

(Continued from page 530).

on the roots and there is no danger. Thus treated, they will bear considerably earlier than those planted directly in the open ground, which plan is best, of course, for the main crop.

As to supports, single poles, seven to eight feet in length, may be used, but in all cases they will require some help and attention in climbing, and very likely they will require tying to the poles with yarn or wrapping twine. A plan which I prefer is to prepare the hills four or five feet apart, set three poles in triangular shape, say 18 inches apart, pull the tops together and tie with twine. At each stake plant two or three beans or set plants and they will run more readily than on single poles. Plant farther apart or nearer, according to horse or hand cultivator.

Avoid working among the vines when wet but give frequent shallow culture. An occasional spraying of nitrate of soda solution, an ounce to the gallon of water, is very beneficial. An application every week or ten days during most of the season will work wonders. These suggestions, if followed, will bring results and as to a paying crop for home or market there is no question. Later we desire to mention other important points which space will hardly admit of now.

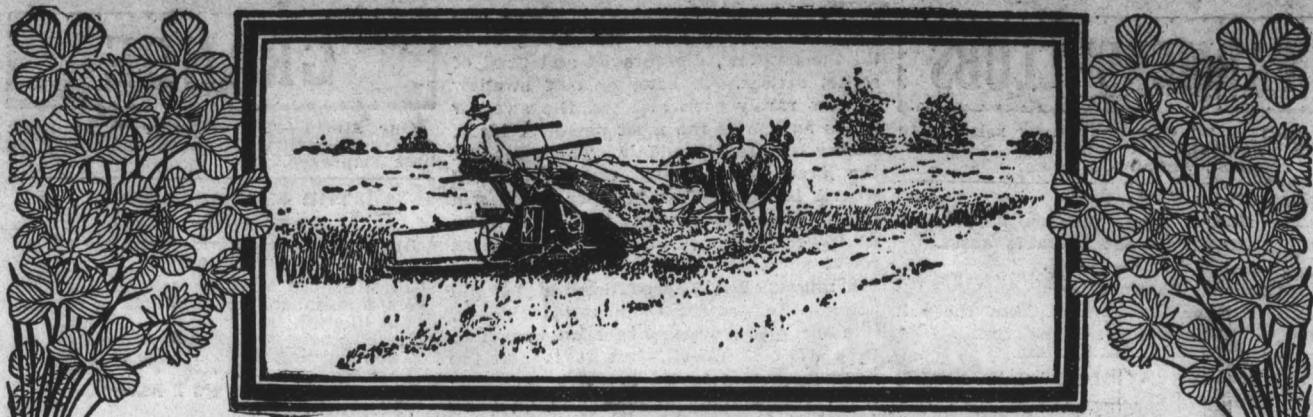
Wayne Co. J. E. MORSE.

THE PRODUCTION OF VEGETABLE SEEDS.

There is profit in raising high-grade seed. Seed crops of sweet corn, garden peas, and beans of good quality are in ever-increasing demand, and the quantity needed yearly has become so large that the seedman is obliged to have the major portion of his stock grown for him by others. Within the past few years there has been an enormous increase in the quantity of seeds produced for commercial purposes. This has been due in large measure to the development of seed growing and handling as a business. There are now nearly one thousand seed firms doing business in the United States. One of the largest of these uses buildings with an aggregate floor space of more than 16 acres. This space is much larger than was occupied by the entire seed trade of the country only fifty years ago. The quality also has vastly improved. One of the most encouraging developments in the growing of garden vegetables is the increasing recognition of the practical importance of using pure and uniform stocks of seed whose varietal characteristics adapt them to distinct local conditions and market requirements. Another consideration is the fact that the growing of seed crops of these vegetables can be undertaken without any radical change in farm practice or material increase in farm equipment. These conditions make this industry well worth the attention of farmers who are located where soil and climatic conditions are favorable for the best development of such seeds.

However, the raising of these vegetables for seed crops is not recommended for all circumstances, even when soil and climate are suitable. The farmer who contemplates undertaking seed crop farming, will do well to consider thoroughly the many elements which enter into profits. Seedsmen are often able to place contracts for growing seed at very low prices—even lower than that at which grain of the species can be sold on the market. Such a condition might be due to any of several causes, but usually rests on an over-supply or a demand for an inferior product. The general tendency now, however, is decidedly in the other direction, and both seed dealers and seed growers do much by co-operation to further this tendency. Dealers should not buy by sample, no matter how good the samples may be, but should endeavor to limit his supply to seed which he knows was grown from pure and true stock seed and, as far as possible, to that which was subject while growing, to his own inspection. Knowledge, experience, and care, on the part of the grower will also contribute much to a higher standard, and consequently to higher prices and better market conditions generally.

In response to a demand for greater knowledge of the cultural methods which are best adapted to seed crop growing for the vegetables mentioned, the U. S. Department of Agriculture has just issued a new publication, bulletin 184 of the Bureau of Plant Industry, under the title, "The Production of Vegetable Seeds; Sweet Corn, Garden Peas, and Beans." This publication discusses this whole subject very thoroughly and gives instructions for securing crops of seeds for these different species.



DEPENDABLE HARVESTING MACHINES

Your success in the busy harvest season, when everything should be just right, depends chiefly on your harvesting machines. If they are not in perfect working order to handle the grain, you lose part or most of your crop—part or most of your profit. Grain goes to waste instead of being turned into golden dollars.

Almost at your elbow is your choice of six dependable Harvesting Machines, each bearing the I H C trade mark.

Champion Deering Osborne
McCormick Milwaukee Plano

After you have worked hard all spring and summer, why take chances—why risk a machine that may not work perfectly. If your machines gave trouble last season, or if you have the slightest doubt of their capacity to go through the harvest without delays, now is the time to figure on new machines—machines that are right. And there is no need to take chances on new machines. You can easily make sure of perfect service and absolute satisfaction.

I H C harvesting machines, the products of American inventive genius and the result of many years of experience, represent mechanical perfection. Millions of farmers throughout the world have found them most dependable—have found that they harvest all the grain quickly and thoroughly, whether it is lodged, tangled, or down, short or tall—whether the land is hilly or level, or whether any other trying conditions are encountered.



I H C Service Bureau

The Bureau is a clearing house of agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the I H C Service Bureau.

The superiority of I H C harvesting machines is due to the all-round perfection of design, materials, and workmanship used in their construction. The substantial main frame, large main wheel, spacious elevator, wide range of reel adjustment, easily accessible bearings, accurate knotters, efficient binding attachment, perfect bundle carrier—and many other features make the most serviceable harvesting machines in the world—the I H C line.

With years of service back of them, their efficiency is unquestioned. Millions of farmers depend on them for their harvests and their profits.

Certainly the price should not deter you from purchasing a new machine. Did you ever compare the cost of a binder, pound for pound, with that of a stove? An ordinary cast iron stove fit only to hold fire will cost from 10 to 15 cents per pound. Put this beside a grain binder embodying the best thought of three-quarters of a century of inventive progress. Every part is accurately constructed of the best material that nature gives. Every part of the machine is thoroughly tested, and the whole is so put together that every part, even when roughly used works with unerring precision. For this kind of an article made up of many different working parts, a farmer is required to pay only about half the price he would pay for a common place kitchen cook stove.

You should not delay. See your I H C local dealer and get all the harvesting machine facts from him. Note that he carries a complete line of interchangeable parts—so that if by accident any part of your I H C machine should break, it is convenient for you to get an exact duplicate without delay.

Ask about the haying machines and tools in the I H C line. Also ask him about binder twine. Get one of these seven perfectly dependable brands, Champion, Osborne, McCormick, Deering, Milwaukee, Plano, or International—in Sisal, Standard, Manila, or Pure Manila.

If not convenient for you to visit the I H C local dealer at once, write us for any of the I H C catalogues and any special information you desire.

International Harvester Company of America
(Incorporated)
CHICAGO USA

Fruit Sprayed with Bowker's "Pyrox"

brings more money because it is free from injury by worms, scab, etc. Over 300 testimonials in our new catalogue show the great value of this preparation on all kinds of fruits and vegetables. Pyrox serves two purposes; it kills insects and prevents disease and blemish. It adheres to the foliage even through heavy rains, saving labor and cost of re-spraying. Perfectly safe. It is all ready to use by mixing with cold water. Every grower who seeks fruit and vegetables free from blemish needs "Pyrox," the "one best spray." It

"Fills the barrel with the kind they used to put on Top"

Send for new catalogue with photograph of sprayed and unsprayed fruit in original colors. Will convince the most skeptical. Say how many and what kinds of fruit trees, or how many acres of potatoes you have to spray, and ask for special prices. We ship from Boston, Baltimore, and Cincinnati.

BOWKER INSECTICIDE COMPANY,
43 CHATHAM STREET, BOSTON, MASS.

MICHIGAN FARMER

AND LIVE STOCK JOURNAL.
PUBLISHED WEEKLY. ESTABLISHED 1843.

The Only Weekly Agricultural, Horticultural, and Live Stock Journal in the State.

VOL. CXXXVI. No. 19.
Whole Number 3547.

DETROIT, MICH., SATURDAY, MAY 13, 1911.

\$1.00 A YEAR.
\$2.75 FIVE YEARS

FARM POWER AND TRANSPORTATION.

OUR subject for special discussion in May is one of great and growing importance to every farmer. During the last half century the development of both power and transportation on the farm has been marvelous. From the slow ox team we have developed into the use of high-class draft and general purpose horses. From the old sweep horse powers we have come to use the steam traction engine, and the tread powers have been superseded by that modern source of economical power, the gasoline engine. Farm transportation has been subjected to a like wonderful change. The special purpose wagons and implements which are used on our farms today were unknown to our forefathers, and the carriages and surries now in common use were a rare luxury a generation ago, while the automobile which is coming into more general use as a means of farm transportation every year seems destined to still further revolutionize the local transportation problem within a short period of years. General transportation, which also vitally affects the farmers of any community, has been extended and bettered and cheapened to a great degree within the memory of a fair share of the people who are now able to utilize and benefit by these modern means of transportation, including in many and rapidly increasing numbers of communities the convenient trolley line. Indeed, the changes in these conditions have been so rapid that we have been unable as a class to keep up with them, and it is not an easy problem for many farmers to decide just what they will find to be of economic profit in the way of improved power and transportation facilities on the farm.

Of course, the main source of power on the farm will for many years to come, and probably for all time, continue to be the faithful horse. But there are horses and horses, and it is a matter for congratulation that the class of horses used upon our farms today is greatly superior to the class found in common use only a few years ago. But there is still great room for improvement in this regard. The high price of horses is stimulating the breeding of a better and heavier class of horses for farm use to the economical benefit of their owners. Good, efficient teams are an essential requirement for the economic conduct of any farm.

But in this development of farm power, much has already been accomplished, along the line of developing power tractors for the heavy work of plowing and fitting the land and hauling the crops to market. These developments have been along two distinct and opposite lines. The first to enter this field were the manufacturers of traction engines, who adapted these machines to field and road work. With the advent of the gasoline engine, heavy power

tractors of this type were developed for the extensive operations of the west and northwest. Recently the manufacturers of automobiles, and others, have taken up this problem with due consideration for economy of weight without the impairment of efficiency in the development of lighter power tractors suited to use upon smaller farms. This development work is still in its infancy, but gives sufficient promise of future success to make it a reasonable prediction that the average farmer of the next generation may have

some sort of a power tractor to help out with the heavy work and find it economical to thus supplement the horse power maintained on the farm.

But let us pass by this glimpse into the future to consider present needs on the farm. During this period of the economic development of farm power the land has become thickly dotted with windmills for the pumping of the farm water supply. Yet there are still quite a good many farmers who pump the water for the stock as well as for the house, by hand.

This is a waste of time and energy which cannot be considered in the light of economy from any angle. It takes a good deal of time to pump the water needed for even a small farm in this manner, an amount of time which is far in excess of a sum which would represent the interest on the cost of a windmill or gasoline engine to do the pumping and cover the depreciation on such a plant. In former years the windmill was the only available power for this purpose and it is still an economical source of power, but

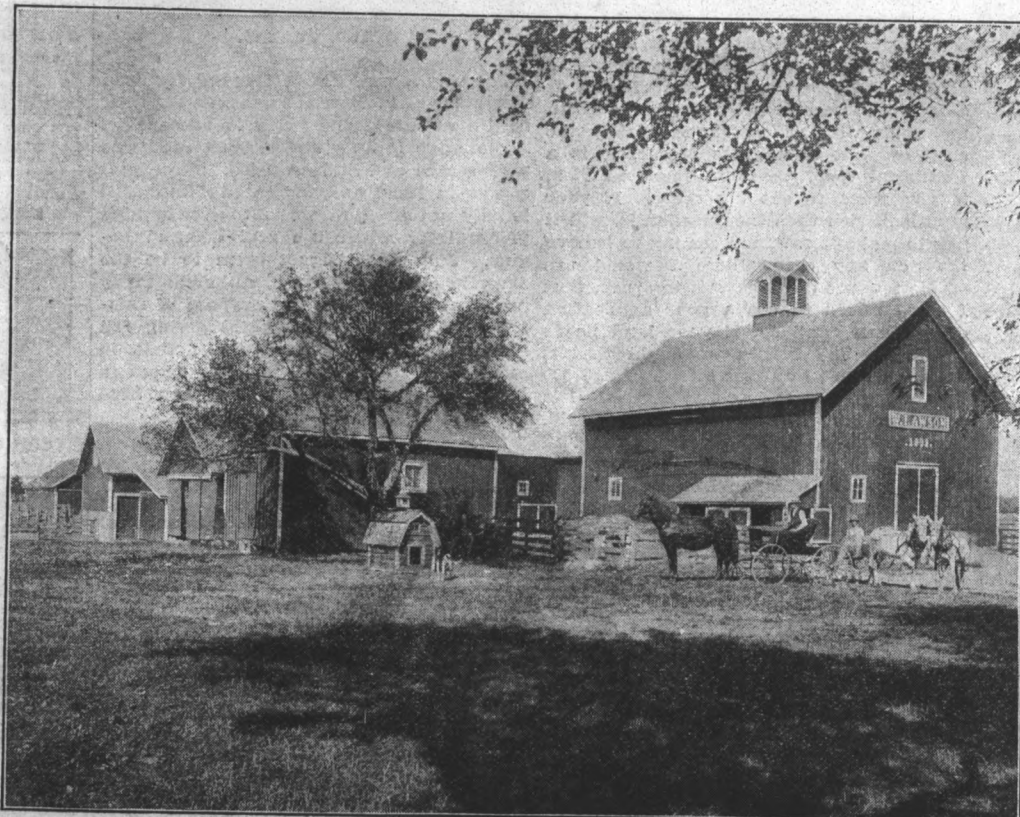
the gasoline engine can also be used for so many other purposes on the farm as an economic source of power that it is rapidly gaining in favor for pumping as well. Then, aside from the many common uses for such a power upon the average farm, which it is unnecessary to enumerate here, there are many less common but just as essential economic uses to which it may be put which too many farmers do not stop to think about or consider. Among these are the uses enumerated in the article on "The Country Home," which appeared in the last issue, including the running of the washing machine and wringer, the cream separator and churn, and in cases where it can be afforded, the electric lighting plant. These uses of mechanical power in the home should be just as seriously considered as other possible uses about the farm or at the barn. What the future may develop in the form of more economical or efficient power is, of course, impossible to predict, but it is certain that the gasoline engine has been simplified and developed to a point where it is both efficient and economical for average farm use for very many purposes, and the day will surely come, and that within a comparatively short period, when the farm which is not equipped with this source of power will be rare indeed.

In the matter of farm transportation, it is equally impossible to predict what the future may bring forth. The power truck may be adapted to common use, as the automobile is being adapted today upon many farms but this will be likely to occur only when we have bettered our roads to a marked degree. Then there is the great development of electricity, the end of which none can presume to predict; but, with the development of the available water powers and the general distribution of the electricity thus cheaply produced over the country there is no doubt that this agent will be quite generally available as a source of power and light, and perhaps of heat.

But this is speculation. The consideration of this problem in each individual case should be confined to facts, rather than theories. It will be found to be a fact in many cases that the more general use of mechanical power can be made profitable on the farm. The kind or extent or location of such power



A Well Kept Farmstead, Home of Wesley Lawson, Shiawassee County, Mich.



should be made the subject of special study wherever it is determined that its installation would be profitable, for upon the forethought with which the plans are laid will the efficiency of the plant depend in no small degree. But there is no denying the fact that where cheap mechanical power can be substituted for expensive human labor it is good economy to make the substitution in all cases where the amount of labor to be performed is sufficient to warrant the investment. It is equally true that where the application of such power can be made to add materially to the comfort of the home at small expense it is in line with good economy to install it. Last, but not least, it is just as undeniable that wherever mechanical power can be substituted for horse power with economy it is good business policy to use it. There is room for a good deal of thought upon this subject by the average farmer, and it is a good time to think about it when this subject is under discussion in the Michigan Farmer.

FARM NOTES.

Corn Smut.

Will you please tell me if smut on corn can be prevented by treating with formaldehyde, and if so how is the best way to treat seed. Also, how much to use.

Wayne Co. E. M. S.

The smuts peculiar to the different grains have their individual peculiarities and habits of growth. The smuts of wheat and oats, for instance, are developed from spores which are attached to the seed and grow up through the plant from the point of germination. These smuts are therefore comparatively easily controlled by the treatment of the seed with a suitable agent, such as formaldehyde. The life history of corn smut is, however, materially different. In the reproduction of this fungus the smut spores are blown about by the wind and when they come into contact with a young corn plant or the young growth of an older plant, they immediately germinate and enter the plant where they continue to grow, sending out a network of threads which, at maturity break up and round out in the development of new spores. But this smut, while it often occurs on the ear, does not penetrate the grain itself and is not perpetuated from year to year by this means, which fact makes it unnecessary and ineffectual to treat the seed.

This perpetuation of the smut from year to year may occur in several ways. The smut masses may be left upon the ground to be blown about by the wind, or may be scattered by the manure pile route to the corn field the following year. The primary spores of the corn smut are said to develop secondary spores under favorable conditions which prevail in the manure pile or on the moist surface of the soil, where they germinate and send out small, colorless tubes, which in turn form the secondary spores which will develop the smut on the corn plant when they come into contact with it. Of course, the great majority of these spores never reach the fresh surface of the new growth of a corn plant, else the fungus would be a much more serious pest. But enough of them will live through the life cycle and find a host upon which to grow the following year to perpetuate the fungous growth which we call corn smut from year to year.

Generally speaking, the loss from corn smut is not sufficiently large to make preventative measures essential, especially where a rotation of crops is practiced as is the usual custom in Michigan. The only precautionary treatment of any avail would be the cutting of the affected stalks from the corn field before the smut masses have opened up and removing them, so as to prevent the spores from being scattered on the ground or finding their way back to same through the medium of the manure pile.

Wireworms.

I would like to know what to do with a piece of clay land which I want to put to corn to prevent depredation of wireworm.

Ottawa Co.

H. R. H.

There is no certain remedy to prevent the depredations of wireworms, where the land becomes infested with them. The best remedy is fall plowing, which will expose the larvae to the action of the elements and help to eradicate them. The larvae of the wireworm lives in the soil for two or three years before completing its life cycle, so that the best method of getting rid of the pest is to keep a field in cultivation until the wireworms are eradicated, and then practicing a short rotation of crops on the land. This pest will never become very troublesome where a short rotation of crops is used.

Some farmers claim to have had good success in preventing loss from wireworms by sowing salt on the land being fitted for corn or other spring crops. But about all that can be done is to fit the land well and plant to corn, and if the corn is destroyed then plant some crop which is more distasteful to these insects, such as buckwheat, or rape, as a forage crop for sheep.

FERTILIZER ATTACHMENTS FOR CORN PLANTERS.

Have you had any experience in using a fertilizer attachment on a horse corn planter? If so, do you think that is a good way to apply fertilizer? What grade of fertilizer would you recommend for corn on a heavy clay loam, also what amount per acre?

Allegan Co.

J. McG.

I used to use a fertilizer attachment to the corn planter when I first purchased a corn planter, but I have taken it off and laid it aside now, because I do not believe this is the right principle in applying fertilizer with corn. I have found out from actual experience it does not pay to distribute fertilizer in handfuls. When you drop a small handful of fertilizer directly on the hill of corn you are not going to get anywhere near the whole benefit of that fertilizer. That is my experience and yet I am frank to say that the majority in the United States today use the fertilizer attachment for corn. It does help give the corn a quick start but you want not only a good start but some fertilizer so that you will have something to feed the crop after it starts. And so I say I have done away with the fertilizer attachment for corn and now put on the fertilizer broadcast with a grain drill before we plant the corn and harrow the ground and thoroughly mix it in with the soil and then plant the corn. I am beginning to use fertilizer in the same way I do stable manure. Spread it onto the land evenly and before you plant your crops. I am not afraid that I am going to lose my fertilizer. I am convinced, with more than 20 years of experience, that it is money well invested. I don't expect fertilizer will double the crop. I do expect to make from 50 to 100 per cent on all the money I invest in fertilizer.

You want a good grade of fertilizer for corn. Corn is a gross consumer and feeder of nitrogen and consequently you want what is known as a nitrogenous fertilizer. I would not think of using a fertilizer containing less than two per cent ammonia for corn and if it would contain four or five per cent it would be all the better. On ordinary soil I think a fertilizer containing two per cent of ammonia, eight or nine per cent of phosphoric acid and four or five per cent of potash would be a good corn fertilizer. If your soil is real sandy I would not object to using fertilizer that contains as high as ten per cent of actual potash.

Now, how much fertilizer to use for corn. I used to put on 100 lbs. to the acre, but I don't believe it pays to fertilize corn and use as little fertilizer as this to the acre. It is a good deal like feeding a great big horse that weighs 1,500 lbs. a quart of oats to a feed and expect that you are going to get results. It is a good deal like feeding a fattening steer that you want to gain a couple of pounds a day, an ear or two of corn at a feed. You won't get any results worth mentioning. And so in fertilizing the corn crop, it is a gross feeder, it is a wonderful crop, the land must be rich, if you want to get big crops. If your land isn't rich then the question is, will it pay to make it so? I am coming to believe that on any crop where I would use stable manure did I have it to spare, that I could afford to use a good application of fertilizer, and so, if your land needs manuring, and I have no doubt that it does, I believe you can afford to use 500 lbs. of a good fertilizer per acre. Put it on broadcast with a grain fertilizer drill, harrow it into the ground, go on and plant your corn just as if you had put on stable manure. If you haven't got faith enough in fertilizer to put this amount of fertilizer on the whole field put it on one-half the field and measure results and see whether the fertilizer pays you or not.

COLON C. LILLIE.

THE FARM YARD.

I know a man who does not have a watermelon patch and who buys his vegetables in town. That may seem a little out of the way but the dooryard of that man looks as though it had not seen a human hand for ages. Needless to say, it detracts from the value of his farm. In our farm work, we are too much inclined to put all of our time on the work which is sure to bring in some money. For that reason, it usually happens that many of us plow the garden after the corn crop goes in. I will not say whether we actually lose dollars by so doing or not but we do lose a great deal of enjoyment and satisfaction. The same may be said of the dooryard. I will not try to argue that one can credit the dooryard with so many dollars at the end of the year. I do know of many farmers who would laugh at an offer of \$500, provided they were to plow up their lawn and to sow weeds in it.

Money makes the mare go and all that. We would have a mighty tough proposition without it, but if a man lives on a farm with the sole aim of extracting every single dollar out of it that is possible to be squeezed from the soil, he will have a mighty hard time to explain why he is living and there is but little use of talking to a man of that type. However, there are those of us who have moved on new farms, or are living on places where the dooryard has never been graded up to any extent who have despaired of ever having what might be termed a lawn. To tell this man why it will pay him to spend some good time on this is a hard task when you have no figures to base your reasoning upon. But it does.

Making a lawn is not the task that many of us imagine it to be. The purchase of a lawn mower is an eye opener. Somehow or other it has a tendency to discourage the weeds and to stimulate the grass. Many good lawns have been made, simply by using the mower. If you want quick results, grading and either seeding or sodding are necessary. This means work, and work at a time when it is scarce on the farm. But making a lawn by using the mower does not mean a great deal of work at one time, though it does mean that one has to keep it up. The average lawn can be mowed in less than two hours. Oftentimes, a lawn that is not graded looks even better than one that is. Encourage what grass you have. If there are big ruts, level them down during your spare moments. If there are big bare spots, a little seed will go a long way. In thousands of cases where there are lawns growing up to weeds, close use of the mower will make a lawn. Two or three hours a week during the summer will do this. You may not be able to see the money coming in, but the chances are that if you once begin you will wear out several mowers.

Ohio.

CLYDE A. WAUGH.

SEED CORN.

Test your seed corn and be sure it will grow. It is unprofitable to plant seed corn that will not germinate ninety per cent or better. Remember that for every kernel of corn that does not grow, your crop is cut down 25 to 33 per cent per hill. Don't wait too long, secure good northern grown corn while you can get it. We have a good supply now, but it is going out fast and it is doubtful if we can secure more as good. Ask for prices and free samples. Alfred J. Brown Seed Co., Grand Rapids, Mich.

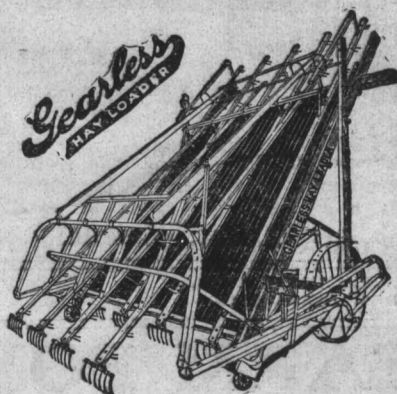
SAND VETCH.

There is a very active demand for sand or winter vetch. Farmers are securing their seed now while the price is reasonable. A year ago in July and August seed was very scarce and high in price. With light stocks in hand and increased demand, it is only natural that we will see very high prices later when the real demand begins. July and August seem to be the favorite time for sowing, although many are sowing early for the purpose of raising seed. Ask for pamphlet giving full information. We import the article in car lots and can make you low prices in large quantities. Alfred J. Brown Seed Co., Grand Rapids, Mich.

ALFALFA VS. CLOVER IN THE EAST.

Experimental and demonstrational work by the Department of Agriculture and a number of the experiment stations has shown beyond doubt that alfalfa can be successfully grown in the east wherever there is a deep, permeable subsoil. It succeeds best, however, on limestone soils or on clay loams which have been heavily limed. There is still much to be learned in regard to the relative value of alfalfa as compared with clover on the so-called "clover-sick" lands. Much of the interest in alfalfa in the east has been due to the inability of farmers longer to grow red clover. Alsike clover has been much

FREE BOOKLET WRITE TODAY.



We want every farmer in the and to have our attractive Free Booklet on hay loaders.

It's full of interesting facts and illustrations.

It shows plainly why the simple, light running "GEARLESS" Hay Loader is the cheapest to buy, the easiest to operate, the most durable and altogether the most satisfactory loader for heavy hay, windrows, light hay, clover, alfalfa, or beans.

It's the loader that can be depended upon every hour during the haying season. "No time out for repairs."

Let us send you our Free Booklet at once.

Write us today.

LACROSSE HAY TOOL CO.,

32nd Street. Chicago Heights, Illinois.

DIGS ALL THE POTATOES

without cutting them—just enough adjustment to meet your conditions without carrying too much soil. Saves enough more potatoes, even in small acreage to pay for machine in short time. Perfect separation. Is as light draft as any digger can be. No neck weight. Two styles made. Prices \$75.00 to \$105.00. No. 150 is the lighter machine, built on strong but very simple lines—a great favorite with growers. Separate bearings, easily removed and cheaply replaced. Operates entirely from the seat.

IRON AGE POTATO DIGGERS

are not experiments—years of actual use in all sorts of conditions have proved their worth. Write to-day for Anniversary Catalog—complete line of potato machinery, garden wheel hoes and drills, orchard tools, etc.

BATEMAN MFG CO.
Box 104 D GRENLOCH, N. J.



Buy This POTATO DIGGER

Extra strong, very durable, light draft, easy on horses, positively best potato digger on market. Fully guaranteed—still priced low. Get free book on Diggers, Pickers and Sorters. Hoover Mfg. Co., Box 45, Avery, Ohio. Transfer points—Buffalo, N.Y., Detroit, Mich., St. Paul, Minn., Marshalltown, Ia., Idaho Falls, Id., Portland, Ore., Spokane, Wash., Winnipeg, Man., Hamilton, Ont., Fond du Lac, Wis.

MELILOTUS

The choicest and one of the best soil restorers known. We have a fine lot of seed that we can retail at less than ordinary wholesale prices. Our seed is hulled, yellow blossom. GUARANTEED TO GROW. This plant is also a splendid preparation for alfalfa.

All northern grown, guaranteed to be 99 per cent pure and free from dodger. Write for free sample.

ALFALFA THE WING SEED COMPANY
BOX 842 MECHANICSBURG, OHIO



Seed Corn—Reid's Yellow Dent, Imp. Leaming, Golden Surprise, American Pride, White Cap and Seed Oats. Catalog free. THEO. BURT & SONS, MELROSE, O.

CHOICE SEED BARLEY

Corn and Potatoes, Fertilizers, Drills and Planters, Cream Separators, Gasoline Engines, Motor Cycles, etc.

E. H. Hutchins, Box 108, Clayton, Lenawee County, Mich.

WANTED PASTURE for 22 head of young cattle or part of them. Dehorned, write what you have. Allen Carlisle, Sturgis, Mich.

LOGS WANTED—Walnut, Oak and Elm. GEORGE I. McCURE, Detroit, Michigan.

BINDER TWINE, 6c POUND Guaranteed the best made. Farmer agents wanted. Sample and catalog free. THEO. BURT & SONS, Melrose, Ohio.

MENTION the Michigan Farmer when writing to our advertisers.

employed as a substitute, and alfalfa to a less extent. In a limited number of experiments red clover sown under the same conditions found necessary for alfalfa has succeeded well. Numerous experiments are now under way to determine how far this method may be relied upon with red clover and how the results will compare with alfalfa sown under like conditions.

Washington, D. C.

G. E. M.

FARM POWER APPLIED BY A FARM BOY.

Chester Williams, a young man of less than nineteen, is the son of Richard Williams, who is one of the successful large



Chester Williams.

farmers of Manistee county. The son has a decided genius for mechanics, and when only sixteen year old, himself rigged up the attachments which enabled them to utilize the power of a gasoline engine to do the work of churning, grinding feed, separating cream, pumping water, shelling corn and running a rip saw and an emery wheel. The illustration shows the corn sheller and feed grinder in operation. He found that the magneto furnished enough electricity for a lamp, so he made the wire connections and lighted the pump house.

For this young man a city life holds no allurements. He expects to stay on the farm. Last winter he took a short

THE CORN CROP.

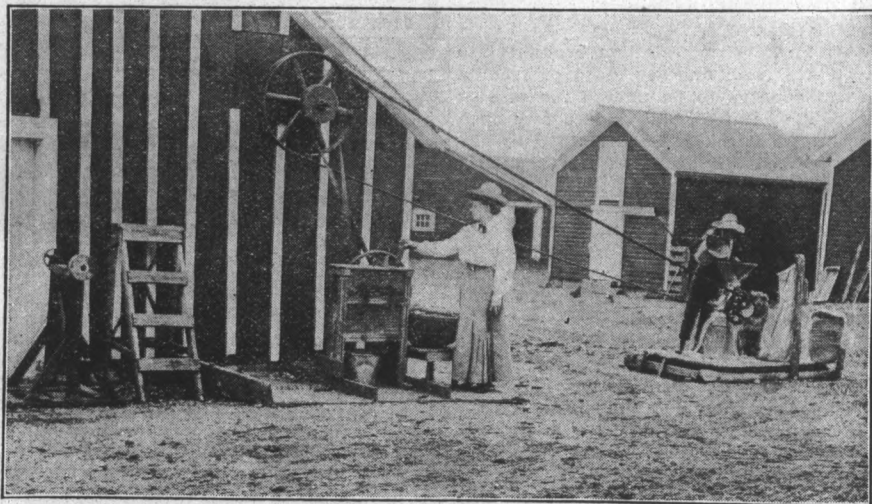
There is much said in regard to corn growing which, like the prayers of the heathen, is vain repetition, but a year is a long time and lest we forget, corn is to be again grown this year.

A week's time within reason is not important in the time of planting. The point is that natural agencies, together with cultivation and preparation of the soil, increases the heat units. Oats and barley germinate at lower temperatures than does corn, and beans require still more heat to make a successful start. There was some sense in the old rule about the size of the oak leaves indicating the proper time to plant. The emphasis has been laid on good seed corn, somewhat overlooking soil temperature. The importance of soil warmth is greater in the twilight zone of corn production than in the corn belt proper, where the heat is naturally greater. Most of Michigan is outside of the corn belt and warmth can be added to by additional preparation of the soil before planting. Sandy soils are warmer than clay loams and what may be true of one class of soils is not essentially true of others.

