

# MICHIGAN FARMER

AND  
LIVE STOCK  
PUBLISHED WEEKLY.

JOURNAL.  
ESTABLISHED 1843.

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

VOL. CXXXIII. No. 1.  
Whole Number 3458.

DETROIT, MICH., SATURDAY, JULY 3, 1909.

75 CENTS A YEAR  
\$1.50 THREE YEARS

## FARM NOTES.

### Harvesting the Hay Crop.

The unfavorable weather for getting in the spring crops and for the early cultivation of corn has bunched the farm work to an extent which will make it necessary to make every move count until after the harvest season. Fortunately the hay crop is a little later than common this year in most sections, which fact has given a little time to get caught up with the other work before it was necessary to begin the haying in earnest. In a good many sections of the country there is much less clover to cut than usual, and while this is to be regretted for many reasons, yet it has delayed the haying season for a few days longer, which has been something of an advantage. Before this issue reaches the reader, much of the clover will have passed the best stage for the making of good hay, but probably very little of it will have been cut. But the generally fine weather which prevailed during the latter part of June has fortunately given an opportunity to get the other work well in hand, so that the haying can be rapidly pushed to a close. Too many farmers are inclined to let the grass stand too long before cutting in order to do other work, and perhaps also because it takes less time to cure the crop if it is allowed to get pretty well matured before cutting. This is a mistake which is costly when measured by the lessened value of the hay for feeding purposes, as well as its poorer market quality if it is to be sold. It is also a loss in the lessened vigor of the aftermath, and where the season is dry as it was last year the late cut meadows will not make much of a start until the fall rains come, and the fields lie sere and brown when they should have a covering of grass to protect them. The effects of this condition can then be seen in the lighter crop the following year, when the rotation is so arranged that the same fields are utilized for meadows two years in succession.

In a season when the weather is likely to be catchy it is quite a general practice among farmers to go at the haying a little carefully, cutting a small area and waiting until the hay is made and nearly ready to draw before cutting more, keeping up this continuous process until the job is completed. This plan has its advantages, but in a season like the present one, when it is essential to get the work along as rapidly as possible these advantages are more than counterbalanced by the disadvantages of the plan. The writer remembers one season when catchy weather prevailed thruout the haying season, in which he started in on this plan, with the result that he had some hay making all the time, quite a proportion of which was necessarily damaged by the frequent rains, besides adding to the work by making it necessary to shake it out and handle it over to get it in shape to draw again. The same season a neighbor with about the same acreage started out by cutting down a ten acre field just after a heavy rain. The good weather lasted just long enough to enable him to get this hay in the barn, when along came another soaking rain. While we were fussing with our batch of hay he

cut another field and just got this in when another rain came. Still again was the operation completed, and by good fortune and good sense this neighbor got his entire crop in in good condition in much less time and with much less labor than we put in in harvesting a like area. By using good judgment and consulting the "weather man" occasionally, we believe that in a season when the work is crowding, and when the haying cannot be commenced as soon as it really should be, this plan of cutting a good acreage is the best one. Of course, if one gets started at the wrong time he is likely to have considerable hay damaged when the work is planned this way, but there is the possibility of escaping this trouble against the certainty of having some damaged where the haying is done on the peaceable plan if there is any catchy weather during the haying season. Now that farmers' telephones are so common the daily weather reports can be used to much greater advantage by farmers during the haying season than would otherwise be possible. On the rural line which reaches the writer's farm the daily weather report is repeated at a certain hour each day by the operator at "central," so that the weather service reaches everybody promptly and can be utilized to the best possible advantage. Of course, the weather forecasts are not infallible, and hard showers may occur when the predictions are for fair weather,

ripen very rapidly, and shell very badly in harvesting if not cut at just the right time. Then the straw is much more valuable if cut when it should be, and generally the berry of the grain is a little plumper if it is not allowed to stand too long before cutting. Hence the necessity of keeping a close watch of the hay and grain fields and getting at this work as nearly as possible when it should be done and pushing it to conclusion in a vigorous manner.

### How Utilize the Oats and Peas.

I have a very fine stand of oats and peas, seed mixed equal parts by measure. Which is the best way for me to handle this crop; let it ripen and save the seed for feed, or cut and save for hay? My hay crop will be lighter than usual.

Barry Co.

C. H. PALMATIER.

One of the valuable characteristics of this crop is its adaptability for the different purposes mentioned. When cut at just the right stage the hay makes excellent feed for all kinds of live stock, particularly for cows and sheep. It makes a very good substitute for clover hay, which would be a very good argument for harvesting it early for hay when there is a prospective shortage of this crop. On the other hand, the grain which might be secured makes a very good feed for balancing up corn in the making up of a ration for any kind of live stock, and comes in very handy in a season of high priced feeds such as we are passing thru at the present time.

