.

Hatch Herd, Ypsilanti, Michigan.

YORKSHIRES

Bred gilts, service boars, September and October pigs. Prices reasonable. W. C. COOK, R. 42, Ada, Mich.

For Sale Yorkshire Boar Pigs—From large early farrowed litters. Got a pure bred boar and increase the quality of your hogs. WATERMAN & WATERMAN, Ann Arbor, Michigan.

Registered Yorkshires—10 gilts bred for June farrowing. 3 fine boars. JOS. H. BREWER, Belmont, Mich.

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FOR SALE—a ranch in Michigan containing about 1,000 acres. One half mile from railway station. J. M. FEEL & BROTHER, Arlington, O.

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Practical Science.

DEVELOPMENT OF THE CORN PRODUCTS INDUSTRY.

BY FLOYD W. ROBISON.

The development of the corn products industry is directly due to the industry of the chemist. It has been dependent in the first instance entirely upon the process of the conversion of starch into sugar. Corn being one of the leading agricultural products of the United States, it may be seen that an industry directly associated with the disposition of corn and its conversion into other valuable products must have a very intimate relationship to agriculture. The production of starch from corn has been accomplished for a great many years but the interposing of a chemical manufacturing process changing that starch into a sugar or syrup is in the main a comparatively recent line of endeavor.

Of course, the main product chemically developed from the treatment of corn has been the substance most commonly known as glucose. Glucose chemically consists very largely of dextrose or as it is sometimes called, grape sugar. Unfortunately the term glucose was not a happy name and the industry has been hampered since its beginning by a term which has been distasteful to the public generally.

It is not strange, therefore, that an attempt should have been made by the Corn Products Company which practically controls the manufacture of glucose in this country to substitute a name which would find more general acceptance. The name, corn syrup, or corn sugar, was accordingly substituted on the assumption that the product, being as finally manufactured a syrup or sugar, could very properly take the name of the agricultural product from which it was manufactured in greatest quantity. We think the name corn syrup, or corn sugar, for a product obtained as glucose is obtained, is not a proper term for the product, but it has been permitted sale under this term in most of the states and the United States government as well has not succeeded in compelling the use of a different name.

We think, therefore, that there is little cause for changing the name at this particular time, inasmuch as so much publicity has been directed toward the product that it is now, or should be at least, pretty clearly understood what the source of the product is. We are in sympathy, however, with the efforts of the manufacturers to find a name other than glucose to identify their product.

According to Mr. E. T. Bedford, of the Corn Products Refining Co., there are 50,000,000 bushels of corn per year manufactured into the various corn products. This 50,000,000 bushels of corn amounts to 800,000,000 pounds of corn syrup, 600,000,000 pounds of starch, 230,000,000 pounds of corn sugar, 625,000,000 pounds of gluten feed, 75,000,000 pounds of corn oil, and 90,000,000 pounds of oil cake.

Corn syrup, starch, corn sugar, gluten feed, corn oil and corn cake, therefore, constitute the principal products of this industry. Many of these lend themselves to the production of still other products, but it is sufficient to recall that this immense industry, one of the most important agricultural industries of the country, has been the direct and immediate outgrowth of the efforts of chemists and is at the present time kept under a strict chemical control.

"How Many Hides Has a Cow?" is the title of a booklet published by the Dupont Fabrikoid Co., Wilmington Del., illustrating and describing Fabrikoid products for upholstering of automobiles, furniture and for other uses to which a product of this kind is adapted. A copy will be sent free to Michigan Farmer readers upon request.

Here Are the Facts

The high quality and low price which have made Firestone Tires so widely popular—are here shown in plain black and white.

Proof—the section showing actual goods built into the tire, and the price list showing that Firestones cost no more than ordinary tires.

The Firestone "extras" built into every tire are not only the result of experience and "know-how"—they mean plain, straightforward "good-

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Here Are the Figures

Firestone

Then note the price! The low figures may puzzle you (considering the "extras") until you know these facts—

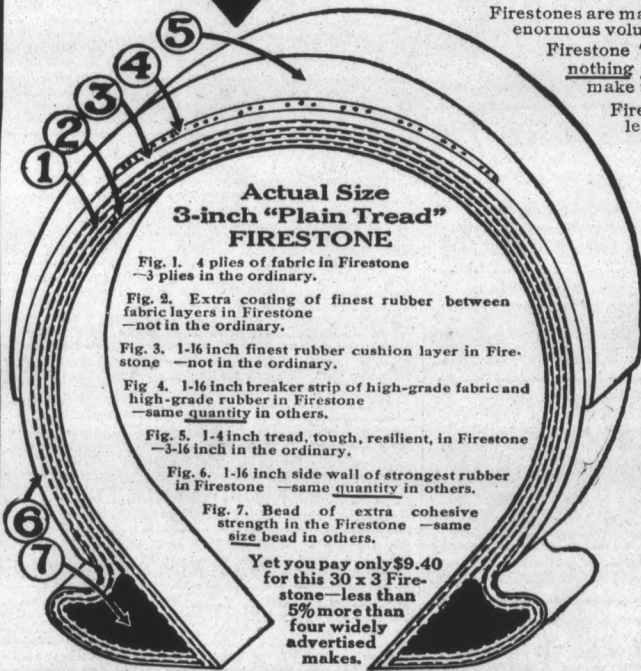
Firestones are made in America's Largest Exclusive Tire Factory. This enormous volume cuts cost of production and reduces the price to you. Firestone Tires and Tubes are made by specialists who make nothing else. This means that they make better tires and make them at a lower cost—another saving for you.

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Study the Facts and the Figures—It Won't Take You Long to Decide on Firestones.



Firestone Net Prices to Car-Owners

	Case Round Tread	Case Non-Skid	Grey Tube	Red Tube
30 x 3	\$ 9.40	\$10.55	\$2.20	\$2.50
30 x 3 1/2	11.90	13.35	2.60	2.90
32 x 3 1/2	13.75	15.40	2.70	3.05
34 x 4	19.90	22.30	3.90	4.40
34 x 4 1/2	27.30	30.55	4.80	5.40
36 x 4 1/2	28.70	32.15	5.00	5.65
37 x 5	35.55	39.80	5.95	6.70

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