The effect of temperature on corn is most marked in the arid countries where the difference of altitude on the mesa land precludes corn growing and these lands shade off into valleys several thousand feet lower where warmer soil and warmer irrigation water makes the corn plant thrive, yet rather too warm for oats, which grow well on the higher land. Corn is among the few tropical plants that have been pushed into the colder regions successfully. It is with seed and soil warmth that some of the continued adaptation to environment problems are involved. The small ears of flint corn preserved in the cliff dwellers' houses, undoubtedly progenitors of our present high scoring ears, shows the distance we have traveled. It also makes us more modest as being the only original brand of real corn improvement folk, or should do so, at least. I always rather admired the egoism that is manifested when some corn enthusiast reaches out and puts on his corn improvement halo. He enjoys it and no harm is done in any way or to any one.

The question of deep or deeper plowing for corn is always an open one, and the evidence is very conflicting.

There seems to be this modification of actual inches of depth, viz., that soils penetrated by legumes, as clover or alfalfa, may be plowed deeper than the same soils not growing legumes. Prof. Hopkins, of Illinois, says that humus in



How a Farm Boy Has Applied Mechanical Power on the Farm.

course in agriculture at the M. A. C. He has lately bought a blacksmithing outfit and intends to do much of the blacksmith work of the farm himself. Last summer the father purchased a fine automobile. Of course, the son acts as chauffeur.

It has been found on this farm that it is the best economy to hire field work done instead of mechanical work, and let the son do the work that requires a knack with tools and machinery, which, when hired, has to be paid for as skilled labor at high prices. On this same place they have a steam engine with which they saw wood, grind feed, cut ensilage, and shred corn.

When a farm boy has a liking for machinery and tools, it should be encouraged. He need not go to a machine-shop or a factory to find profitable employment, there is a field for his efforts and skill right at home. Particularly is this true on a large farm where a great many different kinds of work are carried on.

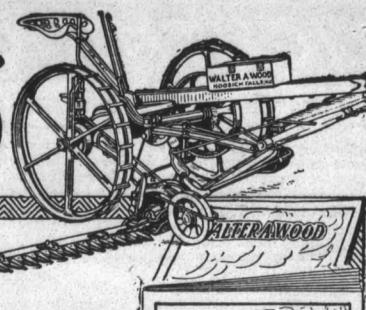
Oceana Co.

E. M. R.

Shiawassee Co.

JAS. N. McBRIDE.

WALTER A. WOOD



All the pull
of the team

is exerted on the cutter-bar of an
Admiral Mower

because of its floating frame construction. This gives a cutting-power unequalled in any other mower. It is only one reason why you should buy an Admiral. Our

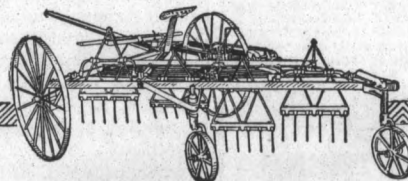
Side Delivery Rake

enables you to finish curing the hay in the windrow, and so save time while making sweeter, better-colored hay. This rake is made of angle steel and is strong and durable.

Send for our Diamond Jubilee Catalog

today. It explains all the exclusive features of both these machines, and will acquaint you with a line of farm machines that is unequalled in every respect.

WALTER A. WOOD M. & R. M. CO. Box 232 Hoosick Falls, N.Y.
or 712 Wabash Ave., Detroit.



Better Disking at Half the Cost

We know that the new Imperial double disc, flexible frame, scalloped blade Harrow will save you money and time, and give you a better seed bed than any other implement. We know this through recorded tests, and from the experience of thousands of farmers throughout the country. We want you to know it, too, from an actual test of an Imperial, conducted by yourself on your own farm.

Imperial Double Disc Flexible Frame Harrows

Any Bucher & Gibbs dealer will be glad to let you have an Imperial Harrow to make this test. Get one from your dealer, and while running it note these facts:



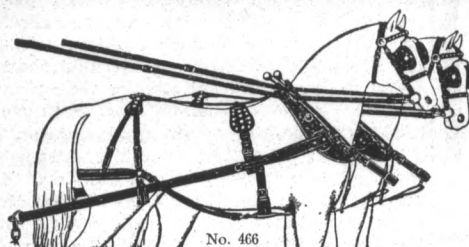
The Imperial Harrow works the ground twice for its full width of cut in the same

time it takes the old style harrow to do it once. Four horses hitched to an Imperial will do twice as much work as three horses with an ordinary harrow.

The specially designed, scalloped blade cuts to greater depth and more perfectly pulverizes the soil. The flexible frame lightens the draft and leaves a perfectly level seed bed.

Write for all the facts about the Imperial double disc Harrow, and we will send you some printed matter that we know will be of value to you. Write to-day.

The BUCHER & GIBBS PLOW CO.
806 E. Seventh St., Canton, Ohio



HARNESS HORSE COLLARS

Ask your dealer for the Label.

Made and Warranted by

ARMSTRONG & GRAHAM

WHOLESALE ONLY. DETROIT. ESTABLISHED 1880.

GALVANIZED FENCE WIRE

\$1.60 FOR 100 LBS. AND UP

This is our price for our No. 9 gauge Galvanized Wire Shorts. The terms Wire Shorts is to denote mill ends of regular fence wire. In the manufacture of wire the mills have lengths over that do not run continuously to a coil. We buy these under contract and put them up 100 pounds to the coil. As far as quality is concerned the wire is as good as any regular full length coils of wire. It is smooth plain galvanized. The lengths range anywhere from 25 to 150 feet, but we do not guarantee the lengths.

As near as possible we keep one or two gauges only to a coil. No farm is complete without one or two coils of these handy wire shorts. Extensively used by grape growers and for fence purposes. Sold as is, no come backs.

Prices per 100 pounds as follows: No. 9.....\$1.60 No. 10.....\$1.55 No. 11.....\$1.70 No. 12.....\$1.85 No. 13.....\$1.85 No. 14.....\$1.90 No. 15.....\$2.00

Barbed Wire: Fifty-four cars of four point Galvanized Hog and Cattle Fencing, catch weight coils, new, but somewhat weather beaten, per 100 lbs., \$2.00. Twenty-six inch Woven Wire Fencing, brand new and first-class in every way, extra strong, per rod.....19¢.

Write for our Special WIRE CATALOG, No. N. O. 28.

CHICAGO HOUSE WRECKING CO., THIRTY-FIFTH and IRON STREETS, CHICAGO.

LIGHTNING

Hear the Voice of Wisdom

OVER 2000 fire insurance companies urge people to protect their buildings from lightning by the Dodd System of Lightning Control. They grant lower rates of insurance to induce people to secure this protection.

It is to their interest to do so. Their statistics prove to them that three out of four of their country fire losses are caused by lightning.

Benjamin Franklin, Originator of Lightning Control



Benjamin Franklin, Originator of Lightning Control

DODD SYSTEM

West Dodd Who Perfected Lightning Control

The same statistics show them that of all the tens of thousands of insured buildings that are protected by the Dodd System, they have never had one dollar's loss to pay.

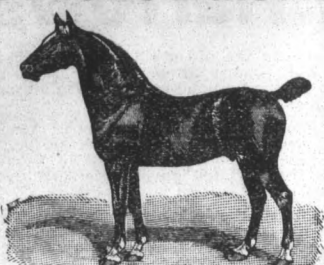
Make this a personal matter now. You have insurance on your home. Get protection on that home and for your family. Get both insurance and protection for the cost of insurance alone. The reduced cost of insurance shortly pays for the lightning protection. Don't trifle with fate. The investment is wise. It adds but little to the cost of your buildings. The Dodd System is a real system—the one universally endorsed. It is in charge of trained, schooled men only. Every building a separate problem, rodded according to conditions. Guaranteed. Money Back or Damage Made Good. Our fine Lightning Book, 7x10 inch pages, with vivid lightning scenes and the whole lightning subject. FREE. Where shall we mail your copy? Address

DODD & STRUTHERS
429 6th Avenue, Des Moines, Iowa.



Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

KENDALL'S SPAVIN CURE

—has saved thousands of dollars and thousands of horses. The old reliable cure for Spavin, Ringbone, Splint or any lameness. For sale at all druggists. Price \$1 per bottle, 6 for \$5. "Treatise on the Horse" free at druggists, or write to Dr. B. J. KENDALL COMPANY, Enosburg Falls, Vt., U. S. A.



Double Your Hay Money

You don't put two men on a job that one can easily do. You farm for profit and know one dollar saved in help hire and one dollar saved in time adds two dollars to your hay profit. The

Hay Loader Hay-Car saves one man's time and doubles your money. Loads quicker—unloads quicker, and quick loading means better hay. Beats rain to the Hay field. Can be placed on any flat hay rack. Write today for special proposition.



Spartan Mfg. Co., Dept. 41 Pontiac, Ill.

WHEN writing to advertisers just say "Saw your ad. in the Michigan Farmer."

LIVE STOCK

MICHIGAN'S STALLION LAW.

During the past few months we have had a great many inquiries from subscribers asking for the publication of the Michigan stallion law. As has been heretofore noted in these columns, the horse breeders of the state have been working for an efficient stallion law, with the result that such a law was passed by the last legislature as noted in our last issue. This bill was signed by the governor on May 1, and will go into effect ninety days after the final adjournment of the legislature. The text of the law follows:

House Enrolled Act No. 177.

An act to encourage the breeding of horses; to regulate the public service of stallions; to require the registration of stallions, and to provide for the enforcement thereof.

The People of the State of Michigan enact:

Section 1. Every person, firm, association or company, using or offering for use for public service any stallion in this state shall cause the name, description and pedigree of such stallion to be enrolled by the state veterinary board and shall procure a certificate of such enrollment from said board: Provided, however, That this shall not apply to stallions not claimed to be by standard or pure bred sires or dams.

Section 2. In order to obtain the license certificate hereinafter provided for, the owner of each stallion shall forward the studbook, certificate of registration, and any other documents that may be necessary to define and describe said stallion, his breeding and ownership, to the state veterinary board. The officers of said board, whose duties it shall be to examine and pass upon the merits of each pedigree submitted, shall use as their standard of action the studbooks and signatures of the duly authorized officers of the various pedigree registration associations, societies or companies recognized by the United States department of agriculture. Upon verification of pedigree or certificate of breeding, a license certificate shall be issued to the owner by the state veterinary board, copies of which certificate said owner shall post and keep affixed during the entire breeding season in a conspicuous place both within and upon the outside of every building where such stallion is kept for public service.

Section 3. Every bill or poster issued by the owner of any stallion licensed under the provisions of this act, or used by him or his agent for the purpose of advertising such stallion, shall contain a copy of the certificate of enrollment of such stallion, and said bills or posters shall not contain illustrations, reference to pedigree or other statements that are untruthful or misleading. Reference to such stallions in newspapers, stock papers and other advertising medium shall contain the name of such stallion, number of certificate of enrollment, and shall designate in letters not smaller than pica whether said certificate reads "Pure bred," "Grade," or "Non-standard bred."

Section 4. The license certificate issued for a stallion whose sire and dam are of pure breeding, and the pedigree of which is registered in a studbook recognized by the United States department of agriculture shall be substantially in the following form:

Michigan State Veterinary Board.
Certificate of Pure Bred Stallion No.
The Pedigree of the Stallion (name).....
Owned byAddress.....
Described as follows: Color.....
MarkingsWeight.....Age.....
has been examined, and it is hereby certified that said stallion is of pure breeding and is registered in the..... studbook, recognized by the United States Department of Agriculture.

Secretary State Veterinary Board.
The license certificate issued for a stallion whose sire is of pure breeding and registered in a studbook recognized by the United States department of agriculture, shall be substantially in the following form:

Michigan State Veterinary Board.
Certificate of Grade Stallion No.
The Pedigree of the Stallion (name).....
Owned byAddress.....
Described as follows: Color.....
MarkingsWeight.....Age.....
has been examined and it is found that said stallion is not of pure breeding, and

is therefore not eligible for registration in any studbook recognized by the United States Department of Agriculture.

Secretary State Veterinary Board.
The license certificate for a "Non-Standard" bred stallion shall be substantially in the following form:

Michigan State Veterinary Board.
Certificate of Non-Standard Bred Stallion No.
The Pedigree of the Stallion (name).....
Owned byAddress.....
Described as follows: Color.....
MarkingsWeight.....Age.....
has been examined, and it is found that said stallion is not eligible for registration as a Standard Bred, and for the purpose of this license is not pure bred, although registered in the Non-Standard bred department of the American Trotting Register.

Secretary State Veterinary Board.
Section 5. A fee of one dollar shall be paid to the state veterinary board for the examination and enrollment of each pedigree or certificate of breeding; and an additional fee of one dollar for the issuance of the license certificate in accordance with the breeding of the animal as above provided. Upon the transfer of ownership of any stallion enrolled under the provisions of this act, the certificate of enrollment may be transferred to the transferee by the state veterinary board upon submittal of satisfactory proof of such transfer, and upon payment of the fee of fifty cents. In case of death of any stallion enrolled under this act, owner of same shall immediately inform the secretary of the state veterinary board. All fees received by the state veterinary board under the provisions of this act shall be paid into the state treasury to be credited to the general fund.

Section 6. In addition to the powers of the state veterinary board as prescribed by act number two hundred forty-four of the Public Acts of nineteen hundred seven, as amended by act number one hundred forty-three of the Public Acts of nineteen hundred one, said board is hereby authorized to provide for official examination of pedigrees and certificates of breeding and ownership, to issue license certificates for stallions enrolled under this act, to compile and publish statistics relative to horse breeding in Michigan and other information of value to the horse breeders of this state, and to incur such other reasonable expenses as may be necessary to carry out and enforce the provisions of this act. All bills incurred and authorized by said board shall, when approved by a majority of its members, be allowed by the board of state auditors and paid out of the general fund of the state treasury.

Section 7. Every stallion brought into this state from another state or from a foreign country to be offered for sale or for public service shall, before any such sale or use is made, be examined by the state veterinary board or its regularly appointed representative, and certified by said board or its representative that said stallion is free from hereditary, contagious or transmissible unsoundness or disease and is of good conformation and breed type and suitable to improve the horse stock of the state.

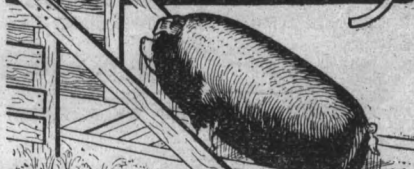
Section 8. Any person, firm, company or association violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and shall upon conviction thereof be punished by a fine of not less than twenty-five dollars nor more than three hundred dollars, or by imprisonment in the county jail not more than thirty days, or by both such fine and imprisonment in the discretion of the court.

FROSTED BEANS AS A SHEEP FEED.

I would be glad if you would tell me if beans that were frosted so as to be too soft to grind are good sheep feed. If so, what would they be worth when shelled? Corn is worth \$1.00 per cwt. and oats 30c per bu. I am new in the sheep business. Emmet Co. F. W. W.

The soft beans of which you write are all right for sheep feed if fed in limited quantities with corn and oats, using not over one-quarter of a pound per day. For present use you would perhaps find them profitable at the price for which corn sells, as they will help to balance up the ration. However, I think you would have considerable trouble in keeping these soft beans through the warm weather unless spread out very thinly and shoveled over occasionally. Otherwise they would be apt to mold, which would be apt to make them unfit for sheep feed, or at least undesirable.

Keep Hogs Healthy



A DIPPING TANK OR A HOG WALLOW

KRESO DIP No. 1

WILL DO THE WORK

THERE IS NO EXCUSE FOR LOUSY MANGY UNTHRIFTY PIGS. IF YOU HAVE SOME OF THIS KIND YOU WILL FIND IT WORTH WHILE TO GET OUR CIRCULAR ON TANKS AND WALLOWS. IT TELLS HOW TO MAKE THEM OF CEMENT

KRESO DIP No. 1

IS A REAL NECESSITY

ABOUT ALL LIVE STOCK FOR KILLING LICE, TICKS, MITES, FLEAS. FOR TREATING SCAB, MANGE, RINGWORM, AND OTHER SKIN DISEASES.

TO DISINFECT, DEODORIZE, CLEANSE & PURIFY.

ALL OF THESE USES FULLY DESCRIBED IN OUR BOOKLETS. WRITE FOR COPIES ASK YOUR DRUGGIST FOR KRESO DIP No. 1

PARKE, DAVIS & CO.
DEPARTMENT OF ANIMAL INDUSTRY.

DETROIT, MICH.



KILLS ALL TICKS ONE DIPPING

64 years experience prove truth of this statement. Every tick and nit absolutely destroyed if you use

Cooper Dip

The only dip that kills ALL ticks in ONE dipping—Cooper's is sure and destroyer. Increases growth and improves quality of wool. Perfect skin tonic. Results considered is cheapest dip on market. Used on 300 million sheep annually. Handsome Calendar and booklet free if you mention this paper. Prices: 25 gal. pkt. 50c 100 gal. pkt. \$1.75 Ask your druggist or write

W. M. COOPER & NEPHEWS
64 W. Illinois Street Chicago, Ill.

NEWTON'S HEAVE

COUGH, DISTEMPER AND INDIGESTION CURE

The Standard Veterinary Remedy. 21 years sale. Send for booklet.



Makes the horse sound, stay sound

DEATH TO HEAVES

The first or second \$1.00 can cures Heaves. The third can is guaranteed to cure or money refunded.

\$1.00 per can at dealers, or express prepaid.

THE NEWTON REMEDY CO., Toledo, Ohio

Don't Cut Out A SHOE BOIL, CAPPED HOCK or BURSTIS FOR

ABSORBINE

will remove them and leave no blemishes. Cures any puff or swelling. Does not blister or remove the hair. Horse can be worked. \$2.00 per bottle delivered. Book 6 F free.

ABSORBINE, JR., liniment for mankind. For Boils, Bruises, Old Sores, Swellings, Gout, Rheumatism, Veins, Varicose, Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Will tell more if you write. Manufactured only by W. F. YOUNG, P. D. F. 283 Temple St., Springfield, Mass.

Ridgling Castration a Specialty. Write for circular. Work guaranteed or no pay. Am a graduate of Farmer Miles School of Veterinary Surgery. HENRY H. PERRY, V. S. R. F. D. No. 1, Morenci, Mich.

Belgian, Percheron and Shire

Stallions and Brood Mares 40 head of prize-winners to arrive March 25. Plenty of mares in foal. A guarantee with each animal.

Prices reasonable. LOESER BROS., Importers, Dept. M, Ligonier, Ind.

BELGIAN HORSES.

If you are wanting to buy Draft Horses write H. H. JUMP, Munith, Michigan.

PROFITABLE PIG FEEDING.

Successful feeders recognize the necessity of having the right type of a hog to convert their farm feeds into pork. Large, coarse hogs should be avoided, while they may give greater weight for their age, they do not always give as good returns for the food consumed. They do not show the same perfection of form at an early age as the smaller, more compact type of hogs, and consequently they cannot be marketed to as good advantage.

The short, chunky pig, while an easy keeper and fit to market at any age, I have not found a profitable pig to feed. He cannot digest and assimilate the same quantity of food, over and above the food of support, that the longer, even-bodied, well-proportioned pig can, the latter often making nearly one-half more daily gain with a slight increase in feed, even where both belonged to the same breed. The short, fine-boned pig is usually the product of immature, undeveloped parents, the result of improper feeding or want of age, or too frequently both, yet this condition applies to more than two-thirds of our breeding swine.

Were we to use other farm animals for breeding purposes when they had attained one-third the age and weight of mature animals, and only at that age, how long would we be in lowering the health, vigor and fecundity of our breeding stock?

The food required to maintain condition is not, and can not be, any fixed quantity, because such matters as the health, condition and temperament of the animal all exert an influence on the amount of food required to maintain condition. Hence, the necessity of producing an animal that is capable of utilizing large quantities of food and putting its flesh on its body in places that command the highest price when the carcass is cut up. We should not run after fancy points to the exclusion of others that add to the commercial value of our animals.

The science of feeding suggests to us the necessity of keeping up a continuous growth, and the greatest conducive to that object for which the animal is kept. It would be a mistake to expect to secure the best breeding condition and the greatest gain in weight by the same line of feeding. It is also especially foolish to expect the best results from a breeding animal that is in a run-down flesh condition. The brood sow needs surplus flesh (reserve energy) to carry her through the nursing period. And if this is produced by the right kind of food and acquired during the latter half of pregnancy, it will not be detrimental, providing the sow gets plenty of exercise.

The first few days after farrowing care should be taken not to feed the sow too much or too concentrated foods, as it upsets her digestive system and promotes too great a flow of milk, which is detrimental to the pigs. After that her feed may be gradually increased and as fast as the pigs show an inclination to take more nourishment they should get it. Soaked corn, wheat, sweet skim-milk and such foods may be given, just what they will clean up with apparent relish, put where the older hogs will not have access to it. When the sow has a good coat of flesh to begin with, and sow and pigs are fed in this way, the sow will wean the pigs without checking their growth. As a general proposition I prefer early litters and since I have suitable farrowing houses I have no more trouble in raising early spring litters than at any other time, but, of course, they must have good warm quarters and plenty of room for exercise.

In feeding young pigs, care must be taken not to feed them too much. A pig with a poor appetite is a poor piece of property. Letting them run on pasture, providing shade from the sun and shelter from rain makes ideal conditions for the pigs in the summer. Never feed heavy, indigestible feeds to young pigs. Skim-milk contains 90 per cent water and 10 per cent solids, yet owing to its digestibility it is one of the best foods to carry young pigs over the weaning period, the most critical period with any kind of animals, when, if the animal is stunted, it never fully recovers its normal condition, and the foundation is laid for unprofitable feeding. I have had very good success in raising a few fall pigs and putting them on the market in midsummer. This requires careful feeding, for all pigs are sure to become diseased and stunted unless they are given the best of care and suitable foods.

Providing we could winter pigs on cut clover, alfalfa, roots and a small grain ration, as many feeders claim they can,

it might be possible to winter spring pigs and market them during the next summer at a profit, but during these days of high priced grain feeds the feeder who keeps his hogs during two summers and one winter to feed for the summer or early fall market deserves no sympathy if he loses money on his feeding operations.

The cheapest, easiest and best way to produce pork is to feed grain while the pigs have the run of good pasture. It does not require a large amount of grain and corn is not objectionable when the pigs have the run of a clover, alfalfa or blue grass pasture. We not only secure a wonderful growth for the amount of food consumed, but also lose little soil fertility in this way. It is indeed a difficult matter to estimate the loss of feed and fertility that is incurred by feeding hogs in small yards and pens, where inadequate means are provided for saving manure, either liquid or solid. Not only is there a great loss of fertility but such yards and pens are wholly unfit for feeding purposes and are especially injurious to young pigs during the summer. Corn is without question the cheapest and best hog feed we have except grass and forage, yet I would not recommend a ration of more than one-third corn for growing pigs and not more than two-thirds for fattening hogs, except during the last few weeks of the finishing period.

Scant pastures may be supplemented by waste fruits and vegetables and green soiling crops. Such foods are largely composed of water, but 40 to 60 per cent of the live weight of the hog consists of water. The nutriment contained in such food is so easily digested that they counteract the injurious effects of heavy grain feeding and regulate the whole system, thus increasing the capacity of the animals to digest and assimilate larger quantities of food and improving the quality of the products. No one can feed pigs intelligently unless he studies and understands the nature of foods and the needs of the animals during the different periods of their growth and development. He needs to understand that breeding stock should be fed differently than fattening stock, that temperature is intimately connected with gains in flesh, that slow growth or no growth is disastrous to profits, that cheap foods may be profitably utilized to make growth and that a variety of food promotes the health of the pigs and gives the most rapid and economical gains.

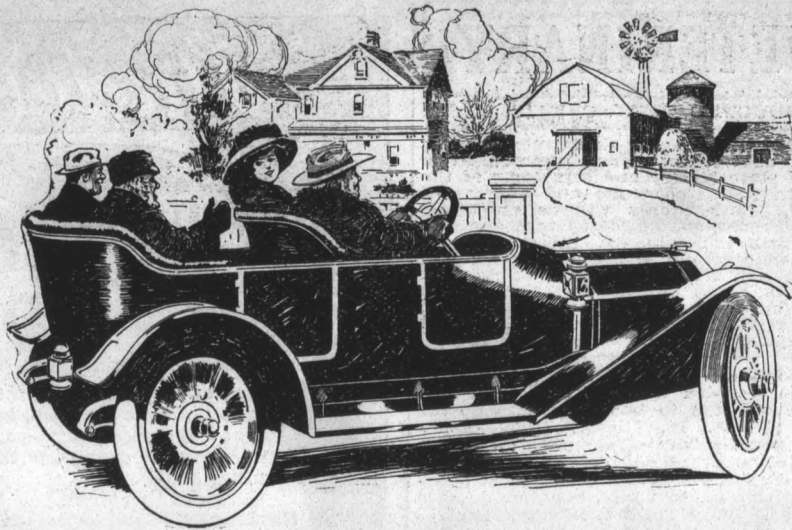
At what age and weight to sell pigs is a debatable question, it being governed largely by conditions. The young pig is somewhat of an expense owing to the cost of keeping the breeding herd. The least expensive pork is put on light weight hogs, but the vital question is that of the pig giving up a reasonable profit on the quantity of food consumed. Commercial lard is largely adulterated and replaced in the market with various substitutes, hence the diminished demand for heavy hogs, the lighter hogs usually topping the market during the greater portion of the year. As a rule, I think the most profitable weights are between 250 and 300 lbs. Of course, this is governed largely by the ability of the feeder and the condition of the markets at the time the hogs are sold. My best returns have been secured by marketing the pig crop at the above mentioned weights.

New York. W. MILTON KELLY.

It was demonstrated at the recent convention of the Indiana Cattle Feeders' Association at Lafayette, Ind., that silage is a first-class supplemental feed in fattening cattle, 300 progressive cattle feeders being present. "Indiana station has fed cattle six consecutive years," said Dean Skinner, in addressing the meeting, "and each year we have shown a profit from our feeding operations, which were conducted along scientific lines in an effort to produce beef and pork at a minimum cost. In all our tests we have used silage as a supplemental feed, and the practical feeder who follows this principle will find that he can produce beef at cheaper cost than without this feed." A lecture on the fertility value of barnyard manure was an interesting topic delivered by Professor Conner, of Purdue, who has charge of soil testing at that institution. "The United States government has figured that the manure from the average 1,000-lb. steer is worth each year \$20 in fertility value," stated Prof. Conner. "Indiana has nearly 900,000 cattle, and the manure from these cattle is thus worth \$18,000,000. Much of it now goes to waste through carelessness of the farmers in failing to keep it in the best condition. Thus they are losing millions yearly in the fertility of Indiana soil."

It Pays to Advertise.

R. J. Lane, Clare, Mich., the well-known breeder of Poland China swine, when he remitted for his advertisement, says: "It certainly pays to advertise in the Michigan Farmer. The first issue in which my advertisement appeared brought me many inquiries."



A Shrewd Investment

AN automobile is the greatest labor saving, time saving and money saving machine a man can have on his farm. Don't make the mistake of thinking it is merely a luxury. To be sure the fellow who runs a car gets twice the pleasure out of life, but sum up the practical uses he can put it to. Today the farm minus an automobile is seriously handicapped. Thousands of shrewd farmers all over America own and operate an

Overland

These same men tell us how much quicker and better they can get to town. How they can take a small gang of men—pack them off to work and be back in a jiffy. How the women folks use it for marketing and making their little social calls. How quickly a broken fence or something else at a distant end of the farm can be mended. How trains are caught—friends are met—business appointments are kept. How much nearer it brings all the surrounding territory and neighbors.

And these same warm *Overland* friends write us of the reliability of the car. How it goes through thick and thin in all kinds of weather and never turns a hair. There is probably some *Overland* owner near you. Look him up and ask him yourself.

The *Overland* is the strongest made and most liberally built car on the market today. We want to prove to you that when you buy an *Overland*, you get your money's worth. Make some comparisons with a few other cars. Take the specifications of the \$1250 *Overland* and compare them with any other cars priced up to \$1500. Take item for item—the wheel base—the size of the wheels—the capacity—the transmission—the motor and body. Go through the entire list. See how much more you get in an *Overland*.

You can use an *Overland* to advantage. It will help you to save time and money. *Overlands* cost from \$775 to \$1675. Made in all the prevailing styles. They don't cost much to operate. The first cost is practically the only cost.

There's a dealer near you who will be glad to show you the *Overland* car. Let him take you for a drive. See what a handsome machine it is and how easily it rides. Send us your name and address and we'll give you the name of the nearest dealer. We will also send you an interesting *Overland* book which gives specifications, prices, models and everything. Better drop us a line at once.

The Willys-Overland Company
160 Central Ave., Toledo, Ohio.

VETERINARY

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

Windgalls.—I have a two-year-old colt that is troubled with puffs on hind legs and would like to know what to do for him. W. A. B., Ithaca, Mich.—Apply equal parts spirits of camphor and tincture iodine every day or two.

Caked Bag.—I have a cow that is bothered with a caked udder, only one quarter affected. F. B., East Pordan, Mich.—Apply one part tincture iodine and five parts soap liniment to udder once a day. Also give 1 dr. iodide potassium at a dose in feed or water two or three times a day.

Sitfast.—One of my mares has a number of small hard bunches on top of neck where collar rests and I would like to know what to apply. I have another mare whose neck is not sore, but hard scales form on upper part. E. W. B.—Apply iodine ointment three times a week and remove the hard bunches with a knife; also apply to wound equal parts boracic acid and powdered alum.

Contraction.—I have a mare that is troubled with contracted fore feet. She travels as if sore in all four quarters. E. Linermore, Otis, Mich.—Contraction is not a disease, but a result of other foot ailments, which cause atrophy of soft tissues of the foot. Blister coronets with cerate of cantharides every week or ten days and it will stimulate a healthy action and the feet will gradually expand. It is also important to keep the hoof moist.

Solidified Bursal Bunches.—My 22-year-old mare is lame in left fore leg. Three years ago she first showed slight lameness which soon passed off. The following spring lameness returned with slight swelling above fetlock joints, but she gradually improved until lameness left her. This spring the lameness has returned and appears to assume a more aggravated form. Her general health is good, wind is poor and she perspires freely. G. W. G., Rapid City, Mich.—Blister fetlock joint with one part red iodine of mercury and eight parts cerate of cantharides once a week.

Pleurisy.—My ten-year-old horse had pleurisy in March; our local Vet. treated him, but the horse is not much better. He breathes hard and his lungs squeak some. When drinking water he often strangles and coughs considerable, but has no discharge from nose. He has a fairly good appetite and eats plenty, but does not gain strength very rapidly. J. R. G., Bentley, Mich.—Apply to chest and sides equal parts turpentine, aqua ammonia and sweet oil every day or two. Also give 1 dr. iodide potassium and a teaspoonful fluid extract lobelia and a teaspoonful tincture opium at a dose three or four times a day.

Navicular Disease—Rheumatism.—My eight-year-old horse appears to be stiff in back and fore feet, but has no bunches—I have thought that his joints were sore. Our Vet. thought he might have lumbago. A. E. E., Elmira, Mich.—I am inclined to believe that your horse suffers from articular rheumatism and several of the joints are affected; besides having, perhaps, lumbago. Give a dessertspoonful of powdered nitrate potash and a teaspoonful colchicum at a dose in feed three times a day for one week, then give 2 drs. salicylate soda at a dose in feed twice a day for a week or ten days. Apply to joints that are affected, one part turpentine, one part aqua ammonia and three parts olive oil once a day.

Distemper—Abscess.—Dropsical Swelling.—One of my horses had an attack of distemper some time ago, his throat swelled and an abscess formed which broke and discharged pus. His legs stocked, there is quite a lot of swelling under belly and he is quite weak. H. P. D., Eagle, Mich.—Inject abscess with one part carbolic acid and 30 parts water twice daily. Give a tablespoonful of the following compound powder at a dose in feed three times a day: Powdered nitrate of potash, powdered rosin, ground gentian, and fenugreek. He should be well fed and exercised moderately every day, but not worked until he regains lost strength.

Malignant Sore Neck—Infected Udder.—I have a horse that had a sore neck last summer; during the cold weather it partially healed, but soon after going to work this spring the neck became sore and I would like to know how to treat it. I also have a cow that gives bloody and stringy milk, but so far as I know her udder has not been injured. W. H. W., Lowell, Mich.—There is perhaps a hard, fibrous core or bunch in neck that should be cut out, then apply equal parts boracic acid, oxide of zinc and powdered alum twice a day. It is needless for me to say that the sore part of shoulder should be relieved of pressure from collar or else it will remain sore. Apply equal parts extract witch hazel, tincture arnica and water to infected quarter twice a day. Give 1 oz. hyposulphite soda at a dose in feed two or three times a day.

Sprained Shoulder—Weak Stifle.—For several years I have been benefited by reading the veterinary department of the Michigan Farmer, but this is the first time I have written for advice. I have

(Continued on page 547).

Studebaker

WAGONS -Length of Service COST Considered LESS

Twenty years of usefulness means much in a wagon, yet thousands of Studebakers have reached that age, yes, and we know of hundreds that have been in use for twenty-five or thirty years, and of a number that are nearing the half century mark.