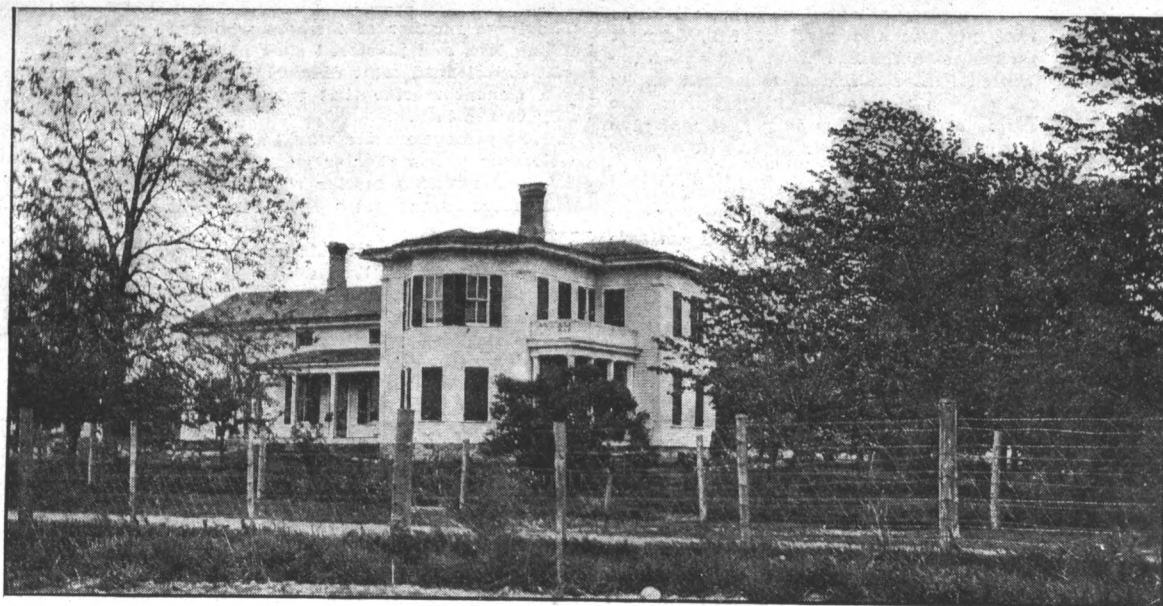
state it would appear that the bulk of the crop has been planted during the last ten days of June. With this late start it will be the more necessary to give the crop the best of care in order to secure a profitable yield. Fortunately soil conditions are favorable for the rapid development of the crop, there being an abundance of moisture in the soil. An occasional harrowing before the plants appear above the ground and timely cultivations afterward will conserve this moisture and insure good conditions for the rapid growth of the vines and early development of the tubers. Probably the bugs will not be as troublesome as they would have been if the bulk of the crop had been planted earlier, and for this reason the spraying for the prevention of blight may be neglected, even by those growers who have made a practice of spraying. This is particularly apt to be the case, since the blight has not been very prevalent in recent years, and the large percentage of farmers who do not spray have secured as good crops as those who have done this additional work. But the case may be different this year. We shall spray as usual, and believe that it will pay every grower who plants a considerable acreage to do the same. The evidence from our experiment stations all points toward a profit from spraying, even when the blight is not very prevalent, and we cannot afford to disregard that evidence because those who have not sprayed in recent years have had good crops. It may be different this year, and the only safety lies in adopting preventive measures.

This work of spraying the potatoes comes at a time when there is little pressing work to interfere with its being done as required by the weather conditions and the condition of the crop. Also, the expense is not great, after the equipment is secured, and we are confident that more growers who plant a considerable acreage of potatoes as a cash crop would find it profitable in the long run to spray their potatoes for the prevention of blight as regularly and faithfully as up-to-date orchardists spray for the prevention of fungous diseases which attack their fruit. The insect pests can be combated at the same time, as in the other case, and the income from the crop thus be made more certain. An occasional good crop in a season of shortage caused by a lack of protection in unsprayed fields will, we confidently believe from the testimony of authentic experiments in which such protection has been proven to be effective, prove an ample reward for the trouble and expense involved.

### WATERPROOFING CONCRETE.

The principal cause of porosity in concrete is the lack of density in the material used, the result of using a too lean mixture or by failing to properly tamp the mortar as it is placed. Concrete that is to withstand water should be of a rich mixture, at the least one part of Portland cement to four parts of pit run gravel and be thoroughly tamped so that the work is as dense as it is possible to make it, thus precluding the possibility of pores.

The methods of remedying porous con-



Farm Home of William Croel, an Ionia County Pioneer.

but the probability of general rains in any section can be foretold with comparative accuracy, and in a general way this service is very valuable to the farmer who utilizes it, especially during the haying season.

Michigan hay buyers are often heard to remark upon the fact that they cannot get hay that will grade as No. 1 in the eastern markets, largely because the bulk of the hay crop is allowed to stand too long before cutting. There is just as great a loss in having a poor quality of hay if it is fed out on the farm as tho it were marketed, if not greater. The writer took some hay in payment of a debt this spring that illustrated this point so thoroly that he could not forbear emphasizing the fact in these columns. The price agreed upon was about two-thirds the price of prime hay, but as a matter of fact the hay was not worth half as much as tho it had been cut at a seasonable time, and properly cured.

What will apply to haying in this respect will apply to harvesting with equal force. Some of the varieties of wheat which are commonly grown in this state

If the seed has been sown too thickly to insure a good crop of grain the most profitable crop would be secured by cutting for hay, and if sown too thinly to make a good tonnage of hay it would be better to let the crop mature for grain, but if a medium seeding which would promise equally well for either purpose, the disposition of the crop might best be decided in the light of the local conditions, as the advantages of the hay which is comparatively rich in protein or the grain which will find a profitable use in balancing up of a carbonaceous ration may seem the more to be desired.

### The Potato Crop.

According to reports received from many sections of the state the acreage of potatoes planted this year will be above normal. The crop has, however, been planted later than usual on account of the backward season and the delay in getting the other farm work out of the way. Planting was finished on the writer's farm on June 23, which is fully a week later than we had intended to plant. From observations made over a considerable portion of the eastern section of the



crete are varied and with the drawback that to be infallible the remedy must be chosen by the age and condition of the concrete to be waterproofed.

One of the most easy methods and one that in a great variety of cases secures the right results, is to paint the walls with a mixture of clear Portland cement mixed with water to the consistency of thick cream; apply to the wall with a stiff brush and use from three to four coats, allowing each one to dry before applying the next—have the wall perfectly clean before using this mixture so that it will fill all pores and bond with the wall perfectly.