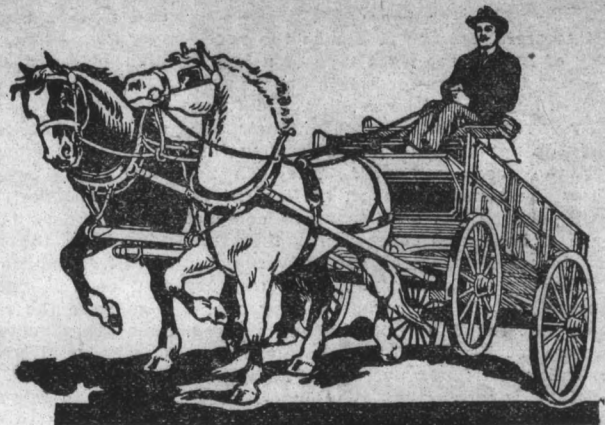
Consider this when you buy a wagon. If it's a Studebaker it's a lifetime investment. Repair bills are practically unknown. It's built right in the beginning. Another thing. You can buy a Studebaker right at home—you can satisfy yourself as to its strength, its easy running quality, its beauty, before you invest a penny. We have thousands of dealers in this country who will gladly point out to you in person its superior merits—who will guarantee and be responsible for your purchase.

We want you to know our dealer in your neighborhood. Drop us a line so we can send you his name and address. Then let him

show you why a Studebaker costs less than any other wagon, length of service considered.

With the dealer's name, we will send you our booklet, "The Farmer's Friend." It tells you why our slope shoulder spokes make strongest wheels; why our wheels give uniform satisfaction; how we construct our gears; why our skeins are practically indestructible.

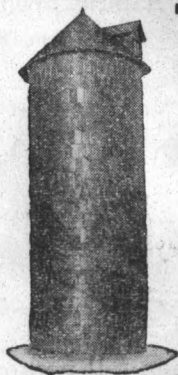
It tells you how we treat our timber; where we get it and the kind we use; how we test our paints and oils. It gives facts about "Studebaker Quality" and "Studebaker Methods" and carries you step by step through the making of a Studebaker wagon.



Largest Vehicle Manufacturer in the world.
Plant covers 101 acres.
Over 100,000 complete vehicles made every year.

The Studebaker Corporation
South Bend, Indiana

Adv. No. 1430



To every good builder, well informed feeder, Dairyman or experienced owner of silos, our

IMPERISHABLE SILO

appeals strongly. Made from Patented Interlocking Vitrified Clay Blocks or fire clay, it cannot swell, shrink, crumble or decay. Will not blow over, crack or absorb moisture. Hundreds in use and not one has failed. Concrete is liable to crack unless heavily re-inforced with steel, which makes it cost more than the Imperishable. Concrete absorbs moisture and causes ensilage to spoil next to the walls. In the "Imperishable," silage keeps perfectly clear up to the walls.

Ask us for free Booklet.

IMPERISHABLE SILO CO.
HUNTINGTON, INDIANA.



For Hogs, Sheep & Cattle
Milk Ointment the best and cheapest, destroys absolutely scabs, ticks, lice, mites, etc. 1 Gallon makes 100 Gallons most effective disinfectant. Get our 25 page Catalog—free for the asking. Agents Wanted.

F. S. BURCH & CO.

64 W. Illinois St., Chicago, Ill.

REID'S HOG CHOLERA REMEDY!
Guaranteed. Price 80c per can; 7 cans, \$5.00. Also cures Cholera in fowls. Agents wanted.
REID REMEDY CO., - Richmond, Indiana.

PIGS FOR SALE.

I keep about 2400 cholera proof brood sows and am selling fine grade

Yorkshire, Poland-China, Duroc and Tamworth Weaned Pigs at \$3 each.

ALVAH BROWN'S PIG FARM,
GRAND RAPIDS, MICH.

T. C. ALCOCK, Temperance, Michigan, Live Stock Auctioneer.
Write for terms and dates.

ARTHUR S. WILCOX, Jerome, Michigan, LIVE STOCK AND REAL ESTATE AUCTIONEER.
WRITE FOR DATES AND TERMS.

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN-ANGUS.

Herd, consisting of Trojan, Ericas, Blackbirds and Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec., 1910. He is assisted by Undulata Blackbird It.

WOODCOTE STOCK FARM, Ionia, Mich.

Guernsey Bull Calf For Sale.—Nicely marked, of breeding. **WILL W. FISHER,** Watervliet, Mich.

TOP NOTCH HOLSTEINS

Top Notch registered young Holstein Bulls combining in themselves the blood of cows which now hold and have in the past held World's Records for milk and butter fat at fair prices.

MCPHERSON FARMS CO., Howell, Mich.

Holstein Friesian Cattle—BULL CALVES. Grandsons of Canary Mercedes, W. B. JONES, Oak Grove, Michigan.

HOLSTEIN BULLS.—1 two years old, sire Admiral Prilly Walker No. 42562; dam Kekke Hengerveld De Kol No. 48390; 1 nine months old, sire Sir Korndyke Pierle Hengerveld No. 56929; dam Nora Iaka Korndyke No. 109765. 1 3 months old, sire Johanna Concordia Champion No. 60575; dam Cora Burk De Kol No. 112542. The above are 3 of the best bulls ever offered for sale in the Mich. Farmer. L. E. Connell, Fayette, O.

DE KOL BULL CALF.—Choicest A. R. O. Breed. Ing and Individuality. **COLE BROTHERS,** Ypsilanti Farms, Ypsilanti, Mich.

HOLSTEIN-FRIESIAN Cattle and Duroc Jersey swine. Bull calves for sale from A. R. O. Cows. **E. R. CORNELL,** Howell, Michigan.

HOLSTEIN BULL CALVES For Sale—From A. R. O. dams. Sire has 75% of the blood of the sire of Grace Payne and's Homestead. **E. COLLIER,** Fowlerville, Mich.

Holstein Bulls.—Cows with all 12 dam and 25-lb. g. dams and Hengerveld De Kol as g. sire. A prime for less than \$200. Also 3 more at bargain prices. **LONG BEACH FARM,** Augusta, Kalamazoo Co., Mich.

FOR SALE—Holstein Bull 2 years old \$125. Bull Calves 6 months to 1 year \$50 to \$100. Bred heifers \$150 to \$200. Oldest herd in Ind. Send for Photos and Pedigrees. **W. C. JACKSON,** 715 Rex St. South Bend, Ind.

FOR SALE.—Reg. St. Lambert Jerseys, producing stock. **C. A. BRISTOL,** Fenton, Michigan.

HEREFORDS.—Both sexes and all ages for sale. Also Poland-China hogs. **ALLEN BROS., Paw Paw, Mich.**

LILLIE FARMSTEAD JERSEYS.

HERD BULLS.—Vidas Signal St. L. No. 58197, Jubilee's Foxhall, No. 82299. Bull calves sired by these great bulls, and out of splendid dairy cows, many of them in test for register of merit. Also a few heifers and heifer calves for sale. Write for description and prices. Satisfaction guaranteed, or money refunded.

COLON C. LILLIE, Coopersville, Michigan.

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

REGISTERED JERSEYS For Sale—Some combining the blood of St. Louis and Chicago World's Fair Champions by HERMAN HARMS, Reese, Mich.

Register of Merit Jerseys. Official yearly lot of young bulls from dams with official records of 483 pounds and upwards of butter. **T. F. MARSTON,** Bay City, Michigan.

FOR SALE.—Registered Shorthorn Cattle, both sexes not akin. **JOHN SCHMIDT,** R. No. 4, Reed City, Mich.

Dairy Bred Shorthorns.—Only one bull left, 10 mos. old. Price \$75 cash or good note. **J. B. HUMMEL,** Mason, Mich.

SHEEP.

Hampshire Ewes bred for March & April; registered stock; Choice individuals. **C. D. WOODBURY,** Lansing, Michigan.

Oxford-Down Sheep and Polled cattle for sale. **J. A. DE GARMO,** Muir, Mich.

Oxford Down Sheep.—Good Yearling Field Rams and ewes of all ages for sale. **L. R. WATERBURY,** Highland, Michigan.

Reg. Rambouillets.—I have 100 ewes, among them all of my youngest and best, also 85 ewe and ram lambs. Live 2 1/2 miles east of Morrice on G. T. Road. Address **J. Q. A. COOK.**

HOGS.

Durocs & Victorias.—Growthy Spring Boars & Glits of choicest breeding from Prize Winners. **M. T. STORY,** R. 248, Lowell, Michigan.

Berkshires.—Ten glits bred to the wonderful Duke Pontiac Chief, to farrow in April or May. No better breeding. **C. S. Bartlett,** Pontiac, Mich.

BERKSHIRE Yearling sow bred for July farrow, also two fall Glits and choice lot of March farrow. ed. (Pigs eth. sex.) **A. A. Pattullo,** Deckerville, Mich.

FOR SALE.—High quality fall Berkshire Glits, to farrow in June. Bred to the excellent young boar, Premier Bacon 4th. **Rougemont Farms,** Detroit, Michigan.

DAMS BROS., Litchfield, Mich., breeders of Imp. Chester White and Tamworth swine, service boars, sows bred or open, of either breed. **Shorthorn Cattle,** Buff Rock, Buff Wyandotte, W. Orpington, Chiks. all breeding stock leading winners

DUROC-JERSEYS.—Nothing but fall glits for sale. **CAREY U. EDMONDS,** Hastings, Michigan.

Duroc Jerseys For Sale—A few sows bred for summer farrowing and Spring pigs both sex. **M. A. BRAY,** Okemos, Michigan.

DUROCS.—25 Bred Sows, of high quality. 10 75 Fall Pigs both sex. Write or come and see. **J. C. BARNEY,** COLDWATER, MICHIGAN.

IMPROVED CHESTERS.—Young boars ready for service, orders taken for sows bred for spring farrow. Also Holstein Bull Calves of the best of breeding. **W. O. WILSON,** Okemos, Mich. Both Phones.

O. I. C. Hogs all ages. Sows bred, and more. **H. H. JUMP,** Manist, Michigan.

O. I. C's For Sale.—Best quality, large growthy type, either sex, pairs not akin, some fine bred glits, choice lot of fall pigs all ages. **OTTO B. SCHULZE,** Nashville, Michigan.

O. I. C. Swine.—Bred glits, males weighing from 150 to 250 lbs. Price and type right. **Geo. P. Andrews,** Dansville, Ingham Co., Mich.

O. I. C.—March pigs with quality and best pedigrees. Order now and get first choice. **C. J. THOMPSON,** Rockford, Michigan.

O. I. C'S. Bred sows all sold. 93 choice Mar. & April farrowed pigs either sex pairs not akin Reg. in buyers name. **Fred Nickel,** R. No. 1, Monroe, Mich.

O. I. C. Choice Spring Pigs, either sex. Pairs not get first choice. All pigs shipped on approval and Reg. free. **HARRY T. CRANDELL,** CASS CITY, MICH.

O. I. C. SWINE.—My herd is chiefly descent of the Royal strain both males and females. Get my price before you buy. Will register free of charge in purchaser's name. **A. J. GORDEN,** R. No. 2, Dor, Michigan.

GREAT POLAND-CHINA HOG SALE.
JANUARY 20th.

60 sows bred for spring farrow. If you want the best, attend my sale as I have the best in the state.

WM. WAFFLE, Coldwater, Michigan.

Butler's Famous Wonders.—The biggest, China. Best by every test, 20 fall boars ready for service, weighing up to 250 lbs. at \$20 & \$25 each, they have got to go. Also Jersey bull calves richly bred. **J. C. BUTLER,** Portland, Mich. Bell Phone.

Bargains.—P. C. Boars ready for service, fall boar pigs. Prize winning African & Embden Geese. **Z. KINNE,** Three Oaks, Mich.

Poland-Chinas.—Fall & Spring pigs of quality at low prices. **B. M. WING & SON,** Sheridan, Michigan.

POLAND-CHINAS.—Fall pigs, either sex. Young sows, spring farrow. Write **L. W. BARNES & SON,** Byron, Shiawassee Co., Mich.

POLAND-CHINAS.—Booking orders for spring pigs. **WOOD & SONS,** Saline, Michigan.

POLAND-CHINAS.—Spring pigs of both sexes. A few choice fall boars. **R. J. LANE,** No. 1, Clare, Mich.

BIG TYPE POLAND CHINA BOARS, also fall and early spring pigs. B. P. Rock eggs \$1.00 per 15. **ROBERT NEVE,** Pierson, Michigan.

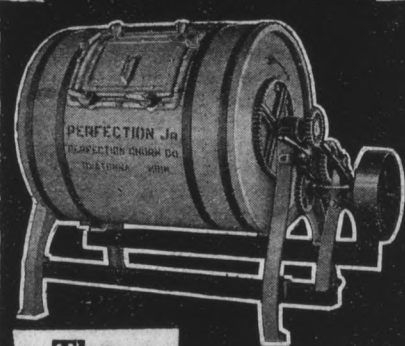
LARGE TYPE P. C. Largest in Mich. Sept. & Oct. pigs weigh 250 to 300 lbs. Sired by two largest boars and from largest sows in State. Come and see and be convinced. **W. E. LIVINGSTON,** Parma, Mich.

FOR SALE PURE YORKSHIRE PIGS. Both sexes. Price reasonable.

MURRAY-WATERMAN CO., ANN ARBOR, MICH.

Lillie Farmstead Yorkshires.—Holywell Oak Lodge blood predominates. Large Herd. Three service boars. Pairs and trios, not akin. Boars ready for service. A fine lot of spring pigs. Glits bred for August farrow. The best hog on earth. Satisfaction guaranteed. **COLON C. LILLIE,** Coopersville, Mich.

\$\$\$
FOR YOU
IN THIS
CHURN



The Perfection Jr. Churn and Butter Worker

You can make highest quality butter as quickly and economically as the large creameries do. You can get more butter, sell it at fancy prices and put the extra profits in your own pocket.

The Perfection Jr. takes the last grain of butter fat out of every drop of milk. Both churns and works in one operation. Gives as good results with little cream or filled to capacity. Perfect for salting and control of moisture. Butter stays all in one piece. Easily removed. The perfect churn for dairy farmers and a money maker for everyone who uses it.

Quickly cleaned—absolutely sanitary—economical to use. Made of best materials in four sizes: 30 gallon, \$60; 40 gallon, \$67.50; 50 gallon, \$75; 150 gallon, \$90.

FREE Ask for our free butter makers book containing interesting information and lowest prices on all dairy supplies.

J. G. CHERRY CO.
30 Tenth Ave., Cedar Rapids, Iowa
Peoria, Ill. St. Paul, Minn.

AMERICAN Steel Fence Post

Cheaper Than Wood and More Durable

Many years of experimenting with metal fence posts have developed this post. It is now thoroughly practical, filling every requirement on the farm, in the town, for railroads and wherever fence posts are used.

Made of tough steel, heavily zinc coated. Durability proven by us—ten years' actual use showing good as new. Means a big reduction in fence cost and maintenance.

40-page catalog sent free, fully illustrating and describing. Send for it.

Sold by dealers everywhere. Ask dealer to show samples and quote prices, or write us direct, American Steel & Wire Co.

Chicago: 115 Adams Street
Denver: First Nat. Bank Bldg.
New York: 30 Church Street
San Francisco: 16th and Folsom Sts.

BROWN FENCE

Rust Proof - Bull Strong
Fences for horses, cattle, sheep, hogs, chickens, etc. 160 styles.
BARGAIN PRICES:
14 Cents Per Rod Up.
We pay the freight. Lawn Fences and Gates. Free catalog and sample.
The Brown Fence & Wire Co.,
DEPT. 49 CLEVELAND, OHIO

FARM GATES
Send for prices with manufacturer's discounts on farm gates and fence. Hundreds of patterns—many cheaper than wood—all better.
STYLE BOOKLET FREE.
THE WARD FENCE CO., Box 875, Decatur, Ind.

LAWN FENCE
Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries.
Coiled Spring Fence Co.,
Box 1 Winchester, Ind.

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

KEEPING UP THE MILK FLOW.

The cow that yields a heavy average daily flow of milk throughout a long lactation period is the one that returns the most profit. A cow that gives milk for only six months is usually very low in total production and in nearly every case where careful records are kept she does not return a profit. Likewise the cow whose milk flow is light is a losing proposition. It takes a fairly good producer to pay for her feed and care. It is only after she has yielded enough milk to pay for feed and care the profit to the owner comes in.

Care and management are big factors in producing a high average daily flow and in securing a long lactation period. Of course, there are cows that may be rated as 200-lb. producers and others that may be rated as 600-lb. producers. Yet it is an apparent fact that each can be made to do far better if well cared for than otherwise.

In order to test the value of good care the New York station at Cornell conducted a test by gathering in a herd from nearby farms. The production of these cows under the college feed and care was compared with what it had been and what it was later on the farms from which they came. It was determined that the yield was 42 per cent greater while the cows were at the college. At the present time the Iowa station has at the dairy farm a bunch of poor grade southern cows. Most of those cows are yielding a profit. In their native state and under the treatment they were receiving there, they had not yielded as much milk as a good Swiss goat. On most farms there are slight changes that can be made whereby the profit may be increased either by increasing the daily yield or encouraging persistence.

Production depends primarily on feed. Feeding the cow is much like firing a steam engine. With the engine the more coal, up to a certain limit, and the better the quality of that coal, the greater will be the amount of steam generated. Just so with the cow, the best records are made only when a generous amount of feed of the best quality has been fed.

Grass is nature's best feed. There is nothing that a cow likes better. It cools out and rests her system. Except in rare cases it does not pay to feed grain to dairy cows while they are on a good grass pasture. On most farms grass is not of the best all summer. It dries up about the middle of the season. At that time he who has planned ahead to keep up the steady milk flow will have some good soiling crop ready. By the use of good green feed at this time the milk sheets will show but very little lower yield at this time.

Silage kept over for this season has some very distinct advantages. It can be fed far more conveniently in the barn and it happens that it is often advisable to keep the cows in the barn at this season to protect them from the flies and shelter them from the hot sun. The silage is as appetizing as anything can be, aside from fresh grass.

Milking has much to do with securing a heavy and persistent flow of milk. The dairy cow is an extremely sensitive piece of animal machinery. Any changes or irregularities are quickly registered on the milk flow regulator and the yield is cut down. In order not to jar the cow's sensibilities she must be milked in the same place, at regular times and by the same milker.

Quietness for the same reason is important. It is as essential in the pasture as in the yard or barn. A dog can, in a few minutes, reduce the output of milk enough so that if turned into cash the money would buy sufficient gunpowder to put a whole pack of his kind out of mischief. There is no place for a dog on a dairy farm. All loud talking or unnecessary noises about the farm must be avoided if best results are to be secured.

Regularity in all things as well as in milking, is necessary. We can not emphasize too much that the cow is an extremely complex and delicate machine. Her sensitive nature learns to expect feed at certain hours. If it does not come at that time, her system is disturbed. In the same way everything that is done to her or about her affects her nervous organization.

After what has been said above, one

scarcely need mention kindness. Yet the dairy cow responds to kindness as does no other animal. The quiet, kind, thoughtful dairyman receives dollars in return for his consideration just as surely as a politician gets votes for his smiles and glad handshakes. On the other hand, a rough, abusive cow man kills his profits just as surely as a grouchy person loses friends.

Dairy cows, or all milch cows, for that matter, require large quantities of water. They will sometimes drink several times as much water per day by weight as their milk flow amounts to. Pure, moderately cool water is most acceptable to them and they will drink much of it.

The milch cow craves salt. It has a beneficial effect upon her system. It, of course, can best be supplied in an open box in the lot where each cow may secure just the amount she wishes and no more.

One way of securing a heavier total yield and a longer lactation period is to have the cows calve in the fall. Under proper treatment being fed plentifully of silage and other suitable feeds the cow will yield heavily all winter. At spring time she will have begun to slacken slightly on her milk flow as a result of six months of hard service. Then, when turned out upon a good pasture, the grass will have the beneficial effect of stimulating the milk flow and producing effects similar to a second freshening. In tests conducted to determine the relative merits of spring and fall calving it has been found that cows freshening in the fall will produce on the average about 20 per cent more milk during the year than those freshening in the spring.

The biggest factor in producing a heavy yield and long lactation period has purposely been left to the last. That factor is the selection of the cow. The best care in the world could not make some of the low yielders return a profit. It could not make the cow that is naturally of the 200-lb. class produce 400 lbs. By determining with the spring balance and the Babcock test which are the right kind of producers and eliminating those which are not, a man can build up a herd which will be profitable to keep.

Iowa. H. E. MCCARTNEY.

IMPROVING THE DAIRY HERD.

There are several hundreds of thousands of farmers in this country who turn their crops into butter or cheese by means of the dairy herd. To them the question of profitable dairy cows is a very important one. It is an established fact that some cows will turn twenty dollars worth of feed into double the amount of butter that other cows will. If one stops to consider this fact he will readily see what an increase in his income will result if he displaces the low producing cows with top-notchers. While a herd of thoroughbred Holsteins, Ayrshires or Jerseys is a very good thing for its owner such a thing is beyond the possession of many dairy farms. Even if they could afford the thoroughbreds the supply is not large enough to furnish one cow for each herd.

Since it is impossible for every dairy farmer to secure a first-class herd by purchase he must turn in another direction if he desires to increase the profit-making value of his herd and every true dairyman certainly has that desire. There is only one other way in which that can be accomplished and that is by breeding. A thoroughbred bull will transmit one-half of his qualities on the first cross; in three years three-fourth blood calves can be obtained from this cross and so on until the seventh year when fifteen-sixteenth blood calves will be born. For practical dairy purposes these will be as good as thoroughbreds, provided care has been exercised in breeding only to thoroughbred bulls whose get have good milk and butter records. Just as soon as the heifers become milkers a test should be made and those that do not come up to the standard in amount and quality of milk should be discarded. The mere fact that a cow has good blood in her should not guarantee her a place in the herd. She must show results in the milk pail. By carefully caring for the heifer calves they may be brought up into gentle cows, used to the place and that will make them worth more than ones that have been purchased from some other farm.

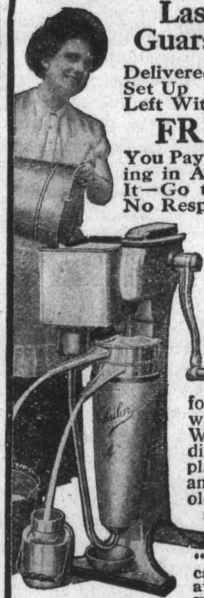
There are too many dairymen who have the idea that it is the number of cows milked and the amount of work done that governs the profits. That is entirely wrong; it is the results in the milk pail

You CAN Afford a SHARPLES TUBULAR CREAM SEPARATOR

Lasts a Lifetime
Guaranteed Forever

Delivered, Free, At Your Home,
Set Up And Started For You,
Left With You For Thorough
FREE TRIAL

You Pay No Freight—Pay Nothing
in Advance—Do Not Haul
It—Go to No Trouble—Take
No Responsibility.



We make you this unusual offer so you can see, for yourself, without any trouble or expense, that Dairy Tubulars produce twice the skimming force, skim faster and twice as clean as others. Contain no disks or other contraptions. Repeatedly pay for themselves by saving what others lose. The World's Best. Later than, different from, rapidly replacing all others. Guaranteed forever by America's oldest and world's biggest separator concern.

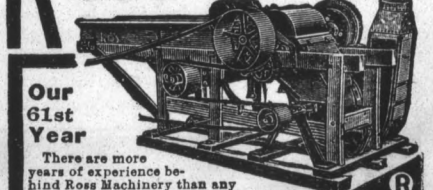
How can you afford to risk anything on any "mail order" or other (so called) cheap machine, the average life of which is one year? All other separators taken in part payment for a new Tubular.



30 Yrs
Write for catalogue No. 152

THE SHARPLES SEPARATOR CO.,
WEST CHESTER, PA.
Chicago, Ill., San Francisco, Cal., Portland, Ore.
Toronto, Can. Winnipeg, Can.

ROSS SILO FILLING MACHINERY



Our 61st Year
There are more years of experience behind Ross Machinery than any other of a similar kind made—years of honest effort that has made it the best of its kind in the world. Fill Your Silo First—Pay Afterwards. Ross Silo Filling Machinery is so good that it will prove itself a good investment, without the aid of professional salesmen, and we want you to satisfy yourself before paying one cent. Write for free catalog.

E. W. ROSS CO., Box 14 Springfield, Ohio

\$15.95 AND UPWARD

AMERICAN SEPARATOR

SENT ON TRIAL, FULLY GUARANTEED. A new, well made, easy running separator for \$15.95. Skims hot or cold milk; heavy or light cream. Different from this picture which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Whether dairy is large or small, obtain our handsome free catalog. Address **AMERICAN SEPARATOR CO., Box 1061, BAINBRIDGE, N.Y.**

EMPIRE FENCE

Get the genuine EMPIRE big wire fence, direct, at wholesale. Save dealer's profits.

Big Factory, Big Sales, 23 Styles
No traveling salesmen, small expense, prices low. Everything guaranteed. Free samples by mail. Prices of leading styles freight prepaid to all points north of the Ohio and east of the Mississippi River:—

Wire	Inches high	Medium Weight	Extra heavy (all No. 9)
9	39	23c per rod	37c per rod
10	47	26c per rod	41c per rod
12	55	32c per rod	49c per rod

Special rates beyond this territory.
BOND STEEL POST CO., 16 E. Maunee St., Adrian, Mich.

DWIGGINS
Wire Fences
CHEAPER THAN WOOD

Superior Galvanizing, Farm Fences, Gates and Arches of all kinds. Superior workmanship. Catalogs sent free.
Dwiggins Wire Fence Co., 212 Dwiggins Ave., Anderson, Ind.

48 IN. FENCE A Rod 25c
Best high carbon coiled steel wire. Easy to stretch over hills and hollows. **FREE** Catalog—fences, tools. Buy from factory at wholesale prices. Write today to Box 78
MASON FENCE CO., LEESBURG, O.

CALVES RAISE THEM WITHOUT MILK, BOOKLET FREE
J. E. BARTLETT, Co., Jackson, Mich.
Please mention the Michigan Farmer when writing to advertisers.

that count. If all of the dairy farmers in this country would endeavor to increase the production of their herds by breeding to thoroughbred bulls they would add greatly to their income.

Ohio.

S. CONNELL.

KINDS OF MILK DEFINED.

Certified Milk is milk produced from healthy cows kept under specially adapted sanitary conditions, including properly constructed stables, the best varieties of feed, ideal care of the animals, and clean, healthy attendants, and a milk which is certified to by a commission.

Clarified Milk is so named from the fact that it has been run through a centrifugal separator to remove from it some of the impurities, after which the skim-milk and the cream are again mixed together.

Condensed or Evaporated Milk is milk which has had a considerable portion of the water evaporated from it and sometimes a high percentage of sugar added to make the product sweeter.

Electrified Milk refers to milk which has been subjected to a current of electricity for the purpose of destroying the bacteria.

Malted Milk is first pasteurized to destroy the bacteria, then a portion of the water is removed by condensation, after which a small quantity of malt is added.

Modified Milk, sometimes called Humanized Milk, is where the product contains definite proportions of fat, casein, sugar and other elements, the purpose of which is to make a food that physicians can use for patients who require careful feeding.

Guaranteed Milk, or Sanitary Milk. These terms are applied to milk produced under such conditions as will give a clean wholesome product for consumption.

Pasteurized Milk is where the product has been heated sufficiently to kill most of the bacteria, but not to the boiling point, and immediately cooled to about 50 degrees or below. The usual tempera-

tures to which the milk is subjected in this process range between 140 degrees and 185 degrees.

Peptonized Milk is milk to which pepsin has been added that the resulting product may be more easily digested.

Powdered Milk is the result of evaporating milk until it is reduced to a powder. The process is also applied to partly skimmed milk, and to ordinary skim-milk.

Sterilized Milk is such as has been submitted to heat at a boiling temperature, or higher, for such a period of time as to completely destroy all the bacteria present in the product.

There are other preparations of milk but these cover the terms most commonly referred to, and while the definitions are brief they will furnish sufficient fact to set the reader right as to the differences existing between them.

PASTURE FOR COWS.

Nothing can be sown this spring for cow pasture next summer that will be as satisfactory as an established grass pasture. There can be no question about that, and yet a fair substitute can be secured by a mixture of grains and grass. Prepare the land well. Sow a mixture of oats, peas, and barley with clover and timothy seed and keep the cattle off until the oats, peas and barley are five or six inches high, or until the roots are established. Clip with the mowing machine what the cows do not keep down properly. In this manner a fairly satisfactory pasture can be secured during a favorable season. If, however, the grains are allowed to grow and head out in places, that is the end of their growth. If they are clipped off with a mowing machine they will continue to grow for a considerable length of time and furnish quite a valuable pasture. If handled in this way the growth of the grains may be depended upon until well along in the summer and by that time the clover and

grass should come forward and be of considerable value.

Grain and grass sown for this purpose should be sown very thickly and the ground should be well rolled and pressed down after they are sown to make it as firm as possible to withstand the trampling of the cattle. The richer the land and the better it is fertilized, the more pasture will be secured.

A TEST FOR CREAM PATRONS.

I have seen the statement in the Michigan Farmer that cream patrons of a creamery are entitled to a fraction of a percentage over and above their test, but I forgot how much. Please answer through Michigan Farmer. Is it fair to take samples of cream delivered and test only once in every two weeks? Or should cream be tested every time it is taken in? Ottawa Co. J. L.

With the most approved separator it is absolutely impossible to get every particle of butter-fat out of milk. To get it within .02 per cent is considered good work. Sometimes we get it down as low as .01 per cent, and .03 per cent is not out of the way. This being the case, when a man brings whole milk to a creamery and it is sampled and tested, the test shows all of the butter-fat in the milk, all of which the creamery can't get out; consequently the whole milk patron gets pay for a little bit more butter-fat than the creamery gets. But on the other hand, when the cream patron brings his cream to the factory, he has skimmed his milk at home and has left .03 per cent on the farm. When the cream is tested, the test shows all of the butter-fat in the cream. You receive all that your test shows, consequently to be accurate the milk patron should receive from .01 to .03 per cent less test than the cream patron to have the proposition absolutely correct to give each man an absolutely square deal. If the tests are made correctly there perhaps would be no large discrepancies by testing once every two weeks, providing the separators were not changed in the meantime so as to give a

greater or less percentage of butter-fat; but testing every time the cream is taken is the only real accurate way of keeping a true account between the creamery and the patron.

MORE CAREFUL STUDY OF COST AND RETURNS NEEDED.

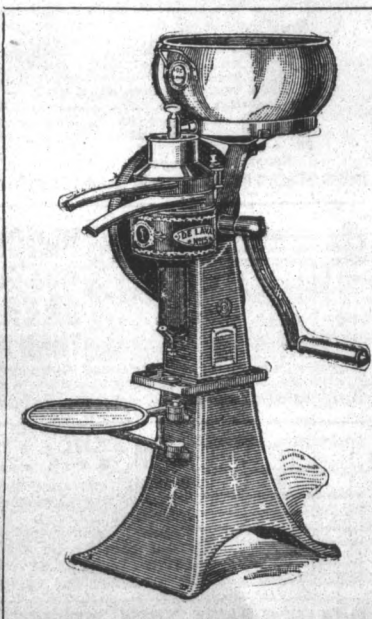
The wide interest which has attended the campaign, conducted for the purpose of directing attention to the importance of knowing the cost of maintenance and the profit of each dairy animal, has led producers another step in determining what a good dairy cow is. Confidence was formerly had in the breeding, conformation and health of the animal. While these factors have not been outdistanced they have been crowded to the "pole" a little to make room for that other consideration which puts in plain language a definite return from the animal or animals in question. That a certain cow produces 400 pounds of butter-fat, is a point of more vital interest to the man looking for a "worker" than the fact that the animal classed well at a fair, although the latter point is of no mean consideration. Great manufacturers figure so closely that they know just the service a certain belt on the machinery performs, what trouble it has caused them, the cost per day and just how long it has been used. These facts an ordinary man would think all nonsense, yet when connected with a thousand other similar facts they make the manufacturer successful. So must the dairyman who is seeking to reach a higher standard with his herd figure closely, get down to actual pounds and fractions thereof, dollars and cents and let them persuade his mind rather than be led this or that way by fancy, or prejudice. Hundreds have testified to the undreamed of results shown by careful use of the scales and the Babcock tester. Condemned cows have been emulated and favorites have gone to the shambles with the result that more copers are coming to the till of the owner. We only wonder why the campaign has not taken hold with a firmer grip, why it has not spread to every dairy farm and started on a new foundation the up-building of thousands of dairy herds, every animal of which must be a profit maker.

Before you buy a Cream Separator See and try a DE LAVAL

IS THERE ANY DOUBT IN YOUR MIND as to which cream separator will give you the most satisfactory service and be the most economical for you to buy?

Here is a proposition that should interest you

Ask our nearest agent to bring a DE LAVAL out to your house and set it up for you. (If you don't know the DE LAVAL agent drop us a line and we will give you his name and address.) Try out any other separator you wish alongside of it. Give them both a fair, honest trial. Then buy the machine that



**Skims the cleanest,
Is easiest to wash,
Turns the easiest,
Is best constructed**

If there is any doubt in your mind when you make this test as to the comparative skimming of the two machines, take a sample of skim-milk from each separator and send it to your State Experiment Station. They will tell you which sample contains the most butter-fat.

We sell thousands and thousands of cream separators every year upon just such tests.

We don't hesitate to ask you to make such a test because we know the DE LAVAL will skim cleaner and give you better service than any other machine on the market. That's why we are perfectly willing to let you try it out alongside of any "would-be" competitive machine ever built. Our willingness to have you make such a test should mean more to you than volumes of printed claims.

Give your cows a square deal. Be fair to yourself. If there is any one farm machine that should be of the very best possible construction it is the cream separator. It is used oftener than any piece of farm machinery—730 times a year—and the very best machine that you can buy will be far the cheapest in the end. You have always heard the DE LAVAL spoken of as a high-grade machine. All DE LAVAL users are DE LAVAL "boosters" because it always "makes good."

We have agents in almost every locality who will be glad to set the machine up for you and give you a free trial, and we have an arrangement with our agents whereby a purchaser, if he desires, may make a partial payment at time of purchase, and pay the balance on easy terms covering a period of twelve months.

If you are interested in the purchase of a cream separator, be sure to write for our new catalog which illustrates and describes in detail the features which have made the DE LAVAL the universal favorite among dairymen all over the world.

In writing please address your inquiry to nearest De Laval office.

THE DE LAVAL SEPARATOR CO.

165-167 BROADWAY NEW YORK 29 E. MADISON STREET CHICAGO DRUM & SACRAMENTO STS. SAN FRANCISCO
173-177 WILLIAM STREET MONTREAL 14 & 16 PRINCESS STREET WINNIPEG 1016 WESTERN AVENUE SEATTLE

POULTRY AND BEES

PREPARATIONS FOR HOT WEATHER.

We must begin now to make preparations for hot weather if the fowls' comfort and profitableness is any consideration. It is not too early to take out the windows. Take them out entirely and replace with wire netting. Use inch-mesh wire to prevent the sparrows from getting in, as a considerable amount of feed is lost in this way.

The walls and inside of house should be thoroughly whitewashed. Add crude carbolic acid to the whitewash before applying and put the mixture on hot. Be sure to get it into every crack and crevice. Remove the nest boxes and dump the nesting material outside where it can be burned. Burn out the inside of nest boxes and whitewash thoroughly, both inside and outside. Take out the roosts and dropping boards and give them the same treatment. An excellent method of completely ridding the house of all kinds of vermin is to fumigate by burning sulphur. Place an old iron kettle in center of coop and fill partly with shavings. On top of this place a quantity of sulphur. Be sure to exclude all fowls from the building and have all windows and other openings tightly closed. Should there be any cracks or knot holes, stuff them shut, also. Now light the shavings and leave the building quickly, closing the door tightly. It is a good plan to keep watch of the fire through a window so if anything should accidentally catch fire it can be quickly extinguished. Let the house remain closed for a few hours; then open everything for a few hours before the fowls are admitted. After treating in this manner there will be no sign of a living insect. The fowls should be thoroughly dusted with insect powder before being returned to the house.

If the floor of the coop consists of earth remove a few inches of the surface and replace with fresh dirt, filling it up so it will be several inches higher than the ground outside. If you have a cement floor remove the litter covering it and replace with a few inches of fresh litter or dry earth.

Have the runs plowed or spaded up and sown to crops that will furnish green feed. If the runs are small and usually bare it is a good plan to spread air-slaked lime over the surface and plow or spade under. This will sweeten the ground and prevent contamination. Rape is an excellent green feed to grow in the runs. It will stand considerable drought without damage. The fowls also relish it. Oats can also be sown in the runs and it will grow more quickly, but the fowls will have to be excluded until it has secured a good growth. If this form of green feed is to be grown it is advisable to have double runs, where possible. One run can be made on the south side of house and the other on the north. Let the fowls have the run of one yard while the other is growing green stuff. If the yards must all be on one side of the house it is a good plan to have two runs for each pen, each run half as wide as the pen in the house, with a gate provided for each so the fowls can be admitted or excluded from either, as desired.

Indiana. O. E. HACHMAN.

WHAT THE CANDLE WILL SHOW.

The time of year is at hand when it is a little difficult to always know the condition of the eggs that are gathered, even upon well managed farms. Candling at home puts the producer in position to demand and to secure what his eggs are worth, and in this connection the following description of the contents of eggs, ranging from fresh to absolutely rotten, as they appear under the candle is of interest. It is from a newspaper bulletin put out by the Indiana station:

Fresh.—Opaque, appearing almost entirely free of any contents, sometimes dim outline of yolk visible, air cell very small.

Stale.—Outline of yolk plainly visible, sometimes muddy in appearance, air cell very large.

Developed Germ.—Dark spot visible, from which radiate light colored blood vessels.

Dead Germ.—Dark spot attached to shell, or red ring of blood, visible.

Rotten.—Muddy or very dark in appearance, yolk and white mixed, air cell large and sometimes movable.

Cracked.—White lines showing irregularly in shell.

FULL-SHEET FOUNDATION VS. STARTERS.

It is seldom now that I use anything less than full sheets of foundation in the frames, either extracting frames or the ones used in the brood chambers. Of course, there is a reason for this, and it is that I believe it pays. A good many will shake their heads after having figured at it and finding that it costs about fifty cents per hive for full sheets of foundation.

I simply allowed the bees to decide the matter by trying both full sheets and starters only. When I got enough more honey to more than pay for the extra cost of full sheets over starters I naturally decided in favor of the former. And then, I get better—much better—combs in the bargain—all nice and straight and free from drone cells. It takes extra time—and time is money you know—to get straight combs from the use of starters only. Then, too, it makes some more work to remove the superfluous drone comb. Anyway, I find it pays to use full sheets in frames, so I preach as I practice. The next thing is to consider practical methods of using them.

In the first place, don't try to use full sheets without staying them with wires. Order the end bars of frames pierced; it only costs ten cents per hundred extra and the wire is included. If you already have some unpierced frames on hand you can pierce four holes into each end bar equal distances apart. I have done this with a straight and sharp three-cornered awl.

The next thing is to pull wire into the frames. If for any reason you did not get wire with the frames, purchase No. 30 tinned wire on spools. There are ways of threading the wire through the frames direct from the spools, but I don't like them as there is trouble from the wire coiling. I wind the wire around a board half as long as the length of wire needed for one frame. Determine this first by measuring. When ready to wind, fasten the spool somewhere with a spike or nail, then go off fifty feet or so with one end of the wire and commence to wind it around the board. When done tie five or six strings around the wire on the board. This is to keep it from jumping off and tangling when the wire is cut at one end of the board.

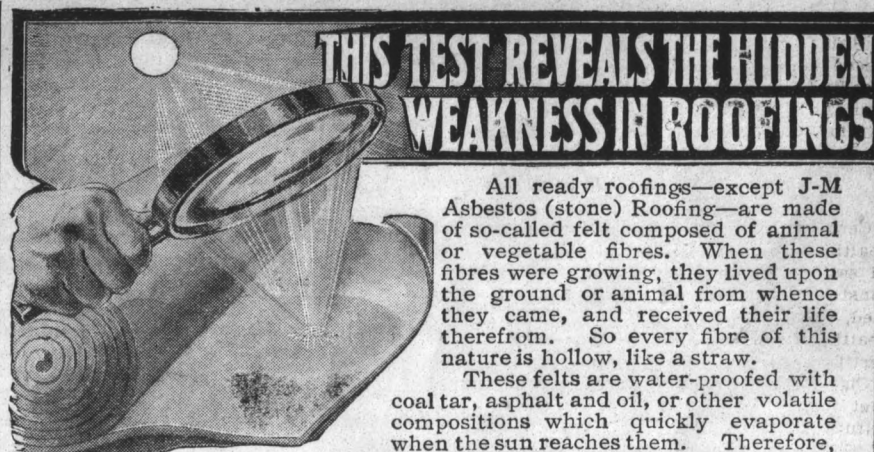
When nailing up the frames press a small nail or tack (I use a quarter-inch cut tack), part way in near the top hole and another near the bottom hole of one end bar. Have the frames and board of wire convenient. Pull out one wire and thread one end through the second hole from the top, commencing on the end where the tacks are. Pull the wire through the frame to the opposite hole in the other end bar. Thread it through the top hole and back to the top hole of the first bar and wind the end loosely around the tack. Next thread the other end of the wire in the same way. Both ends should now be pulled tight and wound several times around the tacks. As the wire can not well be pulled with the bare fingers I use a pair of round-nosed pliers. With these I also press down the tacks after the wire has been wound around them. The ends of wire left are snipped off.

This finishes a frame. Don't pull the wires very tight—just so the slack is taken out and they "sing" a little.

Now comes the putting in of the foundation. You will need a board of a size that a frame will fit over and seven-eighths inch thick. Also a wire imbedder, which can be purchased of a supply dealer for twenty cents or so. Take up a sheet and push it into the groove of the top bar. Then lay it with the frame (wires up) upon the board. Before using the wire imbedder it should be heated. This I do by putting it into a small can of water kept hot on a kerosene lamp. Take the imbedder and run it along each wire once. Press hard enough to imbed the wires nicely into the foundation, but don't bear on so hard as to cut the foundation.

While taking up this frame and fixing the next, keep the imbedder in the hot water. After the wires have been imbedded insert the wedge into the groove of the top bar and the frame is finished. Have the foundation warm and pliable when putting it in. Keep the frames in a warm place, too, afterwards. If foundation is subjected to cold it will warp and twist out of shape and result in bad combs. I rather prefer to prepare frames shortly before giving them to the bees, say a week or so. This gives nicer combs.

F. A. STROHSCHNEIN.



All ready roofings—except J-M Asbestos (stone) Roofing—are made of so-called felt composed of animal or vegetable fibres. When these fibres were growing, they lived upon the ground or animal from whence they came, and received their life therefrom. So every fibre of this nature is hollow, like a straw.

These felts are water-proofed with coal tar, asphalt and oil, or other volatile compositions which quickly evaporate when the sun reaches them. Therefore, the sun quickly begins its deadly work of taking these oils off the surface of such roofings; and then continues to draw them out of the inside through the strawlike fibres of which the felt is composed, until the roofing becomes dry and porous and is no longer water-proof.

J-M Asbestos Roofing is unlike other roofings, because its felts are made of stone fibres which are solid. These solid stone fibres defy the action of the sun's rays and positively prevent capillary attraction, thus hermetically sealing all of the oils so they must remain to do their duty indefinitely.

J-M ASBESTOS ROOFING

is not merely one sheet of water-proofed stone felt, but several layers cemented together with nature's wonderful water-proofer—Trinidad Lake Asphalt. This asphalt is also hermetically sealed, making any escape of oils or asphalt impossible.

Prove for yourself that sun will soon destroy the water-proof quality of ordinary roofings. Focus the rays of the sun through an ordinary sun or magnifying glass and note results. This, in ten minutes, will show you what sun will do in a few months.

This simple sun-glass test is as severe in its way as our famous blowtorch fire test. It will show up the short-comings of a roofing before you pay out your money.

Because of its stone nature, J-M Asbestos Roofing also never needs painting, and is fire-proof, acid-proof, rust-proof and rot-proof.

Most hardware and lumber dealers sell J-M Asbestos Roofing. Sold direct, and applied if desired, where we have no dealer. Write our nearest Branch to-day for sample of the curious Asbestos rock from which this roofing is made, and our handsomely illustrated Book No. N 40.

H. W. JOHNS-MANVILLE CO.

ASBESTOS
BALTIMORE DALLAS MINNEAPOLIS PITTSBURG
BOSTON DETROIT NEW ORLEANS SAN FRANCISCO
CHICAGO KANSAS CITY NEW YORK SEATTLE
CLEVELAND LONDON MILWAUKEE PHILADELPHIA ST. LOUIS
For Canada:—THE CANADIAN H. W. JOHNS-MANVILLE CO. LTD.,
Toronto, Ont., Montreal, Que., Winnipeg, Man., Vancouver, B. C.



Sections, Foundation, Bee Veils, Smokers. A complete line of supplies for bee keepers, ready for immediate shipment. Protection Hives, 40-page catalog, free. **Bees Wax Wanted.**
A. G. WOODMAN CO. Grand Rapids, Mich.

Bee Supplies and Berry Baskets.
Hives, Sections, Comb Foundation, Smokers, etc. Berry Baskets & Crates
We can save you freight expense, and make prompt shipments
Send for catalog. Will quote low prices on large quantities.
M. H. HUNT & SON, 110 Condit St., Lansing, Mich.

\$7.55 Buys Best 140-Egg Incubator
Double cases all over; best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder, \$4.85. Both ordered together, \$11.50. Freight prepaid (E. of Rockies). No machines at any price are better. Satisfaction guaranteed. Write for book today or send price now and save time.
Belle City Incubator Company, Box 14 Racine, Wisconsin

R. C. Br. Leg.—Mammoth PEKIN winners 1911. CLAUDIA BETTS, Hillsdale, Mich.

Indian Runner Ducks. Black Langshans—Book the very best. J. Gordon Drake, Port Huron, Mich.

BABY REDS—Standard Bred at \$15 per 100; \$8 per 50; \$5 per 25. Show quality, rose or single comb, eggs 10c each. Other pens R. C. at \$1.75 per 25. Show quality Red turkeys, eggs 50c each. My Reds are guaranteed layers. Fresh arrival guaranteed. Order now of W. T. FRENCH, Ludington, Michigan.

EGGS FOR HATCHING—Prize winning White and Columbian, White Holland Turkeys, and White Guineas. Z. KINNE, Three Oaks, Mich.

EGGS from the famous Blue Belle Strain of Barred Rocks, prize winners at Chicago & Boston. \$1.50 a setting. \$3 from special pen of 8 hens, \$2 from special pen of 10 pullets. Lake Ridge Farm, Levering, Mich.

S. C. BLACK MINORCA EGGS—Lay large white eggs and lots of them. \$1 for 13; \$3 for 50; \$5 for 100. E. A. BLACK, R. No. 6, Lakeview, Michigan.

White Leghorns—Rose or single comb cockerels. Rose Comb eggs \$1 to \$2 per 15. Ray J. Graham, R. F. D. No. 1, Flint, Mich.

LILLIE FARMSTEAD POULTRY
B. P. Rocks, R. I. Reds, Wyandottes and S. C. W. Leghorn eggs for sale. 15 for \$1; 25 for \$1.50; 50 for \$2.50.
COLON C. LILLIE, Coopersville, Mich.

EGGS: EGGS: EGGS—White & Buff Orpington, White & Barred Rocks, Black & White Minorcas, White & Buff Leghorns, Rose & Single Comb Reds, Houdans & White Crested Black Polish. H. H. King, Willis, Mich.

THOROUGHbred S. C. BROWN LEGHORN Eggs at \$1.00 per 15 or \$5.00 per 100. Stock all sold. LEWIS T. OPPENLANDER, R. No. 4, Lansing, Mich.

EGGMAKERS Strain S. C. Brown Leghorns. Eggs 85c per 15; \$1.45 per 30; \$3.95 per 100. WM. J. COOPER, Mt. Pleasant, Michigan.

Eggs—Light Brahma, White Wyandotte and Barred Rocks. \$1 a setting, \$1.50 for two settings. E. D. BISHOP, Route 38, Lake Odessa, Michigan.

R. C. Brown Leghorns—Kulps 242 egg strain, prize winners, farm range, select eggs \$1.00 15; \$3.00 50. S. W. HENSEL, Basil, Ohio.

R. C. B. Leghorn Cockerels—Kulp strain, the best there is, \$1 to \$3. Eggs in season. C. W. WAITE, Gobleville, Michigan.

SILVER, GOLDEN and WHITE WYANDOTTES. Eggs \$1.50 per 15; \$2.50 per 30. A few White Roosters left, circular free. C. W. Browning, Portland, Mich.

S. C. B. MINORCAS—Cockerels, Pullets and yearlings hens for sale. Eggs \$2 or \$3 per setting of 15. R. W. MILLS, Saline, Michigan.

SINGLE Comb Brown Leghorns—One of Michigan's largest breeders of the Brown Beauty's winning at the leading shows. Send for catalog with prices and photos of my birds. Box 324 D. Charles Ruff, St. Clair, Mich.

FOR SALE—S. C. and R. C. Rhode Island Red Eggs. 15 for \$1.00; 50 for \$2.75; 100 for \$5. BUELL BROS., Ann Arbor, Mich.

WHITE WYANDOTTES—Useful and beautiful. The kind that weighs, lays and pays. A. FRANKLIN SMITH, Ann Arbor, Mich.

White Wyandotte and S. C. White Leghorns. Wyckoff, Moore strains. \$1.50 per 15 or \$5 per 100. WATERBURY, Clarkston, Mich.

Wyckoff and Blanchard Strain S. C. W. raised. Trap nested, heavy winter layers. Eggs 100 \$5.50 \$3.15 \$1. F. E. BOSTEDOR, Eaton Rapids, Mich.

DOGS.

TRAINED foxhounds and hound pups for hunting fox and coons. Also collies. In close 2-cent stamp. W. E. LECKY, Holmesville, Ohio.

YOU WRITE W. J. ROSS, Rochester, Michigan, for those beautiful sable and white Collie Puppies, of the finest breeding, and from stock workers.

ALWAYS mention the MICHIGAN FARMER when you are writing to advertisers.

The Michigan Farmer

ESTABLISHED 1843.

THE LAWRENCE PUBLISHING CO.,

EDITORS AND PROPRIETORS.

39 to 45 Congress Street West, Detroit, Michigan.

TELEPHONE MAIN 4325.

NEW YORK OFFICE—41 Park Row.
CHICAGO OFFICE—600 First Nat'l Bank Building.
CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.
GRAND RAPIDS OFFICE—5 & 6 New Hawkins Building.M. J. LAWRENCE.....President.
M. L. LAWRENCE.....Vice-President.
E. H. HOUGHTON.....Sec.-Treas.I. R. WATERBURY.....Associate
O. E. YOUNG.....Editors.
E. H. HOUGHTON.....Business Manager

TERMS OF SUBSCRIPTION:

Five Years 260 Copies Postpaid \$2.75
Three Years 156 Copies, Postpaid.....\$2.00
One Year, 52 copies, postpaid.....\$1.00
Six Months, 26 copies, postpaid.....60 cts.
Canadian subscriptions 50 cents a year extra for postage.

Always send money by draft, postoffice money order, registered letter or by express. We will not be responsible for money sent in letters. Address all communications to, and make all drafts, checks and post-office orders payable to, the Lawrence Publishing Co.

RATES OF ADVERTISING:

40 cents per line agate measurement, or \$5.60 per inch, each insertion, with reasonable discount on orders amounting to \$24 or over. No adv't inserted for less than \$1.20 per insertion.
No lottery, quack doctor or swindling advertisements inserted at any price.
Entered as second class matter at the Detroit, Michigan postoffice.

COPYRIGHT 1911

by the Lawrence Pub. Co. All persons are warned against reprinting any portion of the contents of this issue without our written permission.

WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

Avoid further trouble by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription.
The Lawrence Pub. Co.,
Detroit, Mich.

DETROIT, MAY 13, 1911.

CURRENT COMMENT.

As noted in the last issue the Canadian reciprocity bill has passed the lower house of congress and is now being considered by the senate finance committee. As every reader knows, the Michigan Farmer has strenuously opposed this treaty, as essentially unfair to the farmers of the country, since the announcement of its terms were made public. Our readers have been urged to act for themselves in the matter by writing to and petitioning their members of congress and the United States senators from Michigan to oppose the measure. Many of them have done so, and we have received many letters from others who hesitated to write to these gentlemen because they did not feel certain as to how they should be addressed upon the subject. But it is certain that the congressmen from Michigan were well advised as to the feeling of their constituents in the matter, as evidenced by the opposition of a large majority of the Michigan delegation to the measure, as noted in a recent issue.

But the fight is not yet over, and the publishers of the Michigan Farmer will not abandon it while there is a fighting chance. As a last effective blow aimed at this measure, the Michigan Farmer has taken the initiative in getting a strong delegation of Michigan men to go to Washington to oppose the measure. Mr. M. J. Lawrence, who is still in Washington working on the proposition, arranged for a hearing before the senate finance committee for May 11, and a strong delegation of influential Michigan farmers, including representatives of the various farmers organizations of the state, prominent educators, well known institute workers and agricultural authorities were interested in the movement and induced to join the delegation. Before this issue reaches the reader they will have presented the cause of the farmers of Michigan to the senate committee in the strongest possible manner. Conferences will also have been held with the Michigan senators, in which the importance of the defeat of this agreement to the farmers of Michigan will be strongly urged and everything possible will be done to compass the defeat of the measure in its present form.

What the outcome will be we cannot, of course, predict. But no effort will be spared to impress upon those in authority

at Washington, that the farmers of Michigan are unanimous in their opposition to this treaty, and that their unanimity of opinion is the result of their own best judgment, and not due to the efforts of any persons or persons who may have sought to arouse their fears and opposition, as has been suggested by President Taft. In the next issue we will publish information regarding the personnel of this delegation and the manner in which it presented the cause of the farmers of the state to the Senate Committee and other officials at Washington.

Not a little anxiety has been felt by the farmers of Michigan regarding the attitude which the United States senators from our state would take on the reciprocity measure when this important matter comes up for consideration in the senate. That anxiety has been in a measure relieved by the recent announcement of Senator Smith that he would not support the agreement in its present form. Senator Smith's announcement was made in a letter to Master N. P. Hull, of the State Grange, in response to an appeal from that gentleman made in behalf of the farmers of the state and country. Senator Smith's letter to Mr. Hull follows:

April 24, 1911.

Mr. N. P. Hull,
Master, Michigan State Grange,
Dimondale, Michigan.
My Dear Mr. Hull:—
I am in receipt of your kind letter of the seventeenth and have read it carefully. I appreciate the anxiety you express for the welfare of the farmers of our state and want you to know that I sympathize deeply with your desire to protect their interests as far as you are able to do so. The Reciprocity Agreement with Canada, as originally drawn, and passed by the House of Representatives on Friday last, is, in my opinion, most inequitable and unfair toward the American farmers. Under its provisions, aliens have the same right to our markets as the farmers of our own country with none of the responsibilities imposed upon our own people. By its provisions, a premium is placed upon residence in an English possession and its beneficiaries exempted from taxation under our laws and military service in time of stress. I cannot see that it is fair or just to our own people and a careful examination of its provisions convinces me that it is very unequal in the limited blessings which it is intended to bestow.

I am not unmindful of the fact that it has received the approval of many of our countrymen and that its failure of enactment will be disappointing to a large majority of the people. My attitude toward the measure is not prompted by any personal ambition of my own, but I have been moved solely in my course by a desire to do justice to the producers of our soil, whose devotion to our country has been exemplified upon every battlefield and in every crisis in our history. It is not the function of a public servant to invite such competition in this field of enterprise as is calculated to impair our domestic market for the products of our own people. I believe in the principle of a protective tariff and fail to see the justice of exposing the products of agriculture to unrestricted competition with a foreign state, while at the same time tenaciously insisting upon full and complete protection for the laborer in other fields of American enterprise and unless this measure can be changed so that it will not burden American agriculture unfairly, I cannot give it my support.

With best wishes, I am,
Yours very truly,
WILLIAM ALDEN SMITH.

Senator Smith is to be congratulated upon the clear reasoning which he uses in expressing his determination to oppose the agreement. He is also to be congratulated upon expressing himself in such an unreserved manner at a time when his attitude will be a helpful influence in the strenuous work which is being done in behalf of the farmers of the country against this most unfair propaganda. Representing the interests of an entire state rather than a sectional district, as they do, the position of our senators is most trying, and it is but natural that they should reserve their decision in such an important matter until they have had sufficient time to weigh the merits of all arguments presented by interested parties on both sides and to inform themselves as to the sentiment of the rank and file of their constituents. Senator Smith has evidently satisfied himself that the farmers of Michigan are not only strongly against the reciprocity agreement, but that they are right in their contention that it is unfair to them and the great industry in which they are engaged.

While Senator Townsend has not yet expressed himself finally in the matter, we believe that he is not a little impressed by the unanimous opposition of the farmers of the state to this agreement and that he is still studying the problem with an open mind, and we hope and believe that he will arrive at conclusions similar to those above expressed by his colleague before the question comes

to a vote in the body of which he is a member.

Seldom has the market for old potatoes exhibited a more "nervous temperament" at this season of the year than it has done for the past three or four weeks, during which time there have been repeated fluctuations of ten to fifteen cents during each week or ten days of the period mentioned. Prices at loading stations have repeatedly reached 50 cents per bushel, and the more liberal shipments brought out by the advance have forced a decline at points of consumption, with the result that the market has sagged to former levels. Growers who are in possession of all or a portion of their crop have, however, apparently been rather strong holders, with the result that there has repeatedly been a quick reaction with like results. With this condition of affairs prevailing growers have naturally been watching the market closely, while dealers have been vacillating between two opinions regarding the prospects for the remainder of the old potato season.

Any analysis of the potato situation at this season of the year must of necessity take into account the prospects of the new crop, if it is to be of any value as a criterion of probable market values for old stock. During recent years the season in which old potatoes are in demand has been constantly shortened, and an increasing preference for the new stock even at considerably higher values than obtain for old stock by the consumers of the north. During the past generation the limit for marketing of old potatoes in normal seasons has been shortened nearly or quite a month from this cause, but any shortage in the new crop is immediately felt in the old potato trade, hence the wisdom of studying the situation carefully before speculating with old stock for higher prices when fairly good prices are obtainable. Of course, it is impossible to get accurate statistics regarding the early potato crop and the best that can be done is to study available sectional reports and make a comparative estimate as to the general situation.

Reports from the Hastings section of Florida are to the effect that prices are booming for the new crop, which is estimated to have been more than half shipped out at the present time. Prices have advanced to \$3.75 per bbl. at loading stations, and it is predicted that growers who have not sold their crop will get \$4, it being considered that the unexpected northern demand will carry prices higher. From the Sanford district of Florida comes the report that the yield is much smaller than was anticipated. At Elkton, the crop is said to be tied up by a New York firm, and that digging is being done very slowly in anticipation of higher prices in the near future. No reports are available regarding the prospects at more westerly southern points than Alabama, where it is reported that the crop in at least one large potato growing section will be but about one-third as large as it was last year. On the other hand, the prospects in Tennessee and other points further north are said to be excellent, but this crop will not be available for some little time.

So far as stocks of old potatoes are concerned, they are generally conceded to be lighter in Michigan than is usual at this season of the year, owing probably to the steady trend of the market throughout the winter months. Stocks are also reported to be extremely light in Minnesota for this season of the year, and Wisconsin's crop was below normal on account of the extremely dry weather of last summer. These conditions doubtless account for the repeated advances in the Chicago market, which has as repeatedly shown weakness under more liberal receipts brought out by such advances in price. Eastern markets particularly at smaller centers have maintained a better level on account of greater distance from available shipping points.

Under these conditions what the outcome will be at the close of the season is difficult to predict. It is improbable that the very high prices of two years ago will be reached, yet the fact that such advances as have occurred did not promote shipments which demoralized the market permanently would seem to indicate that fairly good prices will prevail to the end of the shipping season. It may be that the close of the season will see a shortage, but this is an indefinite prospect, and there has always been danger in recent years in holding old potatoes after the first of June. With this information, which is so indefinite as to keep the wisest traders guessing, we must leave our readers to draw their own conclusions.

HAPPENINGS OF THE WEEK.

National.

The third national peace conference was opened in Baltimore last week. President Taft, Cardinal Gibbons and Andrew Carnegie were among the speakers at the first session.

The fiftieth anniversary of the fall of Camp Jackson at St. Louis, Mo., was celebrated Monday.

Fires are raging in the copper country of Northern Michigan. There is a continuous fire front of 90 miles from Lake Superior to Channing.

The federal courts have overruled the railroad rate statutes of Kansas as well as those of Minnesota and other states, providing for a two-cent rate, upon the grounds that the rate is too low and consequently confiscatory. The court declared that the state had right to impose such restriction on tariffs so long as it allowed earnings to the companies of at least six per cent, even when it concerned carriers doing interstate transportation, upon the ground that the police power of the state allows such control over that portion of interstate roads as lies within the confines of the state so legislating.

Members and officers of the Ohio legislature have been called before the grand jury and indicted upon the charge of receiving bribes. One of the representatives is charged with soliciting money as pay for supporting the bills of certain interests.

While giving a hearing to the shoe manufacturers of the west and southwest the United States senate finance committee accidentally secured testimony to the effect that the shoe machinery manufacturers dictated prices for machinery which shoe men were compelled to pay and these prices are so high that shoes must be quoted higher to cover the added investment. The committee will turn the testimony over to the attorney general for investigation.

It is estimated that 5,000 workmen have gone from their homes into the Humboldt district of Michigan to aid in the growing of sugar beets. Most of the workmen are Russians.

It is reported that 500 square miles of ground have been swept over by flames in Maine. The mayor of Biddeford has called upon the state militia to aid the residents in saving the town.

The past has been the most prosperous fish season in Saginaw Bay for the past fifteen years. The season is about over.

Foreign.

Fire destroyed 1,000 buildings in Yamagata, an important center of trade and capital of one of the prefectures of Japan. Included in the buildings are many of the important business places of the city.

The political condition in Mexico is very confusing, but a general understanding of affairs indicates that the insurgents have been favored by the week's incidents. The federal government, according to different reports, is beginning to lose its grip upon the situation and the rebels are taking heart, redoubling their efforts and adding numbers to their forces by volunteers who formerly did not have faith in the movement. Mexico City is being threatened by the forces of Madero. Americans therein are fearing an attack. Points to the south are said to have fallen into the hands of the insurgents. On the west coast the points gained by the rebels are still in their hands and the positions have been strengthened. In the north an attack was made on Juarez on Monday but the federal troops repulsed the advance. It is generally conceded that another attack will soon be made and with reinforcements that are claimed to be on the way, the rebels hope to capture the place. It was reported that President Diaz has agreed to resign his office, but no confirmation of the report has been published.

The breaking of an ice jam in the Tanana river above Fort Banks, Alaska, released a great bank of ice and water which rushed down upon the city of Fairbanks and destroyed 250 homes.

It is expected that the veto bill will not be amended in the British house of commons since it has passed the committee stage without being changed.

The Ottawa government has provided for the construction of a drydock at Esquimaux, on the Pacific coast. The dock will be 900 feet long. A Scotch company will build the structure.

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat, in the state, southern and central counties, shows a decided increase over the figures given in the April report, the average being 93 in the state, 95 in the southern counties, 92 in the central counties, 87 in the northern counties and 95 in the upper peninsula.

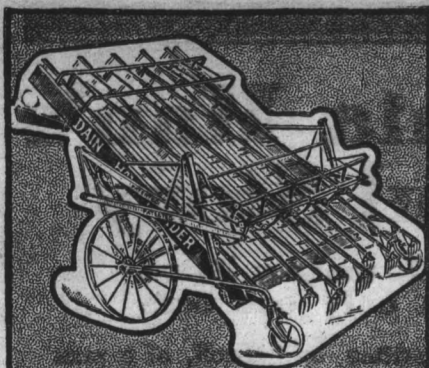
The condition on April 1, in the state was 87, in the southern counties 88, in the central counties 84, in the northern counties 88 and in the upper peninsula 96.

The per cent of wheat sown that will be plowed up because winter killed or otherwise destroyed is 2 in the state, central counties and upper peninsula, 1 in the southern counties and 3 in the northern counties. The damage by Hessian fly in per cent is 3 in the state, 5 in the southern counties, 2 in the central counties and 1 in the northern counties.

The total number of bushels of wheat marketed by farmers in April at 99 flouring mills is 92,482 and at 78 elevators and to grain dealers 56,457, or a total of 148,939 bushels. Of this amount, 111,492 bushels were marketed in the southern four tiers of counties, 34,580 in the central counties and 2,867 in the northern counties and upper peninsula.

The estimated total number of bushels of wheat marketed and used by growers in the nine months, August-April is 10,950,000. The amount of wheat yet remaining in possession of growers is estimated at 4,250,000 bushels.

Seventy-two mills, elevators and grain



DAIN The Light Draft "One Man" Hay Loader

Here is a real Hay Loader; a genuine labor saver; not a mere hay elevator. It's rightfully called the "One man" loader because one man is all that's needed to run it. The force delivery pushes the hay well forward on the load where it can be easily handled by the driver. There's no return carrier to drag the hay off the wagon. This one advantage alone is important enough to make the Dain your choice, yet it is only one of a number of big

Dain Exclusive Advantages

Easy to couple to all wagons without adjustment. No long, crooked crank shaft to break or cause trouble. Geared right to insure light draft and greatest hay gathering efficiency. Gathering rakes and elevating parts operated by hammock mounted pitmans. Works equally well on swath or windrow. Caster wheels in rear lessen draft and make turning easy.

The Dain Loader is lightest draft, most simple in design and most convenient to operate. Gets all the hay; made to last from best materials. That's why it is the most popular loader built today—why it is most widely imitated and just why it should be your choice.

Consult your nearest Dain dealer about any of our tools: Mowers, Loaders, Side Delivery Rakes, Stackers, Sweep Rakes, Presses, or write us mentioning the tools in which you are interested, and we will send you complete description, and our free book "All About Hay," the most practical and helpful hay book ever published. Write today.

DAIN MFG. CO.
814 VINE STREET
OTTUMWA, IOWA

Best Cattle at Least Cost

Best water, best hay and fodder crops, no extreme heat, comparative freedom from mosquitos and other pests, easy winter—all these on land at from \$10 to \$30 per acre near big markets. Ideal dairy country.

Can You Beat It?