This method has secured excellent results and where the wall is not too porous will remedy the defect.

The best concrete authorities advocate the use of the wax method of waterproofing, which is best applied in almost the pure state, adding but little oils to same.

The wall should first be prepared with the clear Portland cement paint as just described, using two coats so that the wall is perfectly smooth; then melt the paraffine wax and add to same about one-half its volume of kerosene oil. This mixture must be applied hot, painting rapidly over the wall as much as it will absorb without showing on the surface too much. The action of this mixture is to penetrate into the concrete closing all the minute pores thus making the concrete impervious to the action of water or moisture.

The paraffine is so absorbed by the concrete that it shows but slightly in the water and in the case of a cistern is of no material damage.

The cost of waterproofing by this method varies from four to seven cents per square foot, depending upon the quality of the wax used, and while the cost is greater than other methods yet for all classes and condition of wall it is the most sure to give satisfaction.

Wayne Co.

A. A. HOUGHTON.

#### PURE AIR INTAKES IN CEMENT BLOCK BASEMENT.

I am building a cement block basement barn this summer. The blocks are hollow, and I wish to install the King system of ventilation. Will you tell me how this may be done in that kind of wall? Also, do you think corn planted at this time will do to make silage with?

Huron Co.

W. N. T.

You understand that the philosophy of the King system of ventilation is to take in pure air from outside near the ceiling of the stable and to draw the impure air out of the stable from an opening near the floor. Consequently, you have to have pure air intakes that allow the air to enter them near the ground on the outside and these intakes extend up on the outside of the wall, or in the wall, up to the top, or near the top of it, and then open on the inside. This doesn't allow the warm air on the inside to pass out because it would have to pass down a column of cold air, and being lighter than cold air, it cannot pass out. Then you have to have a ventilating shaft which is simply a box, or chimney, located at some convenient place in the stable and extending up thru the storage part of the barn and out the roof. The higher above the roof the better, as the higher the chimney the better it will draw. This ventilating shaft is open about a foot from the floor. The rest of it is boarded up, double boarded with tarred paper between to make it air tight.

Now, to get your pure air intakes in your hollow cement blocks, you will have to lay the blocks so that the hollows are directly over each other where you want the pure air intakes. Then this will form a little chimney in the wall. By cutting a hole on the outside into this chimney near the ground, say a foot above the ground, then cutting a hole into this chimney on the inside up next to the ceiling of your stable, you will have the desired passage. You want a number of these little chimneys or pure air intakes on all four sides of your barn and they should not be very large. If too large, they cause drafts and there should be enough of them so that when the wind blows fiercely from one side, you can close them on that side of the barn and still have enough of them on the other sides of the barn to furnish a good supply of pure air.

#### Late Planted Corn for the Silo.

Most people plant their corn for the silo, the last field that they plant, because their ensilage corn does not have to get dead ripe before it should be put into the silo. It ought to be just mature. It ought to be glazed and the ears

ought to be commenced to be dented. When it is in this condition it is just right to put into the silo, and should it not get as mature as this it would still make splendid feed. The man who has the silo in which to put a late field of corn, even corn that did not get ripe but becomes frost bitten, can save the corn and make it very valuable food. It is not quite as good as when properly matured but if it is only in the milk it is well worth saving and a silo, if you have corn in this condition, would pay its cost in one year by saving a field of corn. It has been a very backward spring. Up to the middle of June corn that was planted early has made very little growth and corn planted after the middle of June up to the first of July will probably mature sufficiently for ensilage. Of course, this will depend largely upon the fall. The year I built my silo was a very wet year. We were unable to get the last field of corn in until the 12th of July; think of it. Now, while this corn did not get ripe, it got well into the milk stage before frost came, and we cut it up at once and put it into the silo. This was our first experience with ensilage and we thought it was the nicest feed we ever fed. The cows did well on it, and I am positive that I saved the cost of my silo on this 12 acres of corn, altho I would have preferred to have had the frost held off a little while longer and had the corn get so that it was glazed and the earlier ears dented. You don't want the corn dead ripe. You might be interested in knowing that up to this date, June 26th, I haven't planted all my ensilage corn yet. We have had an exceedingly large amount of extra work to do and the season has been very, very wet. Excessive rains have kept us off our ground two or three weeks at a time, but I shall continue to plant the corn up to the middle of July, if it is necessary to hold off that long.

COLON C. LILLIE.

#### INTENSIVE FARMING.

In view of the recent trend of the wheat market, it would seem that the farmers of Michigan, and for that matter of the United States, would be in a receptive mood for doing any kind of farming that would in any way increase the yield per acre of this great cereal, which goes to make up the best flour of the world. When we say wheat, "we mean all kinds that produce the staff of life," for it makes no difference what section of the United States a farmer is located in, he should be interested in growing the staple article, in any way that will give him a larger yield per acre, and thereby a larger profit considering the number of acres devoted to this special crop.

But do the farmers of this country make wheat a special crop? I think I am safe in answering that as a general proposition they do not. There may be a few, and in the semi-arid regions of the west they perhaps come as near growing it in a special way as anywhere that I know of, but even there, as I understand it, they pay more attention to the conserving of moisture than to any other special feature of wheat growing, but by this method alone they far surpass us, both in quality and quantity of grain raised if the reports sent out of this marvelous method are to be believed.

Now, why should the farmer of this region surpass us in the growing of wheat? No doubt he has some advantages which we have not, but we have one surely if we took advantage of it that he has not, (that is in no such generous measure), and that one is an abundance of moisture, if we took the pains to conserve it. We hear many of our farmers complaining that they do not have land enough to work to keep them busy, when the truth of the matter is, if they would devote more of their time to the crops that they do put in, they would find out that it would perhaps take some additional help to keep their work up to the high standard of excellence which many of them would hold as their ideal once they got into that habit.