Write and get full information. Country filling up fast.

Secretary, Central Alberta Development League, Box 58
Edmonton, Alberta, Canada

20th CENTURY HOE



EVERYBODY
WANTS ONE.

Sells at Sight!

One man does the
work of two.

AGENTS WANTED

Write for information
and territory
20th Century Hoe Co.
Grand Rapids Mich

Make \$1000 to \$4000

A Year—Right From
The Start.



Positions are now open in fine new territories—maybe your own. We start you without capital and you at once begin earning big money. You can make easily up to \$1000 to \$4000 a year, payable as you earn it. No experience necessary. Liberal terms—best plans—best goods—lowest prices. You undersell all competitors and carry staple, well-known goods. Be sure to investigate our proposition—it costs you nothing. This means a fortune to some men. No applicant accepted under 21 years of age or older than 60 years. Write today—now—to Application Dept. B
SAGINAW MEDICINE CO., SAGINAW, MICHIGAN

dealers report no wheat marketed in April.

Rye.—The average condition of rye in the state and central counties is 92, in the southern counties 94, in the northern counties 89 and in the upper peninsula 97.

Meadows and Clover.—The condition of meadows and pasture in the state is 86, in the southern counties 84, in the northern counties 87 and in the central counties and upper peninsula 89. The acreage of clover sown compared with average for past five years in the state is 96, in the southern counties 97, in the central and northern counties 95 and in the upper peninsula 105. The acreage of clover that will be plowed up because winter killed or otherwise destroyed is 12 in the state and northern counties, 14 in the southern counties, 8 in the central counties and 15 in the upper peninsula.

Oats.—The acreage sown, or that will be sown compared with an average for the past five years is 96 in the state, southern and northern counties, 94 in the central counties and 103 in the upper peninsula.

Spring Pigs and Lambs.—The per cent of spring pigs saved as compared with 1910, is 89 in the state and central counties, 90 in the southern counties, 86 in the northern counties and 91 in the upper peninsula. The per cent of lambs saved as compared with 1910, is 93 in the state and central counties, 94 in the southern counties and upper peninsula and 92 in the northern counties.

Farm Wages.—The average monthly wages with board, in the state is \$25.36, in the southern counties \$25.76, in the central counties \$24.96, in the northern counties \$24.10 and in the upper peninsula \$28.27.

The average wages by the day without board, in the state is \$1.54, in the southern counties \$1.57, in the central counties \$1.50, in the northern counties \$1.47 and in the upper peninsula \$1.75. The average wages in the state last year, by the month with board, was \$25.14 and the average wages by the day without board was \$1.54, which is exactly the same as reported for this year.

Fruit correspondents in all parts of the state give encouraging reports relative to present conditions and prospects for an excellent fruit crop. The spraying of fruit trees has increased.

The following table will show the prospect at the present time for a crop of the various kinds of fruit in the state and the different sections:

	State.	Sou. Cos.	Sen. Cos.	Nor. Cos.	Upper Penin- sula.
Apples	88	87	86	91	94
Pears	88	89	85	86	82
Peaches	86	86	88	85	
Plums	86	86	84	88	84
Cherries	93	93	88	97	95
Small fruit..	92	93	85	95	95

NATIONAL CROP REPORT.

The average condition of winter wheat May 1 was 81.6, compared with 83.3 on April 1, 82.1 on May 1, 1910, and 86 the May 1 ten-year average, according to the May crop report of the department of agriculture.

The average condition of rye was 90, compared with 89.3 on April 1, 91.3 on May 1, 1910, and 89.7, the May 1 ten-year average.

The area of winter wheat to be harvested was about 31,367,000 acres, or 1,940,000 acres (6.6 per cent) more than the area harvested in 1910, and 3,118,000 acres (.9 per cent) less than the area sown last fall (34,485,000 acres).

The acreage of winter wheat remaining to be harvested and condition of winter wheat and rye on May 1 for Michigan is: Winter wheat acreage, 947,000; condition, 91; rye condition, 92.

The condition of the wheat crop on May 1 of the past five years averaged 85.7 per cent; the final yield per acre averaged 15.5 bushels. If the above ratio should prevail this year the condition of 86.1 per cent would indicate a yield of 15.6 bushels per acre, which compares with 15.8 bushels, the final estimate of yield per acre in 1910. On the estimated area to be harvested 15.6 bushels per acre would produce 5.4 per cent more than the final estimate of production last year, 9.6 per cent more than the production of 1909.

The average condition of meadow (hay) lands was 84.7, compared with 89.8 in 1910, and a 10-year average of 89.4.

Stocks of hay on farms is estimated at 7,546,000 tons (12.4 per cent of crop), against 7,275,000 tons (11.2 per cent) on May 1, 1910.

The average condition of pastures was 81.3, compared with 89.3 in 1910, and a 10-year average of 87.4.

Of spring plowing, 71.0 per cent was completed up to May 1, compared with 80.3 per cent in 1910, and a 10-year average of 67.2.

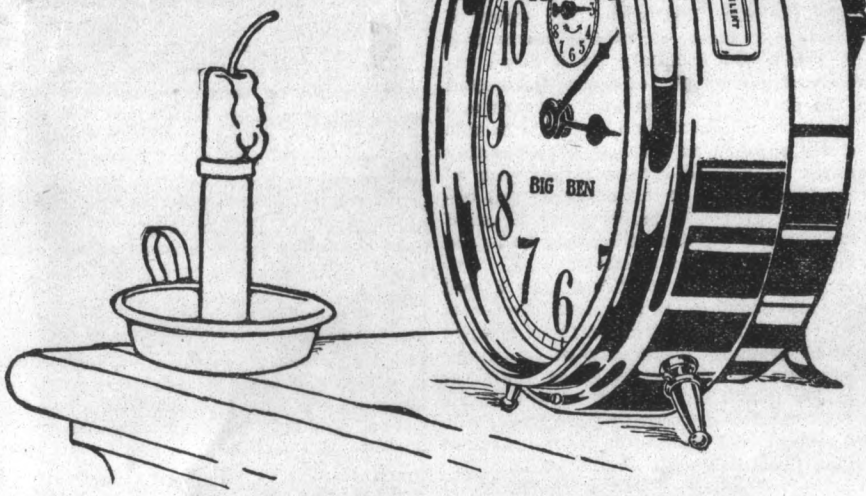
Of spring planting 60 per cent compared with 65 in 1910.

CATALOGUE NOTICES.

The U. S. Phonograph Company, associated with Bishop-Babcock-Becker Co., Cleveland, Ohio, send two interesting and instructive catalogs. One of these describes their numerous models of phonographs, including cabinet machines, and an advance list of May selections, while the other is a 56-page booklet listing a large number of selections, including grand opera, many of them four-minute records, all the U. S. everlasting non-breakable records. Write for these catalogs, mentioning Michigan Farmer.

The E. C. Brown Co., Rochester, N. Y., send a handsomely illustrated 50-page catalog, describing in detail their many types of Auto-Spray modern high pressure spray pumps for all kinds of spraying in orchard, garden and field. Mention the Michigan Farmer when writing for this catalog.

I'm the "Thin Model" Alarm Clock



Look for me in your jeweler's window. Then go in and hear me ring "The National Call to Breakfast." You'll recognize me at once by my "tailor-made" appearance; my beautiful "thin model," watch style case and my big, open, smiling face.

My bell isn't alarming. It's cheerful. I wake you pleasantly—like sunlight does in summer—even on the darkest, coldest mornings.

I ring at intervals for 15 minutes or steadily, as you choose.

And I wake you on time for I'm watch-accurate as a timekeeper.

I've got a regular watch escapement—the mechanism upon which a watch most depends for its time-keeping qualities. You'll notice that I tick fast, evenly and lightly like a watch instead of slowly and heavily like common alarm clocks.

I must run like a watch for six days and nights in my factory under careful inspection before they will let me go to the jeweler.

I was designed by a Swiss, and I'm made in a factory that's been running for the past thirty years. I'm the result of all that experience and all those facilities.

An inner casing of steel gives me great strength and makes me dust-proof.

I'm to be found only at jewelers. Ask yours to introduce me to you today. My price is \$2.50. It could easily be \$3.00 and you'd willingly pay it, for once you see me you'll know I'm worth it.

If you want to be "first in the field" get me—Big Ben—to wake you in the morning.

BIG BEN

Care of WESTERN CLOCK CO., La Salle, Ill.

(23)

If your jeweler doesn't sell me I'll come express prepaid on receipt of \$2.50

A catalogue for you

YOU farmers who need power on your farm; whoever you are; wherever you are, should not let another day go by without sending for the free catalogue of Olds Gasoline Engines.

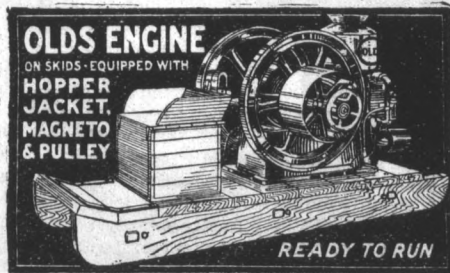
This engine will save you money, save you time and give you complete satisfaction during a lifetime service. It is as safe to buy as a government bond.

Your safety in buying it lies in the pride we have taken for 30 years in maintaining its highest quality, and in our guarantee.

The power and economy of operation depend upon the mixer. The Seager mixer cannot get out of perfect adjustment, because it has no moving parts. There is no gasoline pump to get out of order, as the piston automatically sucks up the gasoline from the base. All repairs needed in the first year are furnished free.

Send for our free catalogue before you decide on an engine. It's to your interest to know about the Olds.

Seager Engine Works, 915 Seager St., Lansing, Mich.



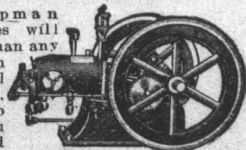
REID'S HEALING BALM—Quickly relieves and cures cuts, piles, eczema, chafes, sores. Makes hair and beard grow naturally on man. Cures galls, cuts and chafes on horses. Price only 25c postpaid. Reid's Roup and Canker Cure increases wt. of fowls. Price 50c postpaid. Order today. Agents wanted. **REID REMEDY CO.,** Richmond, Indiana.

Farm or Business Wanted—Will pay cash. Give full description. **M. F. Box 948 Cherry Valley, Illinois.**

ALWAYS mention the MICHIGAN FARMER when you are writing to advertisers.

SAVES DOLLARS FOR YOU.

Yes Sir. The Chapman Economizer Engines will save more for you than any possible difference in first cost. Let us tell you how they save it. You cannot afford to buy an engine till you know. A postal card brings it. Address, **"ECONOMIZER," Box 95, Marcellus, Mich.**



HORTICULTURE

SPRAYING PROBLEMS.

Although it is rather late for a consideration of spraying for the San Jose scale, the spraying for scab and codling moth will soon be upon us and any discussion of this important topic is timely at any season.

If all sections are waking up to the advantages of spraying, or perhaps to the fact that we must spray in sections where the San Jose scale has appeared to save our trees, as rapidly as is this one there will certainly be a large increase in the number of orchards sprayed in the state. Previous to five years ago there were practically no orchards in this vicinity sprayed at all; last year possibly ten per cent were sprayed; this year at least 50 per cent of the orchards are being sprayed. This is certainly a rapid advancement for a section that has paid almost no attention to fruit.

A general criticism of the care of old orchards given by the general farmer is that to begin with many of them are not pruned properly. The idea of too many is to cut off the large lower branches and let the trees run up in the center something like an upright pear tree. This, of course, will facilitate getting around under the trees with a load of hay, but this is not what orchards are intended for. We want them to grow fruit that will be large and well colored and easy to care for and harvest, so we should endeavor to leave some of the lower branches and thin out above and around them so the sun can get to them, and so we can throw the spray into and through them readily. These can be sprayed much more easily and better than the high parts of the tree, the fruit will not blow off as readily and thinning and harvesting can be performed more economically. The drops will also be less injured. If the tops are too high to spray from a tower eight to ten feet from the ground, using a ten-foot pole, I would cut them out, taking care to cut just above a side limb so as not to leave a stub to die back. If the highest tops are removed and the smaller branches are thinned out clear to the outside of the tree the fruit near the bottom will be as good as that near the top.

A proper pruning, then, is the first step in getting these orchards into condition to spray thoroughly and economically, however, if the pruning can not be done before time for spraying, I would not hesitate to spray anyway, for it will do considerable good and will keep the trees alive and thrifty until one can get time to prune them, but, of course, it is more wasteful of spray material, and the fruit will not be as well colored or as evenly distributed throughout the tree. We have rented several orchards this spring, and could not get to all of them to prune them before spraying time was upon us, so we have sprayed them all and will prune them as we get time.

Many farmers make a mistake in not being thorough enough in spraying, especially in the early spraying given for the scale. We do not consider an orchard sprayed until it has been sprayed from at least two sides and with the wind in nearly opposite directions. There is little use in trying to throw a spray against the wind unless it is very quiet, and then there will be breeze enough to carry the mist back upon one and make it very disagreeable. It is also wasteful of material, for much of it will fall to the ground instead of blowing through the tree and lodging upon the branches. I like to have a little breeze blowing steadily in one direction, then one can drive accordingly, so as to keep the spray from the team and men, and let it strain through the trees from the windward direction. This will allow the spray to strike the trunk and branches from this side clear through the tree if it is pruned out as it should be. Let the spray strain through the tree until one can see that all parts of it are wet but not dripping badly, taking care to keep the rod moving so as to distribute the spray well. Then, when the wind is in a direction nearly opposite, go over them again in the same way and you will insure a good job. Those who do not believe a second application is advantageous on large trees should look across an orchard from the direction toward which the wind blew when it was sprayed; then go around to the opposite side and you will see a perceptible whitening if lime-sulphur was used, especially after a rain has brought out the color of the lime. This shows

that the spray has covered one side of the limb or twig but not the other. The rain will wash some of it down over the bark but one side of the limb will not be as well covered as it should be for scale unless sprayed from this side and with the wind.

In spraying for codling moth and scab after blossoming I do not think it as important to spray from both sides with opposite winds, but it is the best and easiest way to insure a good job. What we are after now is the little fruits and leaves. If the spraying is done while the fruit stems are still upright, and before the leaves are grown much the spray will sift through the tree fairly well if it is pruned out well and probably some will lodge on most of the leaves and fruit, as can be seen by examining them later, but it will be found that the work is much more thorough on the windward side, and that a better job can be done by putting on less from one side and taking advantage of the wind, as in the first spraying. It is usually advised to go over the trees again a week or ten days after the first spray is applied which is soon after blossoming, so why not choose a day for this second application when the wind is nearly opposite from the direction it was when the first application is given, and much better results will be obtained. If one has but little spraying to do this can be easily arranged, but with much to do one can not always wait for a change of wind. However, we do the best we can, always taking notes on the direction of the wind when giving the first application and there will usually be some orchard or some part of an orchard where the wind is suitable for spraying at all times.

The spray should be applied through a nozzle that will break it into a fine mist. There are two types of such nozzles most used, the Vermorel type and the type variously known as Vapo, Friend, which is made considerably like the Vermorel, only larger and without the disgorger. These last named nozzles seldom become clogged as the opening is as large as the mesh in the screen of an ordinary pump. They also are light, convenient, and produce a fine mist if the material is driven out under a heavy pressure. This is where many fail in getting a good job of spraying. The man at the pump simply gets the spray out of the barrel and nozzle but does not work hard enough to put it on the trees in good shape. To insure a good job the spray should be driven from the nozzle at a pressure of about 150 pounds. This can be done with a hand pump but the tendency is to let the pressure get down to from 50 to 100. This is why the power sprayers usually do better work—the engine is a more faithful worker than the average man, notwithstanding that it is sometimes slow in starting and may refuse to work altogether at times when not properly fed or cared for, but some men will never make good pumpers, no matter how they are fed and pampered.

Calhoun Co. S. B. HARTMAN.

HOW SOON STOCK MAY BE TURNED INTO ORCHARDS AFTER SPRAYING.

I would like to know how soon I could pasture my orchard after spraying my trees with sulphur and arsenate of lead solution. I have hogs turned in one and cows to turn in the other. This is my first experience of spraying.

Kalamazoo Co. E. W. B.

This was one of the questions raised when spraying orchards with poisons was first practiced, and so experiments were called upon to furnish information. Tests showed conclusively that the amount of arsenic secured by eating the pasture beneath the trees was too small to produce any physical effect upon the animals. In 1889 Dr. R. C. Kedzie and Prof. Cook, of the Michigan Experiment Station, satisfactorily determined that no danger existed from stock eating grass beneath the trees immediately after spraying. A paper was placed under a thoroughly sprayed tree and left till all drip had ceased; it being a windy day, the drip was excessive. Dr. Kedzie analyzed the paper and found 0.4 of a grain of arsenic. Another large tree, with a thick carpet of June grass, clover and timothy underneath it was thoroughly sprayed, after which the grass was gently removed close to the ground and analyzed, and 2.2 grains of arsenic were found. It requires about 10 grains of arsenic to poison a cow and 20 grains to kill an ordinary horse, hence, it would seem that the danger of pasturing during and after spraying is very remote. Other tests substantiate the results of Dr. Kedzie and Prof. Cook.

A California Man's Wonderful Story

How he and his wife make a living and enjoy life on only one acre

Let us give you the story, written by himself, of a man who has found prosperity on one acre of California land. How he lives well and "has more money to spend than back in Ohio on an 80-acre farm."

Let him tell you himself, in his own homely but vigorous style, how thrift and industry combined with "farm sense" work this seeming miracle, and how, although elderly, California has restored health and vigor.

This man has no land to sell and nothing whatever to gain. You can get his unbiased testimony from the

Union-Southern Pacific

Standard Route of the West

along with books on California which tell you where to look for reasonably priced land, suitable for farming, truck gardening or fruit raising. Just address

Homeseekers' Information Bureau
752 Bee Building, Omaha, Neb.

(694)



100 Bushels of Corn an Acre

is not uncommon in the Southern States and has even been greatly surpassed in some sections. The South will produce as much corn and as good corn as any section of this country, and the value of last year's corn crop in the South was eight hundred million dollars. Why raise corn on land in the North and West valued at \$200 an acre when equally as good corn-producing land in the South can be purchased at from \$15 to \$30 an acre, and where the temperature in summer is no hotter than in the Middle West? And with the additional advantages of another crop or two from the same land and no long, cold winters.

Let me send you our illustrated booklets and learn what can be done in a country where fertile land can be purchased cheaply and where there are 312 working days a year. Low round-trip fares 1st and 3d Tuesdays each month.

G. A. PARK, Gen'l Imm. and Ind'l Agent, Louisville & Nashville R. R. Room 256 Louisville, Ky. (202)

MAKE YOUR OWN TILE

One Man Can Make 300 to 600 Perfect Tile a Day WITH OUR FARMERS' CEMENT TILE MACHINE

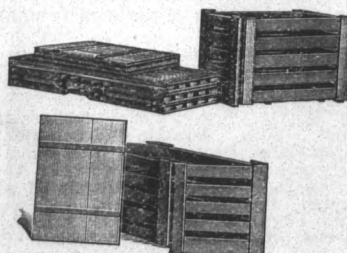
at a cost of \$3 to \$5 per 1000. The only farm tile machine that does not require hand tamping; the only farmers' machine operated by either hand or power. Machine makes 3, 4, 5, 6 and 8 inch tile, 12 1/2 inches long. Our Patented Water-Proof FLEXIBLE CASING holds tile in perfect shape till set. No Pallets. If after 10 days' trial it does not meet 10 DAYS FREE TRIAL with entire satisfaction, return at our expense. The price of the machine will be saved in making your first 2000 tile. Can You Afford to Be Without It? Write today for illustrated catalogue.

FARMERS' CEMENT TILE MACHINE CO., Box 307 St. Johns, Michigan.



To Farmers and Fruit Growers:

The Hinge-Corner Collapsible Box or Crate in the form of a market box or otherwise as desired, with loose bottom and no cover, or with self-fastening top and bottom.



These boxes or crates can be stored like shooks when not in use and can be carted home from the market or to the field for packing produce in the same knocked-down shape and can be set up for packing on the ground in a moment without either nail or hammer. The strength, safety, and convenience of these boxes or crates is without question. Many are now being used in the South for peach and vegetable crates, and this use is constantly increasing. Small trial orders will be gladly furnished. Write for literature and particulars to

THE CLEVELAND BOX CO.

723 Stone's Levee. Cleveland, Ohio.

SPRAY FRUITS AND FIELD CROPS

and do whitewashing in most effective, economical, rapid way. Satisfaction guaranteed. BROWN'S HAND OR AUTO-SPRAYS

No. 1, shown here, is fitted with Auto-Pop Nozzle—does work of 8 ordinary sprayers. Endorsed by Experiment Stations and 500,000 others. 40 styles and sizes of hand and power sprayers—also prices and valuable spraying guide in our Free Book. Write postal now.

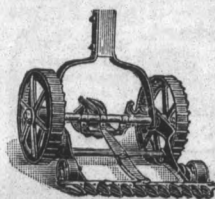
THE E. C. BROWN COMPANY 32 Jay St., Rochester, N. Y.



THE CLIPPER

There are three things that destroy your lawns, Dandelions, Buck Plantain and Crab Grass. In one season the Clipper will drive them all out.

CLIPPER LAWN MOWER CO. DIXON, ILLINOIS.



The Berlin Quart Our Specialty

A WHITE package which insures highest prices for your fruit. Write for 1910 catalog showing our complete line, and secure your BASKETS, CRATES, ETC., at WINTER DISCOUNTS.

The BERLIN FRUIT BOX CO. Berlin Heights, Ohio.



FARMERS' CLUBS

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

THE CONSERVATION OF OUR BIRDS.

Paper read by Miss Emily Bennett at the annual meeting of Clinton County Association of Farmers' Clubs held at St. Johns.

(Continued from last week).

One more class, the birds of prey. An authority says it would be as just to judge all men by the deeds of highwaymen and pirates as to judge all hawks by the deeds of a few.

The food of hawks and owls consists mainly of mice, reptiles, ground squirrels and insects, grasshoppers and large beetles. Some varieties are never known to attack birds or poultry, others do so when other food is scarce, while the cooper and sharp-skinned hawk are bird enemies. When an individual has developed an appetite for poultry it should be killed, of course. A large hawk became interested in a brood of 25 R. I. red chickens last season, appropriating all but seven. A price was offered for his remains but his sagacity has thus far kept him in the enjoyment of life, liberty and the pursuit of poultry prospectively.

The different species of owl police our premises by night as do the hawks by day. Where the hawks and owls have been killed, rodents make serious inroads upon the crops, digging and eating the seed when planted and again at harvest time.

The red squirrel is a bird enemy, searching out the nests in orchard and thicket, yet I understand that in some states he is protected by law, though he has scarcely a redeeming trait. There are many ways of protecting fruit and grain from such birds as claim a portion for their hire. Seed corn may be soaked in a solution of coal tar and neither blackbird nor crow will trouble it. For the fruit eaters plant a few mulberry trees. The more birds visit them the more complete will be your protection. Some birds prefer a thicket or shrub to a tree for a nesting place. Must the highway be entirely denuded of every shrub and plant? Briers, brambles and poisonous vines should have been removed long ago, but the wild rose, the spirea, and several varieties of thorn are highly ornamental, both in flower and foliage, and provide not only shelter for the birds but for many varieties of our flora which have been allowed no other retreat but the roadside.

The native viburnums, the sheepberry, and others, the cornus, or dogwood, and the whistewood, have nestling about their feet many ferns, violets, dicentra, cucullaria and canadensis—wake robins, closed and fringed gentians and the only specimens of our showy lady's slipper, cypripedium spectabile that I even saw growing, displayed its exquisite beauty by the roadside. The picture of its rare grace and purity will enrich my memory, always I think. Many of these shrubs and plants which we are slaying with such a ruthless hand would cost from 15 cents to \$2 to replace with small specimens from the nursery.

A friend from near Ann Arbor said to me last summer. "I wish you to visit us. I want you to drive over the river road. With your love for the wild things growing after nature's plan you will find much to admire and enjoy." But before I am privileged to drive over the river road the highwayman will have been there and only blackened stubs and withered branches will remain to offer silent protest against the spoliation. The rocks and rugged surface all laid bare, it will be a place to avoid for its dreariness rather than seek for its attractions. But I have faith to believe that our failures and mistakes will finally prove to have been stepping stones to something more perfect and true. That the things we esteem so lightly because given in such abundance will one day be assigned their proper value.

May an enlarged vision reveal to us the best methods of conservation of our birds, our forests and our flora.

CLUB DISCUSSIONS.

Discuss Club Organization.—The Indianapolis Farmers' Club met at the pleasant home of Mr. and Mrs. J. Paul, April 20. About 40 partook of the fine dinner served by Mrs. M. Anger as committee. The program was opened by a few selections of instrumental music by Miss Mable Paul. Among them was that most beautiful selection, "The Angels of Night." "History of Our Club," by Mrs. A. Arnold, was ably given. It was the tenth anniversary of the Club and she did full justice to the occasion. A paper, "Position of a Mother in the Home," by Mrs. J. Delling, was listened to with much interest. The reading on "Local Option," by Mrs. A. Andrews, was fine. The paper on "Highways," by Mrs. B. H. Smith, gave some very good ideas. "How Can we Improve Our Club?" a discussion, was opened by I. N. Taggett, who thought our Club was a very prosperous Club and was proud of it, and that it would be better for more Clubs to be organized. C. Pierce gave some good ideas and suggestions. C. Smith thought it would be better if the young people would attend more regularly. The meeting closed by all pronouncing it a splendid gathering. The next meeting will be held at the home of Mr. and Mrs. A. Patterson, and will be the first afternoon meeting.—Mrs. J. M. Miller, Cor. Sec.

Discuss Corn Culture.—The Salem Farmers' Club held its April meeting at the pleasant home of Mr. and Mrs. W. Naylor. In spite of the bad roads and weather, a goodly number gathered and enjoyed the day. As before mentioned, several farmers brought seed corn to exhibit and all joined in a discussion as to "How to plant corn," "When to plant corn," "What kinds to plant," and "the great value of corn on the farm." A recitation by Mrs. May Atchinson entitled, "They tell me corn is king," was listened to with interest. Excellent music was furnished by the Worden choir of young ladies. Select readings, "Shall the middle-aged farmer move to the city?" also the "Old fashioned Sunday," were much enjoyed. A letter was read from Rep. W. W. Wedermeyer assuring the farmers of his attention to the best interests of all in regard to reciprocity. The next meeting will discuss the potato problem. Very interesting and sympathetic resolutions were read in memory of Mr. and Mrs. E. T. Walker, who passed away, both in the same week. Mr. Walker was for several years president of this Club, and always deeply interested in its welfare. Executive committee, Mr. and Mrs. George Roberts and Mr. and Mrs. Edwin Smith. Adjourned to meet in May with Mr. and Mrs. Ed. Smith.—H. C. Thompson, Cor. Sec.

GRANGE

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

THE MAY PROGRAMS.

Suggestions for Second Meeting.

"But when people get together, There's improvement in the weather, There's improvement in the climate of the soul."

Select reading.
Farm management.
Instrumental music.
Home management.
Report of "The One Improvement Club."
Chip basket, in charge of Assistant Lecturer.
Music and reading, in charge of Ceres.

VARIED DIVERSIONS FOR YOUNG PEOPLE.—II.

It has been my privilege to spend several days during each of a number of summers at a county camp where the recreations of the 50 to 70 people on the grounds are necessarily of a very impromptu nature. It has always interested me to observe with how much ease the young people adapted themselves to circumstances when a frolic was on. Boys and girls—but especially boys—who had never "posed," or "acted a part," would come out of the raw state rapidly and really, with little practice, do very well indeed. Every sort of invention had to be resorted to in order to provide costumes and stage settings, but the very necessities and somewhat crude results only seemed to add zest to the game. Thus charades, tableaux, illustrated readings and short plays were put on from time to time before an audience that was willingly blind and deaf to minor defects of these beginners in theatricals.

The costuming for such amusements is half the fun. The injunction to a bride, for the selection of her outfit, applies to the one who would help her by hunting up

"Something old, and something new, Something borrowed and something blue."

Whenever you find a Grange doing this sort of entertaining work, the social spirit is pretty sure to be fine and the question of interesting young people in the Grange is answered. Under good leadership, what may not these young people do? And how they welcome lead-

ership in these directions! How glad they are of every article of antique furniture, garment of old-fashioned cut, quaint poke bonnet that once set off grandmother's fair face, or high hat of grandfather's courtier days! And everyone who unearths these treasures and contributes their use for the play has a part in its success. That is part of the usefulness of employing this mimicry as a feature of



"Costuming for such amusements is half the fun."

community social life; it gives opportunity for so many different people, all with varying gifts, to lend a hand.

Under good leadership, let me repeat, how much may be done to make happy and lift the tone of a neighborhood's social life by these means. These bits of acting, of staging and scenic effects sandwich in between the soberer stuff and make all the more inviting.

JENNIE BUELL.

AMONG THE LIVE GRANGES.

Insurance Rates occupied the attention of Liberty Grange at its last meeting, the question being whether persons having their buildings protected by lightning rods should pay the same rate of insurance as those leaving their buildings without such protection. The general opinion was that a lower rate should be made on rodged buildings. It was also pointed out that the Grange fire insurance company has had fewer claims for damage or loss from lightning than from other causes. This Grange will entertain Gratiot County Pomona on Saturday, May 13.

Grange Year Books.—The 1911 Year Book issued by Lenawee County Pomona Grange is a great credit to that organization. It is a handy little book of 84 pages, carrying a liberal amount of advertising and containing a lot of useful Grange information aside from the complete programs for all the county meetings to be held during the year. It is the second book of the kind put out by Lenawee Patrons and contains a renewal of last year's offer of prizes to subordinate Granges showing the largest, the second largest and the third largest increase in membership during the year. Other interesting features of the book are photo-engravings of the State Master, State Lecturer and Hon. H. F. Baker, member of State Grange executive committee; complete list of Lenawee Pomona officers; brief history of Lenawee county; list of Grange field lecturers and speakers; statement of State Grange finances; announcement of inauguration of life insurance feature by State Grange; Miss Buell's excellent Michigan Farmer article on "Power of Promptness;" financial statement of Lenawee County Patron's Mutual Fire Insurance Co., and names of officers of the county's 34 subordinate Granges.—An equally meritorious Year Book is that issued by Kent County Pomona Grange. In general plan it is similar to the one described above and in every way is fully up to the high mark set by this Pomona in the three or four year books it has previously issued.

COMING EVENTS.

Pomona Meetings.

Gratiot Co., with Liberty Grange, Saturday, May 13.
Arenac Co., with Moffett Grange, at Greenwood, Wednesday, May 17. State Master Hull, speaker.
Lenawee Co., with South Dover Grange, Thursday, June 1. Lecturers' conference conducted by State Lecturer.
Eaton Co., with Needmore Grange, Wednesday, June 7.
Kent Co., with Thornapple Valley Grange, Wednesday, June 7. State speaker, Mrs. E. J. Creyts.
Newaygo Co., with Lincoln Grange, Wednesday and Thursday, June 14 and 15.

Get the Happy Mood—Post Toasties

with cream for a breakfast starter produce it.

And there's a lot in starting the day right.

You're bound to hand happiness to someone as you go along, and the more you give the more you get.

Buy a package of Post Toasties and increase the happiness of the family

"The Memory Lingers"

Postum Cereal Company, Limited
Battle Creek, Mich., U. S. A.

Over 1,000 Gallons
Per Hour
Fairbanks-Morse Eclipse Pumper
Engine and pump jack complete.
\$50.00
F. O. B. Factory
Free catalog No. ME 601
Fairbanks, Morse & Co.
Chicago Detroit

New Wheels
for the Old Wagon
Let us fit your old wagon with "Electric" steel wheels and make it strong and good as new. Another wagon life and a real handy wagon just by buying wheels. Broad tires, never any resetting, no drying apart, rattling or coming loose. Free book gives particulars and shows how it pays big to fit up old wagons with the long-life Electric Steel Wheels. Write for copy. ELECTRIC WHEEL CO., BOX 35, QUINCY, ILL.

I'll Save You \$25.00 And Up
on my 1911 Split Hickory Auto-Seat Buggy. Or 25% saving guaranteed on retail price of any vehicle. Made to order. 30 days' road test—2-year guarantee.
Let Me Pay the Postage on Big Free Book to You
Shows 125 styles. Also harness. Beautiful color-views. Prices astonishingly low. Write me now.
H. C. Phelps, Pres.
The Ohio Carriage Mfg. Co.
Sta. 32, Columbus, O.

I Want Men
Like YOU, Who Want to Make \$3,000 A Year or More
We need a good live man right now in your territory to handle real estate deals for us. No experience or capital necessary. I will teach you the Real Estate Business. Also Commercial, Law and Business Methods, then appoint you representative in your locality. Easy work; large profits. Write for free book.
MORDEN LAND & LOAN CO.,
315 Palace Bldg., Minneapolis, Minn.

\$39.75 Buys This Engine
15 cents runs it 9 hours. The "Matchless" is needed on every farm to run the separator, pump, churn, bone-mill, washing machine. It's so simple a woman can start it. Weighs but 135 lbs. The most powerful small engine. Our free book tells all about the "Matchless" and our 30 day free trial offer. Write for this book today—worth money to you.
WILSON MACHINE CO., 125 E. Grand Ave., Des Moines, Ia.

MARKETS

DETROIT WHOLESALE MARKETS.

May 10, 1911.
Grains and Seeds.

Wheat.—The trade reached a new high point last Thursday; during the three following sessions the market held about steady, and on Tuesday of this week a further decline followed the publishing of the government report, which, though it appeared to be somewhat more bullish than was expected, showed that with fair weather from now till harvest the country will produce within a few million bushels of her highest yield. Rain in the northwest where drouth had threatened for several days, was a particular factor in aiding the bears at the session on Tuesday. It is probable that the market would have shown a greater decline but for the large decrease in the world's visible supply, which brought foreign support to the trade. There is a general belief that the present basis will be held to more or less closely until a new crop arrives. One year ago the price for No. 2 red wheat was \$1.12½ per bu. Quotations for the past week are:

	No. 2	No. 1	Red.	White.	July.	Sept.
Thursday	.....92	.....90½	.....90	.....90	.....90	.....90
Friday	.....91½	.....90	.....89½	.....89½	.....89½	.....89½
Saturday	.....91½	.....90	.....89½	.....89½	.....89½	.....89½
Monday	.....91½	.....90	.....89½	.....89½	.....89½	.....89½
Tuesday	.....90½	.....89½	.....88½	.....88½	.....88½	.....88½
Wednesday	.....91	.....89½	.....88½	.....88½	.....88½	.....88½

Corn.—This grain has suffered declines corresponding to those made in wheat circles. Rapid progress is being made in the corn belt with the new planting, and ideal weather for germinating seed is giving hope to growers that the new crop will be well started. With good crop prospects it is expected that farmers will sell their surplus more closely, and large receipts are anticipated as a result. The market is therefore easy and quiet. One year ago No. 3 corn was selling at 64c per bu. Quotations for the week are as follows:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	.....55	.....56½
Friday	.....55	.....56½
Saturday	.....55½	.....56
Monday	.....55	.....56
Tuesday	.....54½	.....55½
Wednesday	.....55	.....57

Oats.—Following its recent habit of taking the opposite direction from that of wheat and corn, oats this week made a substantial advance in price for both standard and No. 3. Although the crop has been delayed by weather conditions and may suffer as a result, yet the past few days have amended for much that has been lost. However, cash oats are scarce and have a good demand. One year ago the price for standard oats was 45c per bu. Quotations for the week are:

	Standard	No. 3
	White.	White.
Thursday	.....35½	.....35½
Friday	.....36	.....35½
Saturday	.....36½	.....35½
Monday	.....36½	.....36
Tuesday	.....36½	.....36
Wednesday	.....36½	.....36½

Beans.—The only change in this deal was an advance of 2c in the nominal quotations on Monday. No transactions are being closed and the market is inactive and quotations given below are only nominal:

	Cash.	Oct.
Thursday	.....\$1.95	.....\$1.85
Friday	.....1.95	.....1.85
Saturday	.....1.95	.....1.85
Monday	.....1.97	.....1.87
Tuesday	.....1.97	.....1.87
Wednesday	.....1.97	.....1.87

Clover Seed.—The demand for seeding purposes having died out for this season this market has become inactive. Occasionally a few bags are sold, but the volume of business is very meagre. The quotations are as follows:

	Prime.	Alsike.
Thursday	.....\$9.00	.....\$8.75
Friday	.....9.00	.....8.75
Saturday	.....9.00	.....8.75
Monday	.....9.00	.....8.75
Tuesday	.....9.00	.....8.75
Wednesday	.....9.00	.....8.75

Rye.—During the past week No. 1 rye advanced 7c per bu. and is now quoted at \$1. The cereal is very scarce and there exists an active demand for it.

Timothy Seed.—Quotations have made an advance, the price now being \$5.60 per bu., which is 20c above last week's figures. The market is firm.

Flour, Feed, Provisions, Etc.
Flour.—Market is fair with prices steady. Quotations are:
Clear\$4.75
Straight4.65
Patent Michigan4.90
Ordinary Patent4.90
Hay and Straw.—Values for hay have made another advance which restricts consumption. Straw is steady. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$20@21; No. 2 timothy, \$18@19; clover, mixed, \$18@19; rye straw, \$7; wheat and oat straw, \$6.50 per ton.
Feed.—Prices are steady with a week ago. Carlot prices on track are: Bran, \$27 per ton; coarse middlings, \$26; fine middlings, \$28; cracked corn, \$22; coarse corn meal, \$22; corn and oat chop, \$20 per ton.
Potatoes.—Not so many tubers are in farmers' hands as were expected as receipts have not rushed in with the advance in prices, so that now a firm tone prevails and a little better price is being paid. In car lots Michigan potatoes are selling at 48@50c per bushel.
Provisions.—Family pork, \$18@19; mess pork, \$16.50; medium clear, \$15.50@16.50;

smoked hams, 13@14c; briskets, 9½@10c; shoulders, 10½c; picnic hams, 9c; bacon, 14@15c; pure lard in tierces, 8½c; kettle rendered lard, 9½c.

Hides.—No. 1 cured, 10c; No. 1 green, 8c; No. 1 cured bulls, 8½c; No. 1 green bulls, 7c; No. 1 cured veal kip, 11c; No. 1 green veal kip, 10c; No. 1 cured murrain, 9c; No. 1 green murrain, 8c; No. 1 cured calf, 15c; No. 1 green calf, 13½c; No. 2 kip and calf, 1½c off; No. 2 hides 1c off; No. 1 horsehides, \$3.75; No. 2 horsehides, \$2.75; sheepskins, depending on wool, 50c@1.50.

Dairy and Poultry Products.
Butter.—While a healthy demand prevails, the increased production and the disposition of cold storage products made necessary because of the weather, have depressed prices for creamery goods. Dairy butter is steady. Output is increasing. Quotations are: Extra creamery, 21c; do. firsts, 19c; dairy, 16c; packing stock, 14c per lb.
Eggs.—Demand is excellent. Supply is decreasing. Prices advanced a half cent the past week. Fresh receipts, case count, cases included, are quoted at 16½c per dozen.

Poultry.—The market is dull and easy with very little interest. Prices rule steady in all lines. Quotations: Dressing—Turkeys, 15@20c; chickens, 15@16c; hens, 15@16c; ducks, 17@18c; geese, 13@14c lb. Live—Spring chickens, 15@16c; hens, 15@16c; old roosters, 10@11c; turkeys, 15@18c; geese, 11@12c; ducks, 15@16c; broilers, 28@30c per lb.

Cheese.—Michigan, old, 15@16c; Michigan, late, 13@14c. York state, old, 16c; do. late made, 14c; limburger, early, 14@15c; Swiss domestic block, 16@18c; cream brick, 15@16c.

Veal.—Market lower. Fancy, 7@7½c; choice, 6½c per lb.

Fruits and Vegetables.
Cabbage.—Higher. Selling at \$1.75@2 per crate.

Onions.—Steady. Quoted at \$1.50@1.75 per bushel.

Pineapples.—\$1.75@2.50 per dozen.

Apples.—The market is active and firm at steady prices. Baldwins, \$6.50@7; Steel reds, \$6.50@7; ordinary grades, \$4.50@5 per bbl. Western apples, \$2.75@3 per box.

OTHER MARKETS.

Grand Rapids.

Eggs are ½c lower than last week, local dealers paying 15½c. Creamery butter is off half a cent, being quoted at 21c, while dairy is worth 17c. Poultry shippers are paying 12½c for fowls and 28c for broilers. The market on dressed hogs is easy at 7½c. Potatoes have their ups and downs and the range of prices is wide, running from 35@50c, the higher figure being paid at Trufant and Montcalm county stations. Wheat is worth 87c per bushel.

Chicago.

Wheat.—No. 2 red, 94½@95½c; May, 92½c; July, 86½c per bu.
Corn.—No. 2, 53@53½c; May, 52½c; July, 51½c per bu.

Oats.—No. 2 white, 33½@34c; May, 31½c; July, 31½c.
Barley.—Malting grades, 90c@1.10 per bu; feeding, 65@85c.

Butter.—Supplies appear to be accumulating and the market is rather unsettled. Prices, however, show no change from last week. Quotations are: Creameries, 16@21c; dairies, extra, 18c.

Eggs.—The margin between general receipts and graded stock is widening, the better grades moving up ½c this week while general receipts are quoted ½c lower. Market steady with a firm undertone. Quotations are: Prime firsts, 16½c; firsts 16c per doz; at mark, cases included, 13½@14c per dozen.

Potatoes.—This market is again showing signs of weakening, although thus far last week's prices have been fairly well maintained. Receipts continue liberal and the demand is not urgent. Choice to fancy are quoted at 56@58c per bu; fair to good, 53@55c.

Beans.—Generally quiet and steady; red kidneys quoted a little higher. Choice hand-picked beans quoted at \$2@2.05 per bu; prime, \$1.90@1.95; red kidneys, \$2.95@3.25 per bu.

Hay and Straw.—Both hay and straw have advanced an average of \$1 per ton on all grades. Market firm. Quotations: Choice timothy, \$21.50@22.50; No. 1 timothy, \$20@21; No. 2 do. and No. 1 mixed, \$18.50@19.50; No. 3 do. and No. 2 mixed, \$15@17; rye straw, \$9@10; oat straw, \$7.50@8.50; wheat straw, \$6.50@7.50 per ton.

New York.

Butter.—While general advices are to the effect that butter is coming more freely, the market here is quoted higher and steady. Creamery specials are quoted at 23c; extras, 22c.

Eggs.—Prices for all grades advanced. Fresh gathered extras, 19½@20c; firsts, 18@19c; seconds, 16@17c; storage packed, firsts, 18½@19c.

Poultry.—Live. Spring broilers, 30c; Fowls, 14c; turkeys, 13c. Dressed—Fresh killed turkeys, 17@18c; broilers, 30@40c; fowls, 13½@15c per lb.

Boston.

Wool.—The attention of brokers is now directed toward the west, and activity in bidding for the new clip is on the increase, with a tendency toward advancing values for the product, a turn which farmers will greatly appreciate, since the initial bids seemed excessively and unreasonably low after the satisfactory prices realized for the past several years. In London wool prices are higher and there is active bidding for supplies. Following are the leading domestic quotations for the old clip: Ohio and Pennsylvania fleeces—Delaine washed, 30c; XX, 28@29c; fine unmerchanted, 22c; ½-blood, combed, 26@27c; ¾-blood combed, 24½@25c; ¼-blood combed, 23@24c; delaine unwashed, 24c; fine unwashed, 18@20c. Michigan, Wisconsin and New York

fleeces—Fine unwashed, 17½c; delaine unwashed, 23c; ½-blood unwashed, 25c. Kentucky, Indiana and Missouri—¾-blood 25c; ¼-blood, 23c.

Elgin.

Butter.—Market firm at 21½c per lb., which is a half cent below the quotation of last week. Output for the week, 603,700 lbs., as compared with 571,300 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

May 8, 1911.

(Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle, 140 cars; hogs, 12,800; sheep and lambs, 21,000; calves, 2,200.

With 140 cars of cattle on our market here today, and 21,000 reported in Chicago our market opened active and strong 10@20c per cwt, higher than last week.

We quote: Best 1,350 to 1,500-lb. steers \$6@6.25; good prime 1,200 to 1,300-lb. do., \$5.75@6; best 1,100 to 1,200-lb. shipping steers, \$5.40@5.75; medium butcher steers, 1,000 to 1,100 lbs., \$5.15@5.40; light butcher steers, \$4.75@5; best fair cows, \$4.40@5.25; fair to good do., \$3.50@4; common to medium do., \$3.25@3.50; trimmers, \$2.60@3.10; best fat heifers, \$5.40@5.75; good do., \$4.75@5.25; fair to good do., \$4@4.50; stock heifers, \$4.25@4.50, stockers, \$4@4.25; best feeding steers, dehorned, \$5@5.25; common feeding steers, \$4.25@4.50; best bulls, \$5@5.25; bologna bulls, \$4@4.75; stock bulls, common to good, \$3.50@4; best milkers and springers, \$5@6; good to best milkers and springers, \$4@5; common to good do., \$25@35.

With light receipts today, hog market opened 15@20c higher than the close of last week. The bulk of the good quality pigs selling at \$6.60; yorkers, \$6.55@6.60; mixed packer grades, \$6.45@6.55; heavy, \$6.30@6.40; roughs mostly \$5.25@5.40; stags, \$4@4.75. Hogs are well cleaned up today; market closing steady at opening prices. Receipts of hogs at western points were lighter today, with prices showing a slight advance, but we do not think it advisable to become bullish right at this time. Future prices depend entirely on the receipts.

Lamb market opened active today; most of the choice handy lambs selling at \$5.80@5.90. Look for shade higher prices the balance of the week unless receipts should be heavy. Sheep market was a little more active today; most of the choice ewes selling at \$3.75@4; wethers, \$4.25@4.40. Look for about steady prices on sheep the balance of the week.

We quote: Best handy lambs, \$5.80@5.90; heavy lambs, \$4.85@5; bucks, \$3@3.50; yearlings, \$4.50@4.75; wethers, \$4.25@4.50; ewes, \$3.75@4; cull sheep, \$1.50@3; veals, choice to extra, \$6.75@7; fair to good do., \$5.25@6.50; heavy calves, \$3.50@4.50.

Chicago.

May 8, 1911.

Cattle. Hogs. Sheep.
Received today21,000 36,000 25,000
Same day last year.....14,383 27,244 11,124
Received last week.....48,674 154,070 83,520
Same week last year.....45,418 88,350 54,961

Sellers were encouraged today when they found they were able to sell their fat steers largely a dime higher and their butcher stock 10@15c higher, following last week's rise of 10c in steers of good grading and the advance of 10@25c in fat cows and heifers. There was a good demand, with the common to medium cattle going at steady prices. Hogs rallied and sold about a dime higher, under a good shipping demand, following last week's decline of 15@20c. The receipts were much smaller than on recent Mondays, and sales were made at \$5.65@6.20, not many selling at either extreme of the market. There was no marked change in the sheep and lamb market, sheep showing more firmness than lambs, as of late the receipts have embraced very few sheep, owners having sold off most of their holdings. At the close of last week matured sheep were largely 50c higher than a week earlier, while lambs showed advances largely of 25c for the same time. Woolled lambs have advanced more than shorn flocks, as the former have met with competition from shippers to eastern markets. Woolled lambs are salable at \$5@6.50, the top figure being the highest paid in about a month. Shorn stock sold on the following basis: Lambs, \$4.60@5.70; ewes, \$3.25@4.40; wethers, \$4.15@4.45; yearlings, \$4.50@5. A few spring lambs are arriving and find buyers at \$8.50@9 per 100 lbs.

Cattle were in better demand on the whole last week so far as the better kinds were concerned, and they sold more satisfactorily, the improvement being mainly in lots selling about \$6. The bulk of the beef steers went at \$5.35@6.15, with the better class bringing \$6@6.50 and the commoner light weights fetching \$4.85@5.25. Good to choice yearlings had a steady outlet at \$5.75@6.35, while export cattle were salable at \$5.50@6, a good class of killers selling as low as \$5.80. The best showing of choice beefs was made Monday, which is always the big day of the week, and numerous good to choice steers were brought in from Iowa and Illinois feeding districts, while a good number of choice heavy Nebraska cattle were shown that day. It is known that most sections are carrying plenty of good cattle, and in many places there is a general wish to market cattle, but this should be done conservatively in order to avoid so far as possible bad breaks in prices. Butchering lots of cows and heifers have been better sellers at \$3.30@6, a few selling at \$4.15@6.35, while canners sold at \$2.25@2.70, cutters at \$2.75@3.25 and bulls at \$3.50@5.35. Calves were marketed in much smaller numbers, and prices had a regular boom, buyers paying \$3@4 for the coarser lots of heavy weights up to \$6@6.85 for the better class of light

vealers. There was only moderate animation in the stocker and feeder branch of the market, and buyers turned their attention largely to the medium-priced cattle on the stocker order. Heavy feeders that were good enough to be put on full feed at once were taken at \$5.40@5.50, such cattle averaging 1,000 to 1,060 lbs., and a desirable class of feeders brought \$5.25@5.35, while light stockers sold at \$5@5.15, better ones fetching \$5.30 up to \$5.50. Common stockers sold as low as \$4 and common feeders as low as \$4.75. Milk and springers had a fair sale at \$30@65 per head, the best calf being for prime Holsteins around top prices for shipment east.

Hogs have been working downward in prices of late, with steadily increasing supplies, the lowest prices being recorded since 1908. Country shippers persist in glutting the market the first of the week, causing sharp reductions every Monday, and on that day last week hogs sold down 15@20c, the receipts aggregating 57,415 head. Heavy hogs predominated greatly, and an Illinois stock feeder marketed a car load of 30 hogs, about evenly divided between sows and barrows, at \$5.40 per 100 lbs., their average weight being 589 lbs. They were sold to a city butcher. The hogs received have been averaging 246 lbs., the heaviest of a long period, and a gain of five pounds in a single week. The average was 227 lbs. a year ago and 215 lbs. two years ago. The average quality has been first-class, and the only complaint heard from killers is that bacon hogs and pigs are so scarce. These still sell at top prices, with extremely heavy hogs lowest of all. The Chicago stocks of provisions are liberal, aggregating on May 1, 127,175,063 lbs., compared with 122,211,635 lbs. a month earlier and only 67,874,776 lbs. a year ago. Retail prices do not decline in accordance with the reductions in wholesale lots of pork, bacon, hams, etc.

Sheep and lambs of the better class developed more firmness than usual last week under the influence of a larger general demand for well fattened consignments of handy weights, the heavier live muttons going at the usual reductions from prices paid for the lighter weights. The great bulk of the offerings were shorn, and even Colorado lambs came largely clipped. There has been the usual inquiry for feeding lambs, but few were offered, and good light feeders were firm at \$5.25@5.90. There has been a lack of prime flocks of the mutton class, and the percentage of sheep was extremely small.

Horses that were not included in the strictly choice class averaged \$10 per head lower last week as a result of the greatly increased receipts. Country shippers are too lavish in furnishing horses for the market, and unless they act more conservatively, there will be further declines. Sales have been made of good 1,400 to 1,500-lb. chunks at \$200@240, with choice to fancy extra heavy drafters scarce and quotable at \$250@330. Wagon horses and fair light drivers went at \$150@195, better drivers selling at \$200@225.

LIVE STOCK NOTES.

A few shipments of choice Arizona spring lambs have reached the Kansas City market, but no considerable movement is expected for some time yet.

"Regarding the last season, it was a year of disappointment," says a leading Chicago commission firm dealing in wool, in a recent review of the wool market for the last year. "It was a disappointment to the grower because of low prices at shearing time, a disappointment to the dealer because the market remained lifeless most of the time and prices eventually declined to still lower levels. Manufacturers, too, were equally unfortunate, if we may judge from the vast amount of idle factory machinery. The 1911 season has opened with practically the same dull market conditions as prevailed in 1910, and there are two obstacles which seem certain to keep prices down where they are now. The first obstacle is lack of demand. Wool will not go up until mill owners get busy, and they will not get busy until manufacturers of wearing apparel show a much keener desire for woolen goods than at present. Nor will these manufacturers show a desire until wholesalers, retailers and the general public begin a much more active buying of woolen wearing apparel. The probable revision of the tariff is a second obstacle in the way of higher prices. Frankly, manufacturers prefer foreign wools and woolsens, and if the tariff were reduced, it would probably cause a further slump in an already weak market. The bare possibility of such a change in the tariff seems sufficient to prevent any advance over the present price of wool, and may cause a decline."

There is a movement in some parts of the country on the part of farmers to begin breeding beef cattle, it being plainly evident that the time for securing stockers and feeders at anything like reasonable prices has passed away, never to return. Such farmers are keeping their well-bred calves with a view to maturing them, either as "baby beef" or holding them until they become prime, heavy beefs. They are at the same time looking around for high-grade bulls and well-bred cows, and sales of such breeders are gradually increasing, especially where the prices asked are not too high. Farmers living in sections where land has not reached extremely high prices stand a particularly favorable show for success along these lines.

The time has arrived when farmers owning heavy fat cattle should lose no time in getting them marketed, for warm weather is close at hand, and the summer months are unfavorable ones for selling heavy beefs, the popular demand centering on light cuts of beef. The dearthness of beef also tends to make sales of heavy cuts of beef much smaller than in former years, and then eggs are so cheap that they are largely substituted for beef.

THIS IS THE FIRST EDITION.

In the first edition the Detroit Live Stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

May 4, 1911.

Cattle.

Receipts, 1,375. Heavy grades steady; light butchers and common grades strong. We quote: Best steers and heifers, \$5.75@5.80; steers and heifers, 1,000 to 1,200, \$5.25@5.50; steers and heifers, 800 to 1,000, \$4.75@5.25; steers and heifers that are fat, 500 to 700, \$4.50@4.85; choice fat cows, \$4.50@4.85; good fat cows, \$4@4.25; common cows, \$3@3.50; canners, \$2.50@3; choice heavy bulls, \$4.75@5; fair to good bolognas, bulls, \$4.25@4.50; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4.50@5; fair feeding steers, 800 to 1,000, \$3.75@4.25; choice stockers, 500 to 700, \$4@4.50; fair stockers, 500 to 700, \$3.50@3.75; stock heifers, \$3@3.25; milkers, large, young, medium age, \$4@5.50; common milkers, \$2.50@3.50.

Bishop, B. & H. sold Hammond, S. & Co. 1 bull weighing 1,170 at \$4.50, 1 do weighing 1,660 at \$5.35 steers av 1,116 at \$5.80, 1 bull weighing 1,470 at \$4.85, 1 cow weighing 840 at \$3.75; to Parker, W. & Co. 5 steers av 940 at \$5.50, 2 do av 1,040 at \$5.50, 8 do av 1,040 at \$5.40, 19 do av 1,350 at \$5.55, 1 bull weighing 1,230 at \$4.50, 1 cow weighing 870 at \$4; to Mich. B. Co. 7 cows av 1,120 at \$4.25, 11 butchers av 925 at \$5.10, 29 steers av 1,081 at \$5.40; to Bresnahan, Jr., 5 heifers av 644 at \$4, 12 steers av 690 at \$4.85; to Rattowsky 1 cow weighing 970 at \$3.75, 2 cow and bull av 840 at \$4; to Kamman B. Co. 10 steers av 1,164 at \$5.65; to Newton B. Co. 30 butchers av 820 at \$5.15, 6 do av 1,038 at \$5.25, 1 bull weighing 940 at \$4.35, 21 steers av 1,066 at \$5.65, 1 do weighing 820 at \$5.25; to F. & P. Co. 4 cows av 1,012 at \$3.50, 7 do av 954 at \$3.50; to Thompson Bros. 2 bulls av 1,635 at \$4.65, 9 steers av 1,071 at \$5.30, 2 cows av 960 at \$3.30, 4 do av 1,020 at \$4.50, 5 steers av 902 at \$5.35, 1 cow weighing 1,140 at \$4.25, 4 do av 1,067 at \$4.30, 7 do av 1,064 at \$4.25, 4 heifers av 702 at \$4.90, 1 bull weighing 1,200 at \$4.50, 4 steers av 1,052 at \$5.50, 4 do av 805 at \$5; to Mich. B. Co. 29 butchers av 920 at \$5.25, 35 steers av 926 at \$5.50.

Roe Com. Co. sold Kamman B. Co. 2 cows av 910 at \$5, 18 steers av 925 at \$5.40; to Mich. B. Co. 6 bulls av 986 at \$4.40, 19 steers av 850 at \$5.50, 14 do av 626 at \$5; to Parker, W. & Co. 3 cows av 1,026 at \$3.50, 2 do av 825 at \$2.50, 2 butchers av 690 at \$4.

Haley & M. sold Hammond, S. & Co. 2 bulls av 1,015 at \$4.65; to Goodwin 3 cows av 1,033 at \$4.35.

Spicer & R. sold Sullivan P. Co. 1 bull weighing 1,280 at \$4.50, 1 do weighing 1,570 at \$4.75, 3 cows av 1,117 at \$4.25, 2 do av 1,075 at \$3.25, 1 do weighing 960 at \$3, 1 do weighing 670 at \$2.50, 15 steers av 886 at \$5.30, 30 do av 1,077 at \$5.80, 10 do av 1,188 at \$5.80, 8 do av 894 at \$5.25; to Kull 1 cow weighing 1,000 at \$4; to Parker, W. & Co. 2 bulls av 575 at \$4, 1 do weighing 870 at \$4, 2 cows av 1,000 at \$4; to Bresnahan 1 do weighing 920 at \$3.50, 1 bull weighing 680 at \$4, 4 heifers av 567 at \$4, 4 do av 417 at \$3.50; to Sullivan P. Co. 22 steers av 945 at \$5.50, 2 do av 935 at \$5, 2 do av 870 at \$5.10, 9 do av 900 at \$5.10, 3 cows av 1,177 at \$4; to Newton B. Co. 3 butchers av 923 at \$5, 5 cows av 1,012 at \$5.50, 1 cow weighing 1,350 at \$4.50, 2 do av 1,065 at \$4.25.

Lowenstein sold Mich. B. Co. 24 cows av 1,100 at \$4.25.

Hely sold Goose 8 cows av 1,200 at \$4.25.

Weeks sold Hammond, S. & Co. 26 butchers av 936 at \$5.25, 1 bull weighing 1,430 at \$4.80.

Veal Calves.

Receipts, 1,350. Market steady Wednesday's prices; 25c higher than last Thursday. Best, \$5.75@6; others, \$4@5.50; milch cows and springers steady.

Bishop, B. & H. sold Rattowsky 22 av 133 at \$5.40; to Brant 13 av 100 at \$4.25; to Newton B. Co. 2 av 130 at \$5, 2 av 180 at \$6.25; to Goose 38 av 140 at \$5.65; to Parker, W. & Co. 25 av 135 at \$5.50, 17 av 155 at \$6.25; to Thompson Bros. 24 av 135 at \$5.50, 1 weighing 140 at \$4; to Sullivan P. Co. 2 av 140 at \$5.75, 2 av 115 at \$5.75; to Friedman 12 av 130 at \$5.50, 3 av 130 at \$5.50; to Nagle P. Co. 6 av 115 at \$5, 84 av 130 at \$6, 5 av 118 at \$4.50, 20 av 140 at \$6; to Mich. B. Co. 18 av 130 at \$5.70; to Sullivan P. Co. 16 av 135 at \$6, 10 av 143 at \$6; to Nagle P. Co. 11 av 150 at \$5.35; to McGuire 21 av 135 at \$6; to Burnstine 16 av 135 at \$5.50; to Thompson Bros. 9 av 105 at \$4.50.

Spicer & R. sold Sullivan P. Co. 2 av 170 at \$6, 7 av 140 at \$4.50, 9 av 135 at \$5.50, 7 av 135 at \$5, 3 av 110 at \$3.50, 8 av 115 at \$4.75; to Mich. B. Co. 4 av 130 at \$5.75; to Parker, W. & Co. 37 av 120 at \$5.25; to Goose 4 av 130 at \$4.50, 14 av 135 at \$4.50; to Sullivan P. Co. 4 av 145 at \$5.75; to Newton B. Co. 20 av 143 at \$6.

Roe Com. Co. sold Hammond, S. & Co. 2 av 110 at \$4.50, 6 av 145 at \$6, 49 av 138 at \$5.65; to Goose 26 av 135 at \$5.25, 17 av 110 at \$4.35; to Sullivan P. Co. 1 weighing 150 at \$6, 3 av 120 at \$4.50.

Haley & M. sold Parker, W. & C. 27 av 135 at \$5.25; to Newton B. Co. 3 av 140 at \$5.50, 7 av 135 at \$5, 24 av 145 at \$6.

Buck & W. sold Street 11 av 135 at \$5.50.

Jedele sold Burnstine 2 av 140 at \$6.

Dancer & K. sold same 4 av 150 at \$6.

Long sold same 2 av 115 at \$5, 3 av 145 at \$6.

Dancer & K. sold Sullivan P. Co. 6 av 120 at \$3.50, 13 av 120 at \$5.50.

Belheimer sold Barlage 22 av 140 at \$5.75.

Groff sold Schuman 22 av 130 at \$5.50.

Sheep and Lambs.

Receipts, 2,745. Market 10c higher than on Wednesday; 15@20c higher than last week. Best lambs, \$5.40; fair to good lambs, \$4.75@5.25; light to common lambs \$3.75@4.25; fair to good sheep, \$3.75@4; culls and common, \$2.50@3; spring lambs, \$8.50@9.

Bishop, B. & H. sold Sullivan P. Co. 4 sheep av 105 at \$3, 35 lambs av 73 at \$5; to Parker, W. & Co. 219 lambs av 90 at \$5.25; to Breitenbeck 50 do av 78 at \$4.50; to Mich. B. Co. 48 do av 74 at \$5.30; to Breitenbeck 21 do av 55 at \$4; to Sullivan P. Co. 6 sheep av 85 at \$3.25; to Newton B. Co. 166 lambs av 77 at \$5.40; to Sullivan P. Co. 23 spring lambs av 45 at \$9, 166 lambs av 80 at \$5.35; to Fitzpatrick Bros. 17 sheep av 85 at \$4.25.

Roe Com. Co. sold Hammond, S. & Co. 24 lambs av 115 at \$4.75, 6 do av 60 at \$4. Spicer & R. sold Street 30 lambs av 65 at \$4.35, 71 do av 77 at \$5.40; to Mich. B. Co. 40 do av 63 at \$4.65; to Sullivan P. Co. 17 do av 70 at \$5.25, 4 sheep av 77 at \$3.50, 20 lambs av 85 at \$5.35.

Davies sold Marx 30 lambs av 75 at \$5.

Jedele sold Hammd, S. & Co. 4 sheep av 72 at \$3.50, 11 wool lambs av 65 at \$6.25.

Hogs.

Receipts, 7,850. Bidding 10@15c lower than Wednesday; at noon none sold.

Range of prices: Light to good butchers, \$6; pigs, \$6; light yorkers, \$6; heavy, \$5.70@5.75.

Bishop, B. & H. sold Parker, W. & Co. 1,425 av 160 at \$6, 2,050 av 180 at \$5.95, 515 av 215 at \$5.90.

Roe Com. Co. sold Hammond, S. & Co. 325 av 190 at \$6, 320 av 200 at \$5.95.

Haley & M. sold same 140 av 180 at \$6, 380 av 190 at \$5.95.

Spicer & R. sold same 315 av 170 at \$6, 150 av 190 at \$5.95.

Sundry shippers sold same 410 av 185 at \$5.95.

Friday's Market.

May 5, 1911.

Cattle.

Receipts this week, 1,367; last week, 1,187. Market steady at Thursday's prices. Best steers and heifers, \$5.75@5.85; steers and heifers, 1,000 to 1,200, \$5.25@5.60; do. 800 to 1,000, \$5@5.25; do. that are fat, 500 to 700, \$4.50@5; choice fat cows, \$4.50; good fat cows, \$4@4.25; common cows, \$3.25@3.75; canners, \$2.50@3; choice heavy bulls, \$4.75; fair to good bologna bulls, \$4.50@4.65; stock bulls, \$3.75@4.25; choice feeding steers, 800 to 1,000, \$4.50@5; fair feeding steers, 800 to 1,000, \$4.25@4.75; choice stockers, 500 to 700, \$4.50@4.75; fair stockers, 500 to 700, \$4@4.50; stock heifers, \$3.50@4; milkers, large, young, medium age, \$4@5.50; common milkers, \$2.50@3.

Receipts this week, 1,563; last week, 1,764. Market steady at Thursday's prices. Best, \$5.75@6; others, \$4@5.50. Milch cows and springers steady.

Sheep and Lambs.

Receipts this week, 3,237; last week, 3,251. Market dull at Thursday's prices. Few sold up to noon; quality not so good. Best lambs, \$5@5.25; fair to good lambs, \$5@5.10; light to common lambs, \$4@4.50; spring lambs, \$8@9; fair to good sheep, \$3.50@4; culls and common, \$2.50@3.

Hogs.

Receipts this week, 9,909; last week, 6,626. Market steady at Thursday's prices. Light to good butchers, \$5.90@6; pigs, \$6; light yorkers, \$5.90@6; heavy, \$5.75@5.80.

The Chicago market for butchering cattle, after a period of unusually high prices, has changed for the worse, and cows and heifers have had big breaks in prices. Owners in many instances express much disappointment, but grass is getting into good condition, and farmers will send a good many female cattle to pasture for the summer season. Good corn-fed cows and heifers have to be marketed without unnecessary delay, however, and many lots could have been sold at much higher prices several weeks ago.

VETERINARY.

(Continued from page 536).

an eight-year-old mare that suffers from shoulder lameness but is not much sweeneyed. I also have a two-year-old colt that is troubled with weak stifles. I forgot to say that when the mare stands she points her foot. J. C. Sunfield, Mich.—Pointing the foot indicates foot lameness and the shoulder trouble may be the result of lameness low down. Blister coronet and shoulder with one part red iodine mercury and ten parts cerate of cantharides every ten days. The same application may be used to advantage on stiff joints of colt.