The average farmer of today could, with profit to himself, and also that of his neighbor, do more work upon his farm even with his present method of conducting his farming operations, than he is in the habit of doing, for he could keep the foul and noxious weeds out of his fence corners, along his roadsides, and even out of his growing crops if he but would, but I am convinced that the most of them believe, as one man told me a few years ago, "that he could get along with them as long as he lived, and

he did not care what became of them afterward.

In a recent issue of the Michigan Farmer we have a warning from Dr. Beal of the Michigan Agricultural College, as to what we might expect in the course of the next ten years if the farmers of this country do not pay more attention to the eradication of foul stuff from their lands, and I do not believe the Doctor has overdrawn the picture. It does not do any good for one farmer in a community to keep his own farm clean, as I could convince you by telling you a little story of my own experience. However, there must be united effort to control a thing, and that very likely will never be done until the laws are so made and enforced that every farmer will fear the outcome of neglecting the foul stuff growing on his land, and when that time does come, as I feel sure in my own mind that it will, we will then see more intensive farming done and perhaps see more successful small farms than there are at the present time.

Montcalm Co.

J. H. HANKS.

#### MIXING ALFALFA WITH CLOVER SEED.

Would like your opinion of adding two quarts of alfalfa seed to June clover seed in seeding a field of buckwheat to clover. Soil is sandy loam, and was in corn last year. The object in adding the alfalfa seed is to inoculate the soil so that two years' later I can put field to corn and afterward seed to alfalfa. Would also like to know the surest and best alfalfa seed to sow, western or eastern?

Branch Co.

H. L. V.

All of the leading growers of alfalfa now recommend that where red clover is sown and one wishes in the future to grow alfalfa, that a small per cent of alfalfa seed be mixed with the clover seed, on purpose to inoculate the soil with the bacteria which live upon the alfalfa roots. The idea is that in a few years the soil will become thoroughly inoculated so that you will have no trouble in getting a stand of alfalfa. For your information you might be interested to know that I mixed alfalfa seed with my clover seed in seeding my wheat field this spring. I will be glad to tell you later on what the results are.

COLON C. LILLIE.

#### THE BEST MORTAR FOR PLASTERING SILO.

The large number of farmers who are building lath and plastered silos have no doubt experienced some difficulty in mixing a cement mortar that would adhere easily to the lath.

A lime cement mortar would solve this problem as it has greater sticking properties and makes a mortar that is easily spread from trowel and capable of a neat finish.

This may be made for this use by mixing one pail of sack lime with two pails of Portland cement and this mixed with four or six pails of fine sand, depending on the richness you wish the mortar. As the quantity of lime and cement used will carry twice its volume of sand and yet spread nicely, the mortar will cost less to be so mixed.

This makes a waterproof wall and one that can be troweled down very smooth and for plastering outside and inside on a lathed silo would be ideal for the amateur plasterer.

Wayne Co.

A. A. HOUGHTON.

#### HARRYING THE WICKED SEEDSMEN.

The crop reporter of the department of agriculture publishes, as provided by law, a long list of seed dealers selling adulterated seeds. Summarizing the adulterated seed proposition and the effect of the publicity given the subject by the department, Doctor Galloway, chief of the bureau of plant industry, says:

"It is encouraging to note the falling off in the trade of adulterated seeds since the line of work reported upon by the department of agriculture, was begun. The importation of yellow trefoil seed and its subsequent use as an adulterant of red clover and alfalfa seed has practically ceased, 214,000 pounds being imported in the three fiscal years 1905-1907, and only 10,000 pounds in the fiscal year 1908.

"Only one-half as many lots of orchard grass seed were found to be adulterated in 1908 as were found in 1905, when the last collection of orchard grass seed was made.

"In 1908 only 39 samples of Kentucky bluegrass seed were found to be adulterated or misbranded, as contrasted with 110 samples in 1907.

"The department will examine and re-

port promptly as to the presence of adulterants and dodder in any samples of seed submitted for that purpose."

Washington, D. C.

G. E. M.

We should not forget the dragging of the potatoes soon after they are planted, especially if a hard rain has formed a crust since planting time. It enables one to get the start of the weeds. "Get there first," should be our motto. Crossing the first and second cultivations with a weeder when soil and moisture is right will keep the weeds from getting started in the hills. The same thoro work should be done in the potato field as in the corn field. If the weeds are kept in subjection from the start they will not be taking the moisture needed by the crop later in the season, or bother at digging time.

#### FREE DEAFNESS CURE.

A remarkable offer by one of the leading ear specialists in this country, who will send two months' medicine free to prove his ability to cure Deafness, Head Noises and Catarrh. Address Dr. G. M. Brannan, 102 East 12th St., Kansas City, Mo.

#### Two Valuable Hay Presses.

If you are in the market for a hay press, it is a good idea to get in touch with the Sandwich Mfg. Co., Sandwich, Ill. They will fit you out with a belt power press which bales hay at the rate of two to four tons an hour. Or if you want a horse power press they will furnish you a self-feed full circle press which is one of the best things in hay press line ever manufactured. There are several points about this horse press which make hay balers prefer it to other presses. One is that it is always ready for business. It is mounted so substantially that it does its work on the truck wheels. You do not have to dig holes and sink the wheels. Another point is that it is so well adapted to bank barn work. Another point is its convenient operating and its easy capacity of 12 to 18 tons a day. No man with a small operating force makes a mistake who buys this press to do his own work or that of himself and neighbors. The belt power press, of course, is the money maker. It is just such a press as meets the requirements of the big contract baler. Both these presses are described in the Sandwich Company's catalog. We advise readers not to buy any press until they send for it. It is free. When it comes we believe you will find just the kind of press you are looking for described in it.

#### The Cost of Paint.

Many people judge the cost of paint by the price per gallon or per pound. This is the wrong way to judge it, according to the Carter White Lead Company, of Chicago. It is declared to be unfair to the paint. It is pointed out that the cost should be gauged by the surface covered and the number of years of wear the paint gives. The appearance of the job after painting should also be considered. The colors should be brilliant and true to their name—not muddy hues. "If a paint excels in all these points," says Mr. J. O. Carter, of the Carter White Lead Company, "even if its first cost is slightly larger than others, it is unquestionably the most economical paint you can buy. We make the claim for Carter Strictly Pure White Lead that it will not crack, scale or check. It forms a durable, elastic film which contracts and expands with the surface it protects, and only years of wear can remove it. It is also so absolutely white that strong, brilliant tints—true and durable colors—are assured. Another thing, it is fine and even in grain, which makes it spread further."

#### Big Apple Crop in Sight.

From all indications the apple crop this year will be a bumper, and farmers already are planning to take care of the yield. On account of the great demand for cider, many fruit men will soon begin getting busy buying new machinery for that purpose. The name of The Hydraulic Press Manufacturing Company, of Mt. Gilead, Ohio, has been associated with cider-making machinery for so long, and their presses are giving such universal satisfaction, that we do not hesitate to recommend them to our readers who are thinking of buying machinery for cider making. They also make apple butter cookers, vinegar generators, and everything for the cider and vinegar man. Write them for their new catalog, which contains some valuable information. Mention this paper, and address The Hydraulic Press Mfg. Company, 131 Lincoln Avenue, Mt. Gilead, Ohio.

#### A Suspender Especially Adapted for Farmer's Use.

The modern farmer is progressive. The progressive farmer wears President Suspenders. Because he finds the sliding action of the cord at the back leaves his shoulders and back quite unhampered. With President Suspenders he can do far more work with the same effort than he formerly could with the old fashioned rigid-back suspenders that tired him out because they were forever tugging on his shoulders every time he stooped, reached or bent over. The makers say they have yet to learn of a farmer who ever tried President Suspenders and went back to the other kind. President Suspenders come in all lengths and weights. Light, medium and heavy. Youth's, regular length and extra long. Every dealer has them, or the manufacturers, C. A. Edgerton Mfg. Co., Shirley, Mass., offer to send them direct on receipt of the retail price of 50 cents. And all President Suspenders are absolutely guaranteed.



## LIVE STOCK

### IMPROVING THE BONES IN OUR HOGS.

On several occasions at farmers' meetings where the raising of hogs came up for discussion, the matter of size of our hogs in comparison with those of a few generations past, has been brot up and severely criticised. The remark is generally made that the hogs of fifty years ago had stronger bones, and when matured, were larger than the hogs of the present time. Very few of the old time hogs went down on their feet.

These critics are right in regard to the size and quality of the bones of the hogs that were raised when the country was new, but they forget that we produce as many pounds in weight on our pigs of six to eight months of age, as the old timers did in a year and a half; and farther, the pork produced on our young hogs is made cheaper by nearly half, than that on the hogs of war times, which are almost always cited as bringing good prices.

There are reasons that can be readily given that will explain why hogs raised under the old plan had large and strong bones. They were grown slowly and instead of being crowded along with rich feeds were allowed the run of the barnyards in the winter, and the pasture in the summer. Those old hogs chewed on many things that we consider worthless, such as rotten wood, charcoal and ashes that could be had around the partially burned stumps and log heaps. They rooted in the loose soil and chewed soil stones, and no doubt secured a considerable amount of what we now call mineral matter that was a great aid in building up the bony system. There was the potash which they secured from the ashes, charcoal and rotten wood, as well as some that came from the coarse feeds picked up in the barnyards. They no doubt secured some lime and phosphate from the gravel and small stones which they chewed. In fact, they were getting small fragments from the "graveyards of the prehistoric past," and gathering from first hands, some of the primal elements of life.

In our efforts to make the conditions under which our hogs are raised today nearly ideal, for the promotion of the growth of the frame work of our pigs, the question naturally arises as to what can be done. The surroundings have so changed that the pigs, when left to themselves, are unable to secure in such quantities as they require, these elements that we have mentioned. How can we supply them in order to develop size and strength of bone, to enable the pigs to safely carry all the weight we can get on them in the short period of their lives?

In the first place, if one has supplied a good grass pasture to begin with he has made a proper start. The grass itself takes up from the sod more or less lime, and the pigs eating it get it in small quantities. If clover is available there is something more palatable, and while they partake of it in large quantities they secure a small amount of lime and potash, perhaps nearly as much as they can utilize, and it comes in a very cheap form. It does not seem to require a philosopher to explain why pork can be made cheaply and the pigs kept in a strong, healthy condition, when they are running on clover pasture, and are being fed a moderate amount of grain and some dairy wastes.

In the second place, where the grass and clover is likely to be wanting the man who sows a piece of rape to turn the pigs on after it is well started, also does well. While it is not as rich in the nutritive elements, nor does it furnish as much mineral matter as the clover, it is succulent and palatable, which encourages the pigs to eat it, and it bulks up the feed in the stomach, enabling them to get more from the grain consumed with it than they would be able to without it. The rape is an excellent feed to fill in the gap between the time when there is plenty of other feeds in the spring, and the time when they can be supplied in abundance in the fall.

In the third place, the man who has a rich piece of ground, on which he can sow some peas, to commence cutting and feeding as soon as the peas form in the pods, has something with which he can keep the pigs growing toward the day when they can be sold in the market. If one has peas to turn into and let the

pigs harvest the crops, he has something the pigs will enjoy the work of gathering and pay well in increase in weight for the privilege. We do not think of any other crop on which the pigs can be fattened, and make the gains cheaper, than the peas.