Garget.—My cow came fresh five weeks ago and since then one-quarter of bag has been caked, making it very difficult to get any milk from it. There is a lump in upper part of teat, but I imagine it is growing smaller. W. A. B. Benzonia, Mich.—Apply one part iodine and ten parts lard or vaseline to diseased quarter three times a week and give 2 drs. iodine potassium at a dose in feed twice a day.

Navel Infection.—Have had several calves taken sick when they were one day old; they appear to be weak, scour some and after a few days' treatment appear to pick up, but in a few days have a relapse. I have thought it might be the result of their mothers eating too much cottonseed meal or ensilage. G. H. D. Zeeland, Mich.—Apply one part carbolic acid and 30 parts water to navel

of every young calf soon after birth and treat them once a day until the parts are healed. Give each sick calf 1 oz. castor oil at a dose once a week; to check their bowels give a half teaspoonful of tincture opium at a dose three or four times a day until the bowel movements check. Also give 5 grs. salol at a dose three times a day.

Cow Has Bloody Discharge.—My cow calved April 22, and seemingly cleaned all right, but since then she has had a bloody discharge and I would like to know how to treat her. J. W. D., Levering, Mich.—Dissolve 1 dr. permanganate potassium or a tablespoonful of carbolic acid in a gallon of tepid water, and wash out vagina daily until discharge ceases. Also give her a teaspoonful powdered sulphate iron and two tablespoonfuls of bicarbonate soda at a dose in feed twice a day.

Enlarged Gland—Warbles.—I have a cow that has two peculiar ailments, one is a bunch in throat as large as a goose egg, with two black spots in it about the size of a small marble. I also got two worms out of her back; they are the kind of worms that live in rotten wood and are very much like a horse bot. F. B. Irons, Mich.—The bunch on jaw is an enlarged gland and will gradually reduce if you will apply tincture iodine daily. The grubs in back should be squeezed out and killed; where the opening is not large enough make it larger by making the wound in skin larger, using a sharp pen knife. Apply to wounds one part coal tar disinfectant, 15 parts water.

Pup Has Goitre.—I have a pup four months old that is troubled with goitre and I would like to know if you can give me a remedy for an ailment of this kind. G. B. Farwell, Mich.—Give your pup three or four drops of syrup iodide of iron at a dose in feed once or twice a day and if the bunch in neck does not reduce in ten days, increase the dose and continue increasing it every ten days until it has the desired effect.

Yeast Treatment for Barrenness.—I would like to have you tell me how the yeast treatment is prepared and applied to prevent barrenness. W. O. Union City, Mich.—The yeast treatment is effective in curing barrenness in cattle and horses when the disorder is due to an acid condition of the genital tract. In cases where the animal does not come in heat it has no value. The solution is made as follows: Put two heaping teaspoonfuls of yeast in a pint of boiled water. Set the solution near the stove and maintain at a warm room temperature for about five hours; then add three pints of boiled water and keep it warm for another five hours. By this time the solution will have a milky appearance and is ready for use. Flush the parts with warm water and inject the yeast. The animal should be mated from two to eight hours later.

Acidity of Stomach—Kidney Trouble—Sidebone.—I have been greatly benefited by reading the veterinary column of the Michigan Farmer, but fail to find a remedy for my case. Our five-year-old horse is thin, is inclined to chew wood and rubbish; besides, his urine is thick and muddy. When first starting he appears to travel stiff in hind quarters; he also has a small bunch on side of fore heel. O. E. S., Charlotte, Mich.—Give your horse 1 oz. bicarbonate soda, ½ oz. powdered rosin and ½ oz. ground gentian at a dose in feed two or three times a day. When this remedy seems to produce the desired result, lessen dose and taper off treatment. Apply one part red iodine mercury and eight parts lard to sidebone twice a week.

Vaginal Polypus.—My 18-year-old mare seems to leak blood from vagina, not so much when working as when lying down at night, for I find quite a quantity of blood behind her in the morning. J. E. S., Lansing, Mich.—She should be examined as the blood may come from a small vaginal polypus which, when removed and blood vessels tied, she will get well.

FARMS AND FARM LANDS FOR SALE OR EXCHANGE

For Sale—Choice Farm, Stock and Fruit Lands in Gladwin and Clare Counties. We have 20,000 acres of fine unimproved lands, also some improved farms. Write us for maps and folders. A. J. STEVENS & CO., Gladwin, Michigan.

80 acres good land, 40 under cultivation. Fine location near R.R. two miles from town. Price \$100, part cash. Write 2000, A. McPhee, Jr., R. 4, Cass City, Mich.

90-Acre Farm—¾ from Romeo, near car line. Buildings in good condition, plenty of fruit, 12 acres timber, good water and soil. Price \$5,000. Eldred, Elliott & Co., Real Estate Dealers, Romeo, Mich.

PEACH ORCHARD of 15,000 fine bearing trees; 300 acres in tract; 250 in cultivation; loading switch on land; dwelling, barns, packing sheds, stock wagon, implements, tools. Price \$35,000 per acre. D. L. WRIGHT, JEFFERSON, TEXAS.

WHY PAY RENT when you can buy the Best Land in Michigan at from \$8 to \$10 an acre near Saginaw and Bay City. Write for map and particulars. Clear title and easy terms. Stafford Bros., (owners) 15 Merrill Bldg., Saginaw, W. S. Michigan.

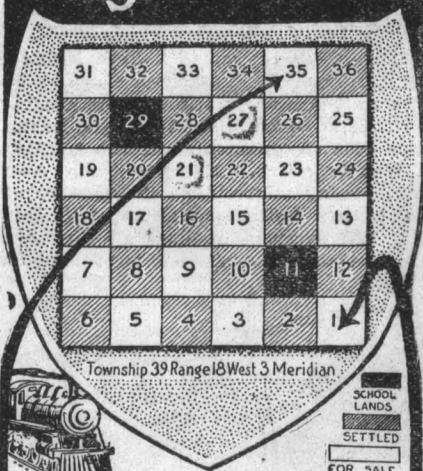
MINNESOTA—Free 200-page Book. Compiled by State. Accurate information about price of lands in, and products of each county. 2,000,000 Acres Home-Steal Lands. Farm Laborers Wanted. Farms for Rent. Address STATE BOARD OF IMMIGRATION, Room 229, State Capitol, St. Paul, Minn.

ALABAMA NEEDS 50,000 FARMERS

Dairymen and stock raisers to supply her local markets with butter, poultry, vegetables, hogs and cattle. The best lands in the world can be had at \$5 a farm in Alabama, where the climate is delightful, where you can raise several crops each year on the same land, and find a ready market for the same. We are supported by the State and sell no lands. Write for information and literature.

STATE BOARD OF IMMIGRATION, Montgomery, Alabama.

Let the Canadian Pacific Railway Show You the Way to Wealth



Come to Golden Saskatchewan

Own a farm where the wonder wheat crop of the World is produced—where every man who is willing to work succeeds; and whose success is the personal care of the Canadian Pacific Railway.

Every one of these 160 acre home farms offered by the C. P. R. is a genuine snap—near a railway and in settled conditions. Act quick if you want one. Here are two

Saskatchewan Snaps

N. ½ OF SECTION THIRTY-FIVE. 320 acres. Gently rolling, south slope, fine dark clay loam, clay sub-soil. Good growth of grass. Well adapted to grain growing. 285 acres can be cultivated immediately. 6½ miles from St. Alphege siding, 1 miles from Wolfe station. Price, \$15.00 per acre. Easy payments.

WHOLE OF SECTION ONE. 640 acres. Gently rolling prairie, north slope. Good brown loam on reddish clay sub-soil. Good growth of grass. Well adapted to general farming. 600 acres can be cultivated immediately. 2½ miles from Wolfe station. Price, \$15.00 per acre. Easy terms.

If neither of these is just what you want, tell us what you would like and we will find it for you.

You can do as hosts of others have done, make the first crop pay for the land. For instance: an average crop of but 25 bushels of wheat at only 80c will yield \$1200 on 60 acres. Such land can now be had as low as \$10 per acre. With first cash payment, \$1.50 per acre down, balance on long time easy payment plan.



Write To-day, NOW. Let the great Canadian Pacific Railway show you the way to wealth. Prices are lower now than they will ever be again, so act quickly if you want to better your condition in life.

Canadian Pacific Railway
General Land Department
179 Higgins Avenue, WINNIPEG, CAN.
F. T. GRIFFIN
Land Commissioner

A Southern Minnesota Farm

is your best investment. We have a few well improved farms that are the best bargains in this country. Remember, they are in a well settled community, with schools, churches, fine transportation, plenty of rainfall, good soil, and best markets. State which you prefer, dairying, live stock raising, or general farming.

SOUTHWESTERN LAND CO.,
126 Jackson St., Mankato, Blue Earth County, Minn.
Marshall, Lyon Co., Minn. "Live Agents Wanted."

Fine Fruit Farm
Receipts \$3,000 in 1910

One of the best in Oceana County, Mich., thrown on the market to close immediately at a remarkable sacrifice: 80 acres, 1600 peach trees, all in fine condition, 300 plums, cherries, apples, pears and grapes; acre in berries; receipts from fruit alone last year \$3,000 besides big crops of corn, potatoes, wheat and hay; some good muck soil for celery, onions, beets, etc.; splendid 12-room residence, convenient outbuildings; near school, village, railroad, cannery; if taken immediately pair horses, cows, flock sheep and lambs in at the low price of \$6,500 for all, part cash. For traveling directions to see this and several other tremendous bargains in money-making Michigan farms, all improved, from \$500 up, see "Chicago Edition" of Strout's Farm Catalogue 34, just out, copy free. Station 101, E. A. STROUT, 407 South Dearborn St., Chicago, Ill.

When writing to advertisers just say "Saw your ad. in the Michigan Farmer."

Woman and Her Needs At Home and Elsewhere

The Buttonhole Stitch With Variations.

By Mae G. Mahaffy.

There is scarcely a stitch in the needle-work realm which is so useful, and at the same time so ornamental, as the familiar buttonhole stitch. Everyone who does plain sewing understands the making of the tailor's buttonhole stitch, but possibly not everyone realizes all that can be done with the simpler form used in

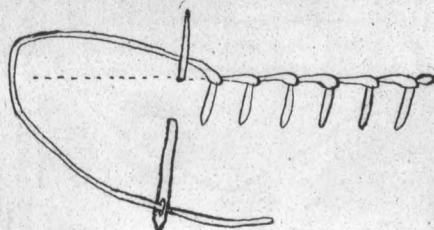


Fig. 1.

embroidery, several varieties of beautiful stitchwork having this stitch as a background entirely, or making use of it in connection with one or two other simple stitches.

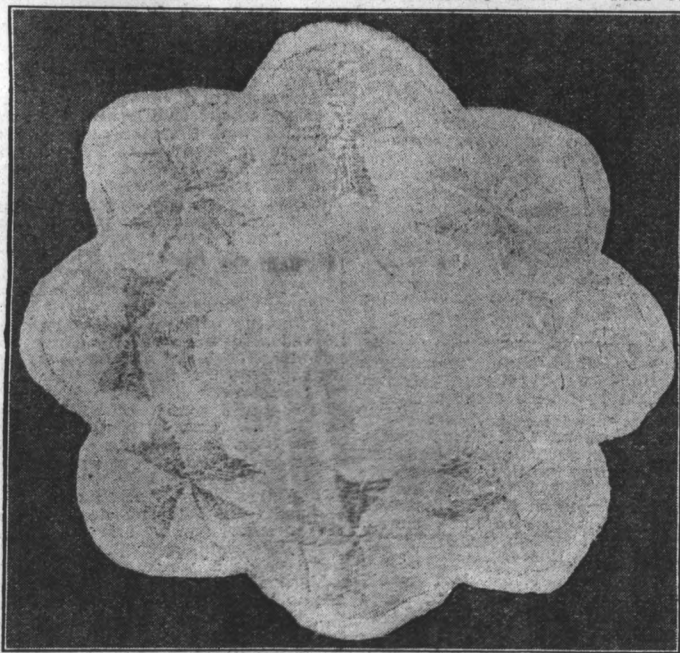
In the tailor buttonhole the thread is thrown around the point of the needle, so that a sort of knot is formed. In the embroidery buttonhole stitch the thread is simply carried under the point of the needle. To be more definite, the needle is brought up at the left edge of the line to be followed, and while the thread is held down with the thumb of the left hand the needle is inserted above this line, brought out on it beside the starting point, but over the thread. As it is drawn through a loop is made. This appears at Figure 1. The stitches are purposely placed apart in this drawing, though in ordinary work they must be crowded up, as in Figure 2. Blanket stitch, Figure 3, is a form of buttonhole stitch used for finishing the edge of flannels, seams, etc., and is placed at regular intervals. It may be varied by grouping two or three stitches close together, and then spacing. It is also frequently used to couch or hold down one or more threads of different color.

Figure 2 shows the method to be followed when the buttonhole stitch is to be used as an edge for scalloped centerpieces, dollies, etc. The outline of the scallops is first run with a strand of padding cotton. This may be the same floss as is used for the outer work, or of ordinary darning cotton, if the regular padding cotton is not at hand. After the running stitch is placed the space between the two rows is filled with stitches of the padding. These should be placed

between those of the padding, utterly spoiling the finished work.

Figures No. 4 and No. 5 show other variations of this magic stitch. In Figure 3 is arranged in graduated trios, battlement form, with one group in graduated lengths, but at varying angles. Any of these stitches prove decorative features for underclothing, baby's clothes, or for inner lines in fancy work generally. The edge is hardly firm enough for severe wear if cut out, since the stitches are not placed sufficiently close, but for flannel or other closely woven material they will answer nicely. If additional strength is needed an outer row of close buttonholing may be placed. One can also work the trios and battlements close together, making the usual safe edge. Spacing, however, is necessary for the other design.

In Figure 5 the work may be placed apart or together. A row is worked on one edge, and the material turned and a similar row placed exactly opposite, the stitches being midway between each pair of the former row. When set some distance apart this is called ladder button-



Dolly Finished in Wallachian Embroidery.

holing. It is a good plan for use in embroidering large lines, scrolls, and for slender leaf forms where a fancy stitch is required.

Figure No. 6 shows the buttonhole stitch placed first one edge and then the other of a simulated band. This, too, is good for filling rows or other long, narrow spaces. Figures 7, 8 and 9 are variations of the brier or feather stitch, only another name for buttonholing, since it is the buttonhole stitch which is utilized. The stitches and the spacing are both slanted. In Figure 9 only very short spacing is needed.

Figure 10 is known to lace workers, as well as embroiderers, usually as the Brussels or Point de Bruxelles stitch, owing to the similarity to Brussels net. A row of spaced buttonholing or blanket stitch is first worked, the loops of the floss being left loose in each stitch, and as regular as possible. Each succeeding row is worked through the loops of the one preceding, thus drawing it down honey-comb fashion. Only the rows along the outline are taken through the material. This is a splendid stitch for covering large figures, which are outlined in some pleasing stitch afterwards, like stem, overcast, chain, etc.

Figure 11 shows a leaf worked in buttonholing, the purled edge being placed along the midrib in working both sides. This obviates the necessity of outlining a midrib in some other way, and gives a pleasing variety, especially in large designs. This and the three following samplers place the stitches somewhat apart, the process showing up better in the cuts in this way. In genuine embroidery they must be close-set and even.

Figure 12 shows solid buttonholing for each leaf, the same edge being purled throughout the group. Such work is good for conventional figures, large chrysanthemums, groups of rather straight leaves, etc. The various petals may be shaded, each petal being a trifle darker than its predecessor.

Figures 13 and 14 show buttonholed effects seen in the popular Wallachian embroidery. Leaves or petals of flowers are worked with the purled edge outward, first up one side and down the other, as in the dolly, the meeting of the stitches forming the veins or divisions. The stitches may be slanted to conform to the contour of the figure. The ring shown is met with in many of the Wallachian designs, and simply requires crowding the buttonhole stitches close in the center, spreading them evenly on the edge. Eyelets may be worked in this way by piercing the center. Ivory or brass rings are covered in much the same manner.

The Wallachian embroidery hails from the province of Wallachia, and is made up entirely of buttonhole stitches. The work may be done in white or colors, and is exceedingly durable. It is used for any household embroidery, and is occasionally met with on dress accessories. Done in the washable blues or reds it is quite

practical, though, of course, for real service nothing is so satisfactory as white. Beautiful effects are obtainable in varied color schemes, however, and are charming on dark background fabrics for scarfs, sofa pillows, and the like.

THE SUNDAY DINNER.

Cream of Corn Soup, Croutons

Salmon Box

Mashed Potatoes Asparagus on Toast

Fruit Salad with Sweet Salad Dressing

Coffee Jelly

Cream of Corn Soup.—Soak one cupful of dried corn over night, or use one tin of canned corn. Cook until tender enough to put through a fine sieve. Then add one pint of white sauce, made with one pint of rich milk, scalded, and a tablespoonful each of butter and flour. Put through the sieve again and reheat. Whip a cup of cream and add just before sending to the table.

Salmon Box.—For a large family, two cans of salmon will be needed. Line a baking dish with cold boiled rice, fill with boned and flaked salmon, pour over it one cup of rich milk, cover with rice and bake for 30 minutes, taking care not to get too brown.

Asparagus on Toast.—Scrape the branches, after breaking off all woody portions, wash thoroughly, then tie together and boil in salted water until tender. Arrange on slices of toast and pour over all a white sauce, to which has been added a beaten egg.

For the sweet salad dressing, boil one

U-S EVERLASTING
NON-BREAKABLE
RECORDS

FIT ANY PHONOGRAPH

Never lose their full tone-value and are guaranteed not to injure the reproducing point of any phonograph. Will not wear, chip, break or crack.

SPECIAL OFFER
To Phonograph Owners

On receipt of 25c (coin or stamps) we will mail 1 two-minute record, price 35c, and one four-minute record, price 50c.

Eighty-five Cents Value for a Quarter.

This introductory offer is for a limited time and only one set sold to each person.

Be sure and write for handsomely illustrated Phonograph Catalog No. 16 and complete List of Records.

The U-S Phonograph Company
Associated with
The Bishop-Babcock-Becker Co.
CLEVELAND, OHIO



STYLISH
DRESSES

are quite largely a matter of wise selection of material. Select

Pacific
percales

(Fifty Years the Standard)

and you secure a serviceable and fashionable cotton dress material for Spring and Summer wear.

Pacific Percales come in Oriental and fancy designs, in pencil stripes, polka dots, plaids, and in both delicate and rich color tones. For dresses, kimono, wrappers, shirtwaists, children's dresses, etc., Pacific Percales always insure rich character, out of the ordinary and up-to-the-minute patterns; positively longest wear. Preferred by shrewd,

stylish women, who want to dress elegantly yet inexpensively.

Ask your dealer for genuine Pacific Percales and see that this trade mark is on each piece—the guarantee of the greatest percale value.

If your dealer does not carry Pacific Percales, write us for free samples and list of retailers who will supply you.

PACIFIC MILLS - BOSTON, MASS.

The Farmer's Son's Great Opportunity

160 ACRE
FARMS IN
WESTERN
CANADA
FREE

Why wait for the old farm to become your inheritance? Begin now to prepare for your future prosperity and independence. A great opportunity awaits you in Manitoba, Saskatchewan or Alberta, where you can secure a Free Homestead or buy land at reasonable prices.

Now's the Time

—not a year from now, when land will be higher. The profits secured from the abundant crops of Wheat, Oats and Barley, as well as cattle raising, are causing a steady advance in price. Government returns show that the number of settlers in Western Canada from the U.S. was 60 per cent larger in 1910 than the previous year.

Many farmers have paid for their land out of the proceeds of one crop. Free Homesteads of 160 acres and pre-emptions of 160 acres at \$3.00 an acre. Splendid climate, good schools, excellent railway facilities, low freight rates, wood, water and lumber easily obtained.

For pamphlet "Last Best West," particulars as to locations and low settlers' rate, apply to Sup't Immig., Ottawa, Can., or to Can. Gov. Agt.

M. V. McInnes
176 Jefferson Ave., Detroit, Mich.
C. A. Laurier, Marquette, Mich.

(55)



Sanitary Dumbwaiter

Saves time, labor, money.

Simple in design—

Small expense to install—

Small cost \$15 and up.

For old or new HOUSE. FREE!

THIRTY DAYS' TRIAL.

Send card today for circular. Address Box 94B

VanFleet & Waffle, Ewart, Michigan.

Lowered into cellar & open

Raised above floor & open.

For old or new HOUSE. FREE!

THIRTY DAYS' TRIAL.

Send card today for circular. Address Box 94B

VanFleet & Waffle, Ewart, Michigan.

Harness at Wholesale Prices!



Direct from our shops to you.

FREIGHT PAID.

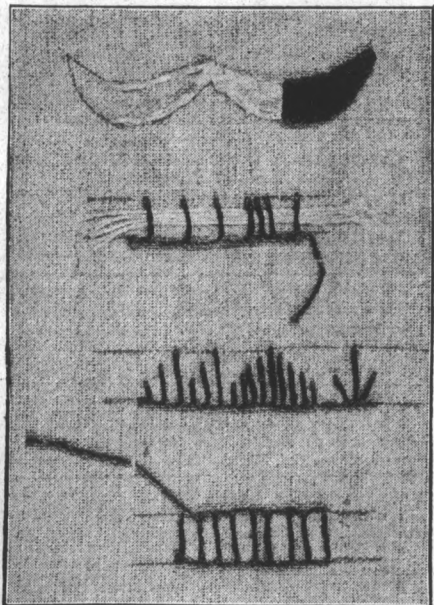
We Can Save You Money.

Write to-day for a copy of our

HARNESS BARGAIN CATALOG

JOE'S HONEST HARNESS CO., CARO, MICHIGAN.

MENTION the Michigan Farmer when writing to our advertisers.

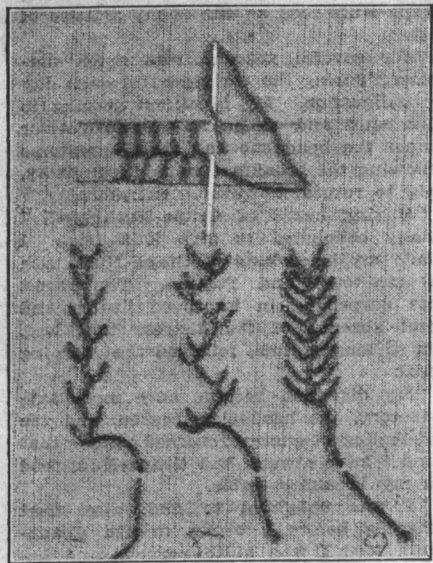


From Top to Bottom Figures are Numbered 2, 3, 4 and 5 respectively.

close together, somewhat heaped up toward the center, so that the scallops will stand up clear and distinct. The buttonholing proper is then made across these stitches. Any padding must be placed at right angles to the outer stitches. If it is not the outer stitches will sink down

cup of sugar and one cup of water until it begins to thicken. Cool, and add the juice of one lemon and two tablespoonfuls of pineapple juice. Use any fruit you have, bananas, oranges, pineapple, cherries or diced apple.

Coffee Jelly.—Soak half a box of gelatine in a fourth of a cup of cold water for 15 minutes. Then pour over it three



Top Figure, No. 6. From Left to Right at Bottom are Nos. 7, 8 and 9.

cups of boiling coffee, add three-fourths of a cup of sugar, and when all is dissolved strain through two thicknesses of cheesecloth.

OUT WITH THE FEATHER BED.

The day of spring housecleaning is upon us and the sound of the carpet beater and the tack hammer is abroad in the land. Closets are being turned inside out, parlors aired, bedrooms overhauled and bedding and bed furnishings cleaned in countless homes. As a fitting finish to the annual upheaval, why not relegate that pet feather bed to the attic, where its old companion, the cornhusk tick, has long resided, and accustom yourself to the habit of sleeping on your mattress?

You have long had mattresses, but still you kept to your feathers, notwithstanding hygienists told you that sleeping on an animal product was unhealthy. But the warmth and softness of the feathers allured you and you clung to your idol.

Perhaps you have the idea that a mattress couldn't possibly be as soft as a feather bed, and you may have just grounds for that belief. Possibly your mattress isn't so soft, because there are mattresses and mattresses. But if you look into the matter thoroughly you will

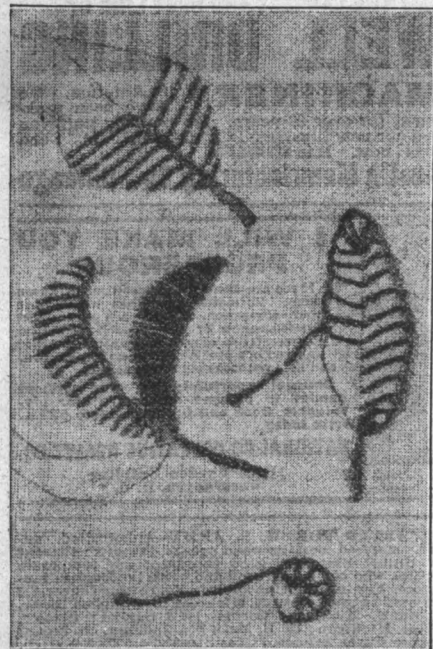


Fig. 11 at top; beneath it Fig. 12; to the right, Fig. 13; at bottom, Fig. 14.

find there are mattresses made which are every bit as "comfy" as your old friend, and much more sanitary, if we are to believe the domestic science experts. Take the cotton felt mattresses, for instance. When of the best quality, you will find them every bit as satisfactory and restful after a hard day's work as any feather bed could possibly be. Cotton picked fresh from the fields and run through a felting machine, is the only thing used in their construction and

certainly our conception of cotton is of something light, springy and soft.

The first cost of the best quality mattress may seem high, but in the end it is always cheapest to buy the best. A cheap mattress can not be made over, while a good one may be renovated. Besides, it may be used and used without this expense of making over, by placing it occasionally in the sun, as the action of the sun will bring it up and make it light again after it has become packed down by use.

MEN, WOMEN AND HOMES.

BY ELLA E. ROCKWOOD.

Mrs. and Mrs. Smith built a new home last summer. It is a beautiful one and provided with every modern improvement, but in planning it the dominating spirit was the masculine. The arrangement of the rooms, the character of the decorations, the placing of the windows and doors were according to the ideas of the head of the house, and the woman who was to have the care of the home was scarcely consulted, or if she was given an opportunity to express an opinion her wishes were unheeded in almost every instance. The result is a number of rooms which, while beautiful to look at, are inconveniently arranged for work, and very hard to take care of.

Mrs. and Mrs. Jones also built a new home last year. Mr. Jones paid the bills, but the plans were submitted to his wife for approval and she was given the right to make any alterations she saw fit. I say she was given the right to make alterations, but would it not be acknowledged by all fair minded persons that such was hers without any concession? When it came to finishing the walls, the decorator suggested to Mr. Jones that cer-

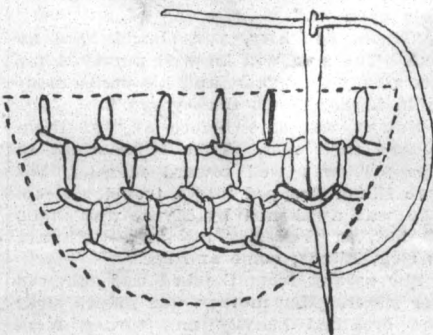


Fig. 10.

tain changes in the color scheme submitted to him might be advisable.

"Consult with my wife," was the reply. "I would not think of dictating on such a subject. She is to have it exactly as she wants it."

A third new home built last autumn is owned by Mr. and Mrs. Brown. They talked over the matter together and decided upon a certain sum which the house was to cost. Mrs. Brown went over the plan, which she had formulated as being about what she wanted as to the number of rooms and their general arrangement, with the architect and found that it could be brought within the sum named. The final plans she submitted to her husband, but he told her to arrange things to suit herself as he considered that she was more competent than he to decide a matter in which she was the more vitally interested.

The first woman is living in a beautiful home but it is not arranged for convenience in doing the work because planned by a man who did not take that part into consideration. The two others planned their homes themselves and every window, door and cupboard is placed exactly where best calculated to facilitate the housework and make it as easy as possible. Which way is best?

A CRACK FILLER.

Dear Editor:—A good crack filler is made by shredding old newspapers into tiny bits and stirring into glue all the paper it will take up. Fill the cracks with this and leave to harden.—M. A. L.

SHORT CUTS TO HOUSEKEEPING.

From now on through the spring if potatoes are put on to boil in cold water instead of hot, they will be much whiter. It also improves them to sprinkle with salt after draining, and give them a few shakes.—F. D. C.

For housecleaning time try wood ashes and a scrubbing brush to clean the smooth finished plastered walls. I used them on my kitchen walls and worked wonders.—Mrs. W. B. S.



MARTHA WASHINGTON COMFORT SHOES



Sensitive, feverish, aching feet get lasting relief from Martha Washington Comfort Shoes. They fit like a glove and are as easy as a stocking. No buttons or laces—just complete and lasting comfort.

MARTHA WASHINGTON COMFORT SHOES
rest the feet. Be sure you get the genuine. There are many inferior imitations. Reject as counterfeit anything offered that has not the Mayer name and Trade Mark stamped on the sole. The best merchants handle the genuine.

The real Martha Washington has the name and the Mayer Trade Mark stamped on the sole. If you can't find a dealer, write to us.

Free—If you will send us the name of a dealer who does not handle Martha Washington Comfort Shoes we will send you free, postpaid, a beautiful picture of Martha Washington, size 15x20.
We also make Honorbilt Shoes for Men, Leading Lady Shoes, Yerma Cushion Shoes, Special Merit School Shoes and Mayer Work Shoes.

F. MAYER BOOT & SHOE CO., Milwaukee, Wis.

BEWARE OF IMITATIONS

MILWAUKEE CUSTOM MADE

\$15.00 You Save all Retailers' and Jobbers' Profits **\$9.85**

Direct from Factory to You. We Pay the Freight.
Send for **FREE** Tick Samples and Illustrated Folder.

When you pay more for a Mattress you are doing one of two things: you are paying **BIG PROFITS TO RETAILERS AND JOBBERS** or you are paying for fancy high-priced Magazine Advertising. We sell direct to you at one narrow profit over actual cost of material at factory. You get far greater value and save \$5 to \$7.50 a Mattress. Being used in thousands of homes and **GIVING PERFECT SATISFACTION**. Your Mattress comes direct to you, all transportation charges prepaid, in our originally sealed bale of dust-proof paper and burlap. It reaches you as fresh and clean as the day it left the Finisher's table in our factory. Safe delivery guaranteed.

MATTRESS WEIGHS FULL 55 POUNDS
10 Pounds More Than the Ordinary Kind
EXTRA THICK—EXTRA SOFT SPRINGY
Built For Comfort and Service

Built up of extra quality Soft, Light, Airy Cotton sheets giving the Worthmore Mattress that Extra Thickness, Extra Softness And Springiness—not found in any other Mattress, regardless of make or price weighing only 40 to 45 lbs. We Use Best Quality Satin Finish Dust Proof Ticking At No Extra Cost. Tufted and stitched all by hand. Worthmore Mattresses will not lump up, get hard or wear into hollows. Never requires "making over." An occasional sun bath keeps them fresh and clean. Two Months Free Trial Right In Your Own Home. If not entirely satisfactory we will promptly return every cent you paid us. So send us the measurements of your bed, attach check, postal or money order and we'll send your Mattress the same day. Full size Mattress (4-6x6-4) cost \$9.85. Smaller sizes proportionately low prices. **SEND FOR FREE TICK SAMPLES AND ILLUSTRATED FOLDER.**

THE WORTHMORE BEDDING COMPANY
Reference: German National Bank. **STATION D, DEPT. F, CINCINNATI, O.**

Why rent?

Own your own farm.

Nothing down—9 years to pay.

Don't give up the best of your crops to a landlord.

Haven't the money to buy!
You don't need money.
Here is a wonderful opportunity.
The Panhandle of Texas needs settlers.
It is the country along the Santa Fe, in the northwestern part of Texas.
The land is level prairie. It is the original residual soil—deep, rich and fertile. For years it furnished the finest pasture. Now it is too valuable for range purposes. The owners are selling it for general farming.
I want to tell you about the opportunities for settlers on these Panhandle lands. (The Santa Fe has no land to sell.)
I know one owner who will sell you a farm for only \$20 an acre. You don't have to pay a cent for two years. After that you pay one-seventh each year, with interest at 6 per cent from date of purchase.
But you must live on and cultivate the soil.
Have you ever heard of a proposition like that?
Another proposition, at the same price, requires \$2 an acre down, the balance in ten equal payments, with interest at only 6 per cent.

These are but two of the many opportunities open to real homeseekers in the Panhandle.
Owners of these lands will not sell to speculators. The land must go to actual settlers. They want to see the country built up. They want the crops coming into their towns and the trade of prosperous farmers who are owners of the land they farm.
The Santa Fe, too, is anxious to see the country developed. It wants to haul the people and their goods and products.
The country is in splendid condition this spring. Nearly 3 inches of rain in February. Everything ready for you.
Let me send you our folder, "The Panhandle and South Plains." It tells all about this country—its soil, climate, rainfall, water supply and crops. Let me put you in touch with the men who own the land. Let me tell you about the opportunity the Santa Fe affords twice a month to go and see this land at reduced rates.
Don't wait. Make the break.
Write me to-night, if only a postal. You will be glad.
C. L. SEAGRAVES, Gen. Colonization Agt., A. T. & S. F. Ry., 2213 Railway Exchange, Chicago.