The question is often asked as to which is the cheapest and easiest method of furnishing the mineral elements which we have mentioned, as necessary for the growth and development of the bony system in the summer time. One cheap source of potash is charcoal. On most farms there are considerable quantities of corn cobs that are laying scattered around and in piles that can be converted into charcoal and be fed only as fast as they will consume it. Dead coals from the wood stove will serve a good purpose. Pigs seem to like it and will chank on it at frequent intervals. They will consume considerable quantities of ashes.

A popular and convenient source for securing the lime and phosphorus, is to keep some ground phosphate rock where the pigs can help themselves to it. I have never used it myself, but have seen it used in the pens of pig breeders and they report that the pigs will consume considerable quantities of it. Another source is purchasing and feeding bone meal, as it will supply what is needed in order to build up the bones to carry the weight. On all sides it is contended that the use of clover and other summer feeds, or the use of ashes, charcoal, ground phosphate rock or bone meal will insure against the condition of too fine bones, and the inability to carry the weight of the animal on his mission of gathering food, or in being transported to market. The matter is worth the serious consideration of swine breeders and feeders.

While the importance of the mineral elements in the food is beginning to be understood, the necessity for exercise should not be overlooked. The exercise of any organ, or any part of the body, is followed by an increased flow of blood to that part, and it comes to restore worn out organic material, and to build up the parts as well as to fortify them for increased effort in the future. If the pigs are allowed a liberal amount of exercise at the same time they are receiving the well balanced feeds, the bones, muscles, vital organs and all parts of the body can grow and be harmoniously developed. If the exercise is neglected, the frame work will not be developed, and the vital energy will be wanting. When seeking to correct conditions by furnishing the necessities on one part, let us not forget and neglect the exercise, an essential on the other part.

Wayne Co. N. A. CLAPP.

### GOING OUT OF SHEEP.

A number of farmers of my acquaintance who have been keeping sheep as an adjunct to their farm live stock for several years, are seriously considering the advisability of disposing of their flocks. Possibly these farmers have good reasons for believing it prudent to sell off their sheep but before making a hasty move in this direction there are a number of things that are well worth careful consideration. It is an undeniable fact that every farm and owner are not alike adapted to the keeping and management of sheep. Soil conditions vary widely and while one farm may be well adapted to sheep growing, another adjacent to it may be quite unsuited for the purpose. In such cases there is ample reason for disposing of sheep where they have been found unprofitable. However, I am fully convinced that some farmers are considering selling off their flocks where the soil is well adapted to sheep husbandry.

The first reason I would advance for urging farmers to keep their flocks is the bright prospect ahead for all kinds of sheep products. Never before have such prices been paid for a high quality of mutton. The demand of the American people is gradually on the increase for mutton of quality. There simply is not enough high quality of mutton to go around. The fact that the range product of both wool and mutton is gradually on the decline is going to force the market to look to the farm for its supply. The farmer who has a good grade flock of wool and mutton producing sheep is indeed, from all indications, making a serious mistake if he lets his sheep go. The day has gone by when western grown lambs will be shipped east in large numbers for fattening purposes. The farm is the most economic source for the production of high quality of mutton. It is

my candid opinion that the small farmer will be the mutton maker in the future. Many of the best lambs put upon the large markets today are farm produced and the time is not far hence when the farmer will not only raise his own feed-lot material but put it into a marketing condition as well.

Michigan farms are sadly in need of more sheep. Very little of the land in this state is not well adapted to sheep husbandry. Sheep can be kept profitably upon limited areas. The farmer who has been keeping sheep as an adjunct to his farm live stock need not purchase more land in order to increase his flock, but follow more intense methods and endeavor to make two blades of grass grow where but one formerly grew. Sheep readily adapt themselves to intensive methods of management. Range is not so important as the amount and quality of forage produced. With our soil well adapted to the growing of a large variety of forage crops there is no reason why farmers should not increase the size of their flocks, rather than dispense of them entirely.

We need more flocks of sheep in Michigan of successive years breeding. One of the great handicaps of the present generation is the lack of foundation stock upon which to begin the breeding up of our sheep. Few flocks in this state have been bred for more than ten to fifteen years. We ought to have hundreds of them and the sooner these flocks are established the better, and the more profit will be obtained from sheep husbandry. In England we find flocks throughout the country that have been maintained upon the same farms for over a hundred years and in some instances a hundred and fifty years. Throughout all these years the most careful methods have been employed to improve the flocks and to maintain a high standard of excellence. What has been accomplished in England is an excellent illustration of development where a man puts his heart into his work. Surely the time must come when the American farmer must follow in the footsteps of his English brother in this respect.

The farmers of this country must get down to business in the matter of live stock production. The spirit of unrest has fostered many a new industry, but our live stock interests are sadly in need of the permanent establishment and maintenance of pure-bred flocks and herds. The greatest remuneration comes to the man who chooses a vocation and then settled down with a firm and well developed determination to hand down to the succeeding generation a better grade of live stock than he inherited. It is a well established fact that if the father keeps sheep the son is apt to take up the mantle when his father throws it down and will carry on the good work to a much higher degree of perfection. By all means keep your flocks of sheep. Give them more and better attention. Select the best you can produce from year to year for breeding stock and in this way lay the foundation for a profitable flock of sheep that will become as much a part of your farm as the land title.

Shiawassee Co. LEO C. REYNOLDS.

It is believed by those best informed in such matters that fat cattle should be marketed rather than held for any prospective rise in values. Under present conditions the cost of holding is high, and it seems hardly probable that there will be a sufficient advance to warrant keeping back properly matured beefs. On the other hand, the prevailing opinion inclines strongly to the view that the thrifty, growthy kinds that are fattening satisfactorily should be retained and finished for the summer or autumn markets. There are very fair supplies of cattle in Nebraska and other southwestern states in preparation for the future market, and while eastern sections are doing less feeding, there will probably be sufficient beef cattle to meet the wants of the trade, for less beef is eaten than a year ago. Let the cattle come to market as soon as their condition warrants.

### SOLD OUT OF GUERNSEYS.

Allan Kelsey, Lakeview, Mich., the well known breeder of Guernsey cattle, who has been advertising in the Michigan Farmer, writes as follows: "Please discontinue my advertisement. I am entirely sold out. I am going in the Guernseys as fast as I can. I can then run an advertisement all the year. I often wondered why large breeders did not advertise in the Michigan Farmer as I was confident it would reach people that are not accessible otherwise."

(Breeders, there is something to think about in what Mr. Kelsey says.—Eds.)

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## VETERINARY

CONDUCTED BY DR. W. C. FAIR,  
CLEVELAND OHIO.

Advice thru 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.

**Inflammation of Skin.**—I have a 3-year-old heifer that has some sort of a skin trouble. The hide appears to be lifeless and hard, seems to affect her udder and hind legs more than any other part of body. She has gone almost dry, this I think, is on account of pain. O. H. E., Blanchard, Mich.—Apply one part oxide zinc and four parts vaseline to sore parts of skin once or twice a day. Also give 2 ozs. glauber salts at a dose in feed twice a day.

**Heifers Gave Milk Too Soon.**—I have two heifers that are due to calve about October 15, 1909. Both are a cross between Durham and Holstein and both have come to their milk. We milk them once a day; is this milk fit to use and what is causing them to give milk so soon? E. G. G., Eaton Rapids, Mich.—The milk is fit for use and their coming to milk so soon would indicate that they were going to be large milk producers.

**Barren Heifer.**—I have a 2-year-old heifer which I cannot get with calf; have bred her every three weeks since February. I would like to know if anything can be done to get her with calf? B. J. F., Caledonia, Mich.—You had better try the yeast treatment, which is made by putting two heaping teaspoonsful 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. 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.

**Barren Heifer.**—I have a Holstein heifer two years old that was in heat a year ago. She was mated, but did not prove to be in calf, and has not come in heat since. What can I do for her? F. Z., Marine City, Mich.—I have known a forced-service to stimulate the generative organs and have the desired effect of bringing the heifer in heat. It is also fairly good practice to open neck of uterus. Or give 2 drs. powdered capsicum, 1 oz. powdered rosin at a dose in feed twice a day.

**Sharp Edges on Grinder Teeth.**—I would like to know what to do for a mare that slobbers at the mouth. She has done it about as much on dry feed as she has since running on grass. She has lost flesh gradually for several months. J. B. H., Cedar Springs, Mich.—If you will file off the sharp points of outside of upper rows of grinders and inside of lower rows, you will perhaps remedy this ailment. I also suggest that you put 2 drs. alum in a quart of water and wash out mouth twice a day.

**Enlargement on Lower Part of Belly.**—I have a mare that has a large bunch situated about six inches in front of bag. I have blistered it twice with blisters advertised in M. F. but the bunch is still there. What would you now advise me to do? F. G., Mendon, Mich.—Give her 1 dr. iodide potassium and 3 drs. powdered sulfate iron at a dose in feed twice a day for twenty days. Apply equal parts tincture iodine, spirits camphor to bunch once a day.

**Barb Wire Cut.**—I have a colt that was cut on barb wire last September, making a wound on outside of quarter of fore foot. I succeeded in healing the wound, but the colt met with a similar injury a short time ago and now he persists in biting the sore, thereby preventing it healing. He is in a healthy condition so far as I can tell. W. F. S., Oak Grove, Mich.—Apply equal parts iodoform, boracic acid and charcoal twice a day, but before making these applications pour on a little peroxide-hydrogen, this will clean off the pus and save your washing the wound. Apply a piece of oakum and a bandage to sore; this will prevent him biting it and if it continues to itch apply 1 part bichloride mercury and 250 parts water.

**Fistula of Withers.**—I have a yearling colt that our Vet. tells me has fistula of withers. He has burnt it out and cut it open, it has healed all but a small spot in the center which discharges matter. I have tried everything I can think of, without success. This colt is weak and trots lame. It is not swelled any but is very sore when touched. P. J. A., Monroe, Mich.—Give a teaspoonful of sulphur and 1 dr. iodide potassium at a dose in feed night and morning for 20 days. Inject a small quantity of equal parts peroxide-hydrogen and clean water to bottom of sore twice a day; ten minutes after using these applications apply 1 part bichloride mercury and 250 parts water twice a day for one week. The next week apply 1 part carbolic acid and 30 parts water; the following week apply 1 part chloride zinc and 300 parts water, alternating these applications in the order that I have mentioned until a recovery takes place.

**Canine Distemper.**—I am anxious to know what to do for a dog that has distemper. I have already lost one valuable collic. He has a heavy discharge from

eyes, jerks at sides, has difficulty in breathing and is somewhat paralyzed in hind quarters. J. S. B., Springvale, Mich.—Canine distemper has always been a serious ailment in dogs and no matter what line of treatment is followed, quite a lot of them will die. They should be fed whatever food they crave. The bowels should be kept moderately open and when they have fever give them small doses of aconite two or three drops at a dose five or six times a day. They should also be given tonics and nerve stimulants. Give a grain or two of quinine two or three times a day, also give three or four drops tincture of nux vomica at a dose two or three times a day. If they refuse food give them eggs, milk and whiskey. This should be given to them three times a day to support their strength. They always do better to be kept out in the open air.