PIT AND PITLESS SCALES

CHICAGO SCALE CO.
ORGANIZED 1863
1021 JACKSON BLVD.
CHICAGO, ILL.

WRITE FOR PRICES

ALL SCALES WARRANTED

Family, Portable and Dormant Scales, Scales, Sewing Machines, Engines and Trucks.

Mention the Michigan Farmer when writing to advertisers.

HOME AND YOUTH

JOAN OF ARC.

BY Z. I. DAVIS.

Once 'neath a humble peasant roof
There dwelt a maiden, kind and good,
Who daily toiled, and sewed, and spun,
And cheerfully did what she could.
Within the shadow of the church
Some pilgrim's heart was often stirred
By listening unto her prayer
Couched in a voice like some sweet bird.

As sunshine, was her presence bright;
Her thoughts, pure as new fallen snow,
Wreathed in undimmed, celestial light
With naught to quench their ceaseless flow.
Angelic beings to her came,
Veiled in the glory of the sky,
Winged seraphs known to Heaven's fame
With grand commission from on high.

For France she plead, her native land,
Torn with the battle's bloody strife.
To her the Powers gave command
And bade her save her country's life.
The tender maiden, loved and mild,
With holy zeal and true heart brave
Obeyed as trustful as a child
And wrought her country's life to save.

To arms the hosts of France she led,
Nor faltered in her holy soul
When from a cruel wound she bled
But onward pressed toward the goal.
At last, through her, they crowned the king
And won for France the dear-bought prize
That made sad hearts with gladness sing—
Her young life paid the sacrifice.

Ah, would we do a noble deed,
To bless and help humanity,
Then this life's lesson we must heed:
For others' sake ourselves deny.

ONCE A MORMON.

BY IRMA B. MATTHEWS.

Synopsis of Preceding Chapters.—Promoters of a new colony, claiming to be ministers, enter a prosperous New York state community and persuade a number of farmers to sell their homes and join them. Among the colonists thus secured are Amos Brandon, his wife, his young daughter, Elinor, his married daughter, Myra, and her husband, James Baldwin. Another married daughter, Rosetta, and her husband refuse to join. The site selected is on one of the Beaver islands, in Lake Michigan, and the colonists are transported there by boat. Just before reaching their destination the chief promoter reveals himself to be one James Strang, leader and ruler of the Mormon kingdom which he had established on the island. Under the title of king he claimed to rule in accordance with revelations received direct from the Supreme Being. Strang absented himself from the island the first winter, during which the colonists suffered severely, and on his return sought to relieve them and at the same time makes war on the Gentiles by making public a so-called revelation that it was lawful for his people to seize the property of the Gentiles. He also prescribed a certain mode of dress for the women, at which Elinor rebelled, although her father, who seemed completely under the control of Strang, tried hard to enforce obedience. During the first summer Strang decided to have himself crowned king, and Elinor, in the company of her young admirer, Robert Stuart, attended the coronation. The rule of Strang now became oppressive; the seizure of property by the Mormons was still sanctioned and many Gentiles fled from the island. His law regarding women's dress was disregarded by Elinor, although the king seized and burned her wardrobe in his futile effort to compel her to adopt the prescribed dress. A little later Strang proclaimed a revelation sanctioning plural marriages, at which his own wife deserted him and fled from the island. Some of the colonists indignantly counseled rebellion, but the majority, among them Amos Brandon and his son-in-law, continued blindly to trust and follow Strang. As matters grew worse the women of the colony held an indignation meeting and implored Strang to change his views regarding polygamy but without avail. He retaliated by commanding his elders, among them James Baldwin, to take additional wives. Myra Baldwin fled to her father's home and on his refusal to shelter her Amos Brandon's wife demanded her share of their property that she might independently support and protect her daughters.

Amos Brandon turned pale. He had not just counted on this. That his wife would take the part of her child he knew, but that she would ever think of leaving him was another matter. He knew, too, that were his wife to persist in her demands he would be sadly crippled for both land and funds.

"But, Martha, cannot you see that if I harbor Myra I shall get into no end of trouble. Elinor has made me trouble enough as it is, and you have upheld her in it, and now—"

"It makes no difference to me. You have your choice. If she goes I go, and I do not intend my children shall want."

"Very well, have it your own way, but if harm comes to us all you will have no one to thank but yourself."

"God is still in his heaven, Amos, and He is amply able to care for me and mine. That wicked man will not always prevail, remember that!" Myra, however, turned to her mother with a sob.

"Let me go, mother dear; it does not matter what becomes of me now. I do not want to stay here and make trouble for you also," but her mother would not listen. "If you go I shall," she answered firmly as she tried to soothe the poor girl. She had asserted her rights, but from that day no one ever saw Martha Brandon smile again. The sunny nature that had been hers so many long years seemed turned to stone and left her hard and cold, showing tenderness to no one but her children. Tormented by thoughts of the past, perhaps, and finding no pleasure in his sorrowing household, Amos Brandon spent more and more of his time away from home.

James had come to the house and tried to induce Myra to return to her home but she shrank from him with fear and loathing, and Mrs. Brandon forbade his ever coming again. "You have spoiled the life of the woman you swore to love and cherish," she declared, "and we never wish to see you again." He went away, but what his thoughts were no one knew.

It was not long after this that Elinor, walking in the forest not far from her home, came face to face with Strang. She was startled and turned to flee but he stepped before her.

"Have you learned yet to obey, my pretty rebel?" he asked, but she made no answer. "I warn you that you will soon be in a position where you will have to regard my word," he smiled meaningly. Elinor did not understand his meaning in the least but she grew sick with fear at the look in his eyes.

"I have answered you once, King Strang," she said haughtily, "and that should be enough. I shall never change. Will you allow me to pass now?"

"Beware, girl," he scowled as he stepped aside. "My time will soon come."

Chapter XIII.

For some days after her meeting with Strang, Elinor did not trust herself to go far from the house, and then only if Myra or her mother was with her, although she thought to herself that her home was no protection for her so long as her father was one of the king's men. She said nothing of it at home, however, for she felt there was trouble enough there. Myra was languid and half ill and her mother was much concerned about her. Then another blow fell. Mr. Brandon returned to his home one evening, bringing with him a young girl, not much older than Elinor, whom he introduced as his wife and gave orders she should be well cared for.

He turned away and went to see about things outside without waiting to see what kind of a reception his new wife received.

Mrs. Brandon turned to her daughters. "Take what things you can carry," she said, "and carry them to the old house." The most of the things inside had been her own, brought from a former home. She added, "What is mine I will have, but do not take one thing your father has bought."

The girls obeyed. The old house stood some distance from the new and was the first shelter built when they came to the island; as the years had passed and had proved prosperous, Mr. Brandon had built a more pretentious home. It was to this former one, still standing, and with a little work made habitable, that Mrs. Brandon had directed her daughters to carry the things. She herself worked with feverish energy, hoping to get away without again encountering her husband.

The young wife watched the preparations in silence at first. She was shy and quiet, but at last she cried out, "I did not mean to come here and turn you all out; oh, indeed, I did not. I was told you were willing I should come. Won't you please forgive me and stay," she entreated, while tears stood in her eyes. Mrs. Brandon paused in her task to look at her companion compassionately. "Poor child, for you are indeed nothing more, I do not blame you, I pity you. I dare say you are innocent of wrong, as my own daughters here are. It is not on your account I must leave but his."

"I wish I had not come," cried the other with a burst of tears. "But, indeed, the king made me."

"I do not doubt that," answered the elder woman, and Elinor, as she heard, felt sick at heart.

When Mr. Brandon returned to the

house he found a strangely dismantled home and a tearful wife.

"They have all gone," she sobbed; "I have driven them all from their own home and it is cruel and a shame."

"So much the better," answered her husband, grimly; "there has not been much peace with them lately anyhow, but I think some of them will come to time before long. Come, we will get some supper, and tomorrow we will see about buying some new things. The ones they have taken were only old ones anyhow."

Mr. Brandon no longer feared the threat of his wife to have her share in the property, for had not the king assured him that it should all be his if he obeyed him and that there was no other law here but his? How was his wife to get help from outside to fight him, and, if she did, of what avail when every officer was a Mormon and bound to do the will of the king?

Meanwhile, in the other house the women were working feverishly. They did not say much—their burden was too great for words. Besides, what was there that they could say. Under their hands the house soon took on an air of neatness and Elinor built a fire in the old fireplace and tried to prepare a little supper from the things she had hastily collected on leaving the other house. Where more provisions were to come from when those were gone they had not asked themselves as yet. They knew a good share of the property was rightfully their mother's and they gave it no other thought than that.

Mrs. Brandon, however, refused the food her daughter offered her. "I cannot eat tonight," she said, turning piteous eyes toward her. The look broke Elinor down. "Oh, mother dear, to think that you must suffer so," she sobbed. "I could bear anything better than this. Oh, how I hate the man that has brought all this upon us."

"Hush, daughter, you should hate no one. The man will be well punished for his sins, do not fear, and his punishment is in higher hands than yours."

But it was late before any of them sought their rest. Then it was not to sleep; it was well toward morning before Elinor dropped into a troubled sleep. She was awakened by Myra, who stood by her, in the early morning. "Mother is sick, Elinor; come and see."

She sprang from the bed and followed her sister. Her mother was indeed sick; she breathed heavily and turned from side to side, moaning every now and then.

Elinor was frightened and Myra was aroused from her own grief by the condition of her mother. "What shall we do?" she asked again and again, "what shall we do?"

Elinor did not answer. She dressed hurriedly, and, going to the door, saw her father about his morning work. She crossed the yard and confronted him. "Mother is very sick," she said abruptly. "Will you get medical help for her?"

"Sick is she? Well, it is no more than I expected and I hope you girls are satisfied, dragging her over in that old damp house to stay. If you are, and will move her back where she belongs, I will see she is well taken care of, but I cannot do it while she stays there."

Elinor's eyes flashed. "She would rather die than be taken into that house to witness her own disgrace and yours, and you know it. Do you think if she dies you will get possession of what is hers?"

"There is nothing hers," he answered calmly.

"You know better than that; you know how grandfather's will read as well as I."

"It may be as well for you to understand that Strang is ruler of this island and the maker of the laws. Who can come here and say him nay?"

The full force of the whole thing rushed over Elinor in the twinkling of an eye. The king had set aside her mother's claim to the property and, as her father said, who was to say him nay. She grew sick at heart but she answered bravely, "That we must leave the future to settle, but will you send us aid? That is the question now?"

"I have answered you."

"Very well," and she turned away. She went back and told Myra what she had learned. "There is no use applying to the Mormons. They would not dare help us if they wanted to do so, but I know a woman in the Gentle settlement who knows much about the sick. I believe she will help us and I will go and see."

"Do not be gone long," pleaded her sister.

"I will hurry as fast as possible, Myra."

She did hurry, almost running some of the way, her mind filled with bitter

FOOD IN SERMONS

Feed The Dominie Right and the Sermons Are Brilliant.

A conscientious, hard-working and successful clergyman writes: "I am glad to bear testimony to the pleasure and increased measure of efficiency and health that have come to me from adopting Grape-Nuts food as one of my articles of diet."

"For several years I was much distressed during the early part of each day by indigestion. My breakfast seemed to turn sour and failed to digest. After dinner the headache and other symptoms following the breakfast would wear away, only to return, however, next morning."

"Having heard of Grape-Nuts food, I finally concluded to give it a trial. I made my breakfasts of Grape-Nuts with cream, toast and Postum. The result was surprising in improved health and total absence of the distress that had, for so long a time, followed the morning meal."

"My digestion became once more satisfactory, the headaches ceased, and the old feeling of energy returned. Since that time I have always had Grape-Nuts food on my breakfast table."

"I was delighted to find, also, that whereas before I began to use Grape-Nuts food I was quite nervous and became easily wearied in the work of preparing sermons and in study, a marked improvement in this respect resulted from the change in my diet."

"I am convinced that Grape-Nuts food produced this result and helped me to a sturdy condition of mental and physical strength."

"I have known of several persons who were formerly troubled as I was, and who have been helped as I have been, by the use of Grape-Nuts food, on my recommendation." Name given by Postum Company, Battle Creek, Mich.

"There's a reason."

Read the little book, "The Road to Wellville," in pkgs.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Rider Agents Wanted

In each town to ride an exhibit sample 1911 bicyc. Write for special offer.
Finest Guaranteed 1911 Models \$10 to \$27
with Coaster-Brakes and Puncture-Proof tires.
1909 & 1910 Models \$7 to \$12
all of best makes....
100 Second-Hand Wheels
All makes and models, \$3 to \$8
good as new.....
Great FACTORY CLEARING SALE
We Ship on Approval without a cent deposit, pay the freight, and allow 10 DAY'S FREE TRIAL.
Tires, coaster brake rear wheels, lamps, sundries, parts and repairs for all makes of bicycles at half usual prices. DO NOT BUY until you get our catalogues and offer. Write now.
MEAD CYCLE CO. Dept. 8.77, CHICAGO.

THE LARGEST AND BEST LINE OF
WELL DRILLING
MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 14. Send for it now. It is FREE.
Austin Manufacturing Co., Chicago

I WILL MAKE YOU PROSPEROUS
If you are honest and ambitious write me today. No matter where you live or what your occupation, I will teach you the Real Estate business by mail; appoint you Special Representative of my Company in your town; start you in a profitable business of your own, and help you make big money at once.
Unusual opportunity for men without capital to become independent for life. Valuable Book and full particulars FREE. Write today.
NATIONAL CO-OPERATIVE REALTY CO.
E. R. HARDEN President
1612 Marden Building
Washington, D. C.

WANTED FOR U. S. ARMY—Able-bodied, unmarried men, between ages of 18 and 35; citizens of United States, of good character and temperate habits, who can speak, read and write the English language. For information apply to Recruiting Officer, 212 Griswold Street, Detroit, Michigan; Heavenrich Block, Saginaw, Michigan; Corner 1st & Saginaw Streets, Flint, Michigan; 110 E. Main St., Jackson, Michigan; corner Huron Avenue & Quay Street, Port Huron, Mich.

Let Me Start You In Business!
I will furnish the advertising, matter and the plans. I want one sincere, earnest man in every town and township. Farmers, Mechanics, Builders, Small business men, anyone anxious to improve his condition. Address Commercial Democracy, Dept. D 30, Elyria, Ohio.

YOUNG MEN WANTED TO LEARN VETERINARY profession. Catalogue free. GRAND RAPIDS VETERINARY COLLEGE, Dep. 11 Grand Rapids, Mich.

PATENTS: For facts about Prize and Reward offers and Inventions that will bring from \$5000 to Ten Million Dollars, and for books of Intense Interest to Inventors, send 8c. postage to Pub. Patent Sense, Dept. 88, Barrister Bldg., Washington, D. C.

ALWAYS mention the MICHIGAN FARMER when you are writing to advertisers.

thoughts as she reviewed her life since coming to this island. She had come a care-free girl, and now she was a woman embittered with injustices. She found the woman she sought, who listened to her story gravely.

"I will go home with you and do what I can and tell you what to do, but I can not stay with you as I would gladly do if I could, for we are soon to leave the island. It is no longer safe for my husband here."

She went with Elinor in a short time, but when she saw the invalid she shook her head and looked pityingly at the two girls.

"The truth, we want the truth," cried Elinor as she saw the look; "you do not think we are going to lose our mother!"

"I think it is doubtful if your mother ever recovers," answered the other, gently, "although she may linger some time. I should judge she has been failing for some weeks and some shock has caused the present symptoms."

"You are right," said Elinor, slowly, as she reviewed rapidly the past few weeks. "We might have noticed, had our minds not been so occupied with other things." Then Elinor related to this sympathetic listener something of what they had passed through.

"I wish I could do more for you," she said when leaving them, "but may God have you in His keeping is my prayer."

Chapter XIV.

The days that followed were like a nightmare to the two lonely girls as they watched over their mother, gradually getting weaker and weaker. When Amos Brandon found that his wife was really seriously ill some of the tenderness he had always had for his gentle wife must have returned, for he went to see her and offered everything for her comfort. But the visit was not repeated. Mrs. Brandon was so much worse after seeing him that her daughters would not allow him in her presence again, as they feared she could not stand the agitation. Every day, however, he inquired about her and seemed really sorry that she did not improve. Myra and Elinor took turns in resting and caring for their mother, but the strain was telling on them both.

One evening, about a week after she was taken ill, Elinor had walked a short distance from the house to enjoy a bit of fresh air when suddenly a figure stood beside her.

"Robert," she exclaimed.

"Yes, Elinor. I have been to the other side of the island and I did not know of your trouble until today. I have been watching for you for some time, hoping you might come outside, for I wanted to see you alone."

Elinor did not answer for a moment. She had not seen Robert so often of late and she sometimes wondered if he, too, had deserted her, and yet—well, perhaps it would be as well if he did.

"Have you no word of welcome for me?" he asked.

She raised her face to his. It was white in the waning light. "I have not so many friends that I can afford not to welcome one," she answered sadly, "but my heart is full," and in spite of herself, as she saw the sympathy in his face, the tears came and she sobbed aloud.

"Poor girl," he answered, "you are indeed passing through deep waters. I wish, Elinor, you would give me the right to help you bear your burdens. You need me now. You must have long known that I love you. Will you, dear?"

She could not answer at once but he passed his hand caressingly over her bowed head, waiting patiently until she could speak. At last she looked up. "I wish you had not spoken, Robert," she said sadly, "for it can never be."

"Why not? Is it that you do not care enough for me?"

"No, it is that I care too much. I can never marry a Mormon."

"But why?" he asked, still puzzled.

"O, Robert, need you ask why when you see the havoc it has wrought in my family? Look at Myra and my mother."

"But, dear, you need never fear such a fate as theirs," he answered quietly as light began to break upon him. "I should never take another wife. I do not believe in the practice."

"So James said," she declared wearily, "even the morning of his second marriage."

"But do you compare me to a weak man like James Baldwin?" indignantly.

She looked at his determined square-cut jaw and smiled faintly. "No, and it is not that I distrust you, Robert, but others. The king hates me; he would, I believe, do anything to make me miser-

able. He is not satisfied with what he has already done and were I married he would know there was no surer way than to send another woman into my home, and he would lose no time in doing so. He would lay his commands on you."

"I would never obey."

(To be continued.)

MUSIC IN OUR HOMES.

BY MRS. FRED NISEWANGER.

No house is really a "home" if it is entirely without music, and no music is so lastingly satisfactory as that made by competent members of the home and their friends, but it is in something of a repentant-sinner spirit that I come advocating machine-made music, too.

Something like a year ago, a favorite farm paper so persistently urged that a phonograph be placed in each farm home and talked so slightly of expensive piano lessons with their hours of tiresome, family-annoying practice that, in a "straight talk" letter the journal invited its readers to send, I diagnosed their case as "sickness of musical soul" and all but accused them of running in advertising matter among their editorials. Since then, we have both improved; neither is so radical today.

Last December a real musical treat came to our little town. Quite a renowned college glee club of twenty voiced stopped off for one evening on its western tour, presumably because its president's home is in this town.

Although seven miles from town, we felt that we could not miss this opportunity. Our children range in age from three to ten, and we usually stay at home rather than have them out at night, but the older ones were anxious to hear the music and there was no one to leave them with, so we broke the general rule.

The program did not close till nearly eleven and by the time we drove home, had a little hot lunch and got to bed, the clock warned us that we could not often repeat the performance on our own account, and less often on the children's, although all had enjoyed the evening. The next week there was one of the latest and best phonographs in this farm home and we were urging all our neighbors who had not done so before, to "go and do likewise."

The Waldorf can scarcely furnish better orchestral accompaniment with a ten-course dinner than is now possible with our more modest meals and an evening in a cozy room, in easy chairs, with four-minute records of the works of musical artists is preferable to fourteen miles of frosty drive—as a regular thing, at least.

Enjoying good music, feeling responsible for the children's taste along that line, and knowing that there is both education and degeneration in innocent-looking wax records, we have tried to choose wisely. Of course, the collection includes some of the pretty "popular" music but we are all becoming familiar with some of the best operas and with the work of a number of the best vocal and instrumental artists of the world—a thing impossible to most rural dwellers under any other condition. We began our collection of records modestly and have added two or three a week since, at various times, so as to always have something new and not become tired of anything.

The piano still holds first place—and always will, but the phonograph is a close second and, while we are becoming more efficient in piano work, stands as an encouragement and an example. One cannot hear it reproduce Benzler, Lange, or any of the rest, without renewed desire and determination.

But as for "long, tiresome, family-annoying hours of practice"—there are none. These are made enjoyable for the children by the application of modern methods in music, and are taken as a matter of course by them, the same as their school work. And when the "family" is properly attuned, it does not get "annoyed," for there is music in even harmonious practicing, it is only discord that is noise and an annoyance.

There are comparatively few Paderewskis and Melbas, but with ordinary training, there are many who are a comfort to themselves and a pleasure to their friends. Music should no more be considered a luxury than are those articles of food and clothing not absolutely essential to physical health, and those parents that can at all afford to supply the necessary lessons but consider them "too expensive" are almost criminally negligent for all normal children like music in some form, and to deny them this is to stunt perfect development and narrow their lives.

SUMMER UNDERWEAR

Strong Elastic Ventilated Absorbent Cool

"Porosknit" is worn by more men and boys than any other underwear in the world. It satisfies two million wearers every summer. Absorbs more sweat than a thick shirt, and the open texture evaporates it at once. That keeps you comfortable, even on hot days.

Wear "Porosknit" in the field and when you are dressed up. Try a suit.

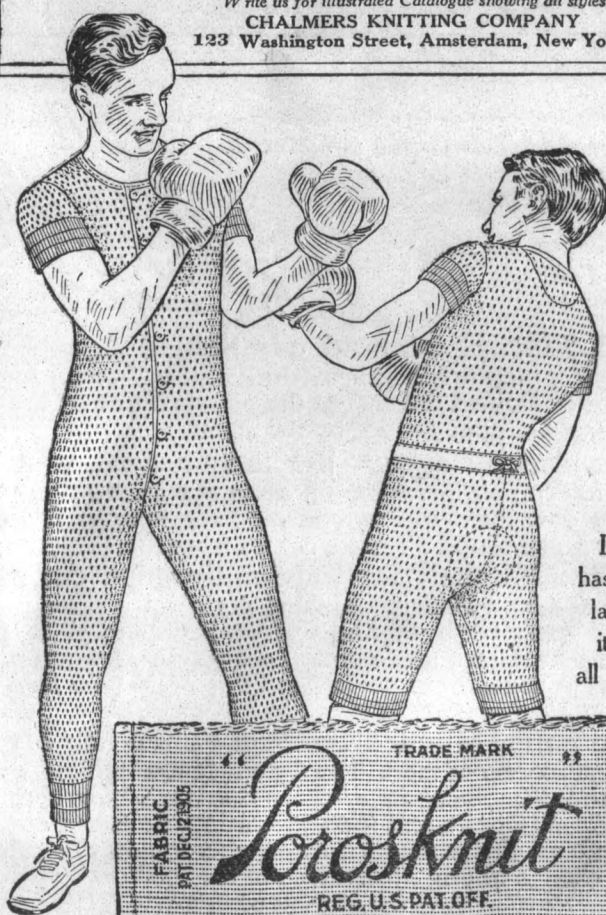
MEN'S Any Style BOYS' 50c Shirts and Drawers 25c

Men's Union Suits, \$1.00 Boys' Union Suits, 50c.

Write us for illustrated Catalogue showing all styles

CHALMERS KNITTING COMPANY

123 Washington Street, Amsterdam, New York



If it has this label it is all right

ANYBODY CAN LAY IT.

Rubber Roofing

Warranted For Twenty-Five Years. FREIGHT PAID To Any Station East of Rocky Mountains, except Texas, Colorado, New Mexico, N. Dakota, S. Dakota, Wyoming, Montana. Special prices to these states on request.

ONE-PLY . . . Weighs 35 lbs., 108 Square Feet, \$1.10 per roll.
TWO-PLY . . . Weighs 45 lbs., 108 Square Feet, \$1.30 per roll.
THREE-PLY . . . Weighs 55 lbs., 108 Square Feet, \$1.50 per roll.

TERMS CASH: We save you the wholesalers' and retailers' profit. These special prices only hold good for immediate shipment.

Indestructible by Heat, Cold, Sun or Rain.

Write for FREE SAMPLES or order direct from this advertisement. Satisfaction guaranteed or money refunded. We refer you to Southern Illinois National Bank.

CENTURY MANUFACTURING COMPANY, Dept. 404, East St. Louis, Ills.

Ever-Ready

Safety Razor

With 12 Blades

ENTIRE OUTFIT 3,000,000 in use. Sold and guaranteed by dealers everywhere.

AMERICAN SAFETY RAZOR CO. NEW YORK.

Be An Independent Buyer Spend One Cent For This Big FREE Book

A Kalamazoo Direct to You

TRADE MARK REGISTERED

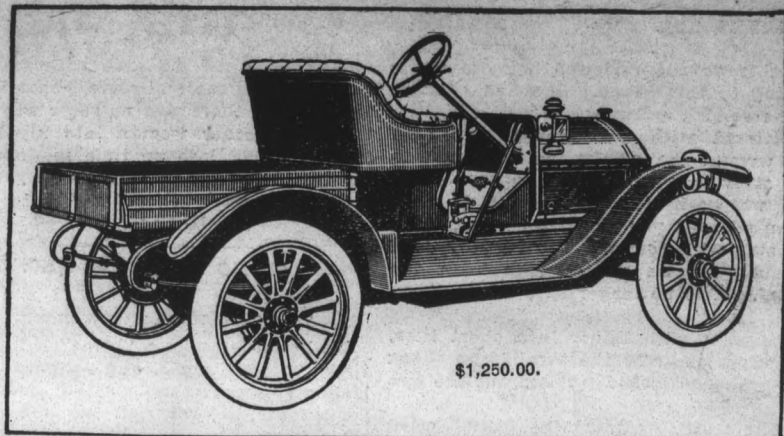
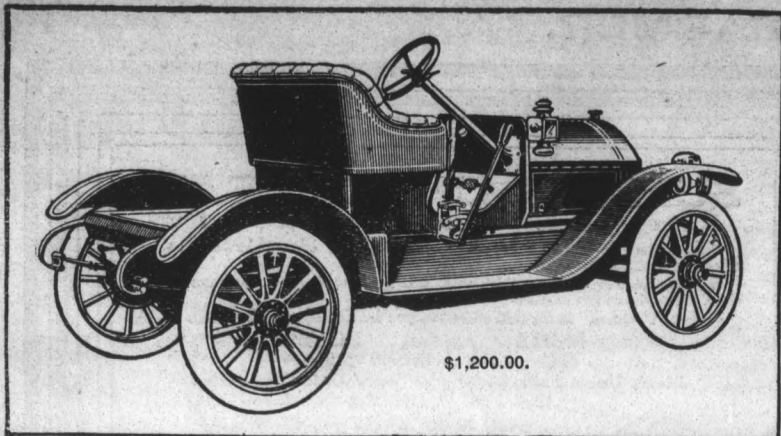
—"And Gas Stoves, Too"

tomers in 21,000 towns. Over 400 styles and sizes to select from. \$100,000 bank bond guarantee. We prepay all freight and give you

—30 Days' Free Trial
—360 Days' Approval Test
—CASH OR CREDIT

Write a postal for our book today—any responsible person can have same credit as your home stores would give you—and you save \$5 to \$40 on any famous Kalamazoo stove or range, including gas stoves. Sold only direct to homes. Over 140,000 satisfied customers.

Kalamazoo Stove Company, Mfrs., Kalamazoo, Michigan



The Car You Ought to
Have, at the Price You
Ought to Pay—

Silent as the Foot
of Time

Mitchell

WHILE we bind our Selling Agents to carry out the broad provisions of the Mitchell Make-Good Policy, the cost of the plan is borne by the Mitchell-Lewis Company—not by the agent.

We arm our agents with the sinews of war in the shape of free repair parts for all parts that prove defective, and when they pass them out to you *they are doing it for us*, so you understand that the Make-Good Promise comes from the Factory.

If the Mitchell car were not a good car we couldn't afford this Make-Good Policy. Making good on a poor car knocks profits sky-high and that's why you find so few Make-Good Policies rigidly carried out. While we have made good in every case where the request was made, the cost to us has been trifling and this *proves the high character of the Mitchell more than anything else*.

And this Mitchell Service Policy has been responsible for the great success of the Mitchell car. It has induced many people to buy the car without knowing its merits. But once they became owner, *they remained Mitchell owners* and there are twenty thousand of them scattered throughout the United States and Europe who couldn't be persuaded for love or money to change to any other make of car.

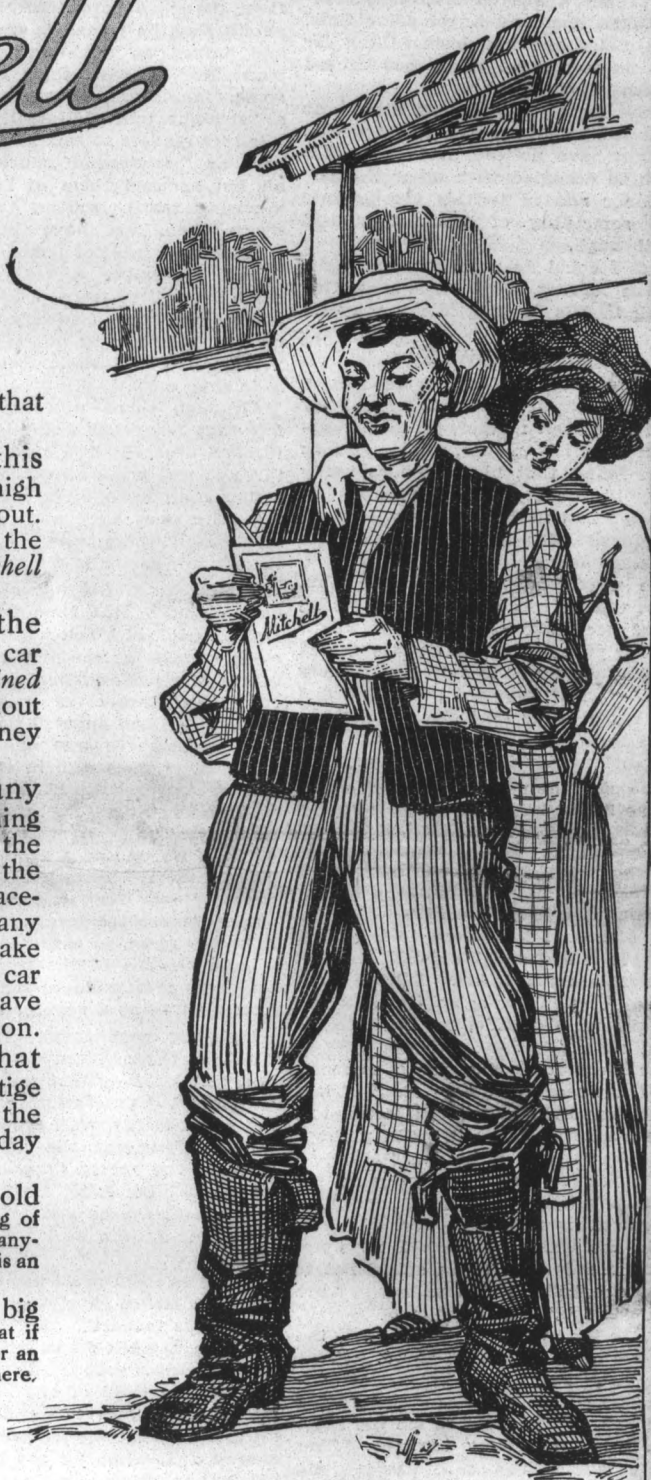
Here's the proposition and it's too clear to be mistaken by any man with a business head: The Mitchell will do anything and everything that any high cost car will do. It has the same speed, the same power, the same fine materials. The only difference between high-cost cars and the Mitchell is the price. *Everything else is equalized*. The Mitchell is a graceful, handsome, comfortable, absolutely silent running car—a credit to any man in any walk of life. Now add to this the fact that the factory will make good (free of charge) any part that proves defective and watch your car through the eyes of its "Trouble Men" as a cat watches a mouse, and you have the one automobile proposition in the world worthy your undivided attention. The Mitchell-Lewis Motor Company is the same company that has been manufacturing Mitchell-Lewis wagons since 1834 and the prestige and fine reputation acquired by the old company is being maintained by the present organization which with a few exceptions is practically the same today as it was thirty years ago.

So a purchase from the Mitchell-Lewis Company has all that fine old standing behind it. We believe that it is the sincerest organization engaged in the making of automobiles and we know our customers feel the same way. Certain it is that there isn't anything we won't do to perpetuate the old character and prestige and you ought to consider this an asset of the highest degree.

Mitchell cars are going like the proverbial hot cakes. The demand is big and persistent. At the present rate of demand we won't have a car left by July 1. So that if you believe all we have told you of the car and the organization behind it, you better enter an order for a Mitchell now and be sure of your summer touring before summer actually gets here. If you wait, you may not get a Mitchell at all. And that would be a big loss to you.

Send for advance circular No. 30.

All Prices F. O. B. Racine.



Mitchell-Lewis Motor Co.

Racine, Wis. U.S.A.