**Inflamed Parotid Glands.**—One of my cows is troubled with a swelling on each side of neck which extends from ear to throat, which causes her to wheeze like a broken winded horse. My neighbors were inclined to believe that she had been stung by a bee. I applied turpentine and lard, which appeared to do some good; however, the swelling has since returned and she is as bad as ever. G. O., Custer, Mich.—Your cow suffers from inflammation of the parotid glands (salivary glands). Give her 1 lb. sulphate magnesia at one dose and only this dose. Also give 1 dr. iodide potassium, 1 oz. hypo-sulphite soda at a dose in feed night and morning. Apply equal parts tincture iodine and camphorated oil to swollen glands once or twice a day. She should not be overfed while the glands are in an inflamed condition.

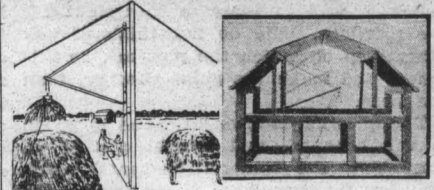
**Irregular Strangles—Partial Paralysis—Wind Sucker.**—I have a large 4-year-old horse that had distemper this spring. He was out in the last snow storm, since which time he has gradually failed. His temperature keeps up three or four degrees above normal; breathes heavy, the membranes of mouth and eyes are too white, mouth slimy, seems weak in hind parts, appetite quite poor and he seems to be most fond of grass. I also have an 8-year-old stallion that has contracted the habit of sucking his tongue and filling himself with air. W. W. P., Eaton Rapids, Mich.—It is possible that an abscess is forming in a part of the body hidden from view, perhaps in the lungs or abdomen; if so it is quite apt to produce death. Keep him out doors where he can have fresh grass to eat and plenty of fresh air. Give him 1 dr. acetanilide at a dose three times a day until fever reduces. Also give 20 grs. quinine at a dose three times daily. Also give a tablespoonful of powdered saltpetre at a dose once a day. Keep this treatment up for 20 or 30 days. Also apply equal parts aqua ammonia, turpentine and sweet oil to back every day or two. For your horse that sucks wind, buckle a strap around neck, tight enough to prevent him sucking air. It may be necessary to use a jaw strap in order to prevent his opening mouth.

**Brain and Spinal Trouble.**—I have a nervous 5-year-old mare that had distemper last spring; she was exposed to a severe snow storm before recovering from it. Since then she has coughed some and discharged from nose. I treated her for distemper, but she appeared to get very weak. It has left her with a slight cough and she seems to act as tho crazy; the expression of her eyes is that of an insane person. When she had a sick spell I pushed her sideways gently and she fell down. She is inclined to kick, paw, strike her head, and makes an effort to rear up. Should she have another similar attack what had I better do? G. C., Merrill, Mich.—Your mare suffered from an attack of vertigo and it is possible that this is the result of her having an irregular form of distemper. Give 4 drs. powdered bromide potash and 1 oz. hypo-sulphite soda at a dose in feed twice a day. Feed less grain and more grass to keep the bowels open. Should she have another attack apply wet cloths to head, keep her as quiet as possible and give ½ oz. bromide potash at a dose every hour until she quiets.

**Heifer Injured While Calving—Two Holes in One Teat.**—I have a 2-year-old heifer which calved June 3rd, and which did not do well; had to call on veterinary who took the calf away from her. The calf died during the operation. The heifer is large and was in fine condition, but could not stand on her feet for about 36 hours after calving and has not been right since. When she wants to urinate or her bowels move she will strain for a minute or two and make several attempts before she passes anything and the excretion is very little and the water very thick and milky color, small quantity and very bad odor. I have given her salts and castor oil, also niter. She seems to be a little better, but not right. She eats well and seems to feel quite well, only when she wants a passage. This heifer also has a dummy teat with an opening right at the back and close up to the udder of the right back quarter of the udder. This teat is so short that it is impossible to milk it and it contains considerable milk and the gland is badly swollen, and caked quite hard, so that when the main teat of that quarter of the bag is milked it leaves a long, hard lump as large as a man's wrist extending clear up the right back section of the udder. The milk from the four other teats is clear and she gives a good flow, but that which comes from the dummy is thick and watery. Please advise thru the M. F. what to do for this heifer to put her in a healthy condition; also what to do for her udder. Will it be necessary to milk the dummy or can something be done to prevent the milk from collecting in that section of the udder. If it will be necessary to milk it, would have to use a milking tube as the teat is not

(Continued on page 15).

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Have some choice cows and heifers at right prices.

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## POULTRY

## THE COLONY POULTRY HOUSE FOR THE FARMER.

The average poultry keeper, the general farmer, keeps comparatively few fowls, yet in the state of Kansas, where there are more eggs marketed than in any other state, the farmers are the ones who market the eggs. That is to say, in Kansas there are very few egg farms, but the farmers keep so many chickens that the grand total exceeds that of any other state.

There are in Michigan a number of what might be called egg farms, but the greater number of eggs here come from the general farmer. It is therefore recognized that with better care of the fowls upon the general farm there would

proper sanitary conditions, for if the droppings are left on the board very long in warm weather they will soon become offensive to the fowls and the health of the flock may be impaired.

Early in this article I said that the house would accommodate 35 hens and 35 pullets. The outside dimensions of the house are 14x24 feet, which gives 336 square feet of floor space. Allowing each fowl 4.5 sq. ft. of space, there would be room for 74 fowls. Some breeders claim that there should be at least 5 sq. ft. allowed each fowl, but in my estimation it depends a great deal upon the breed that is being kept. This house is primarily intended for laying fowls, such as Leghorns, and they are among the most active fowls and will do well on 4.5 sq. ft. of floor space.

The building that poultry is kept in has a great deal to do with the care that will be accorded the flock, either on the farm or in town. In the east and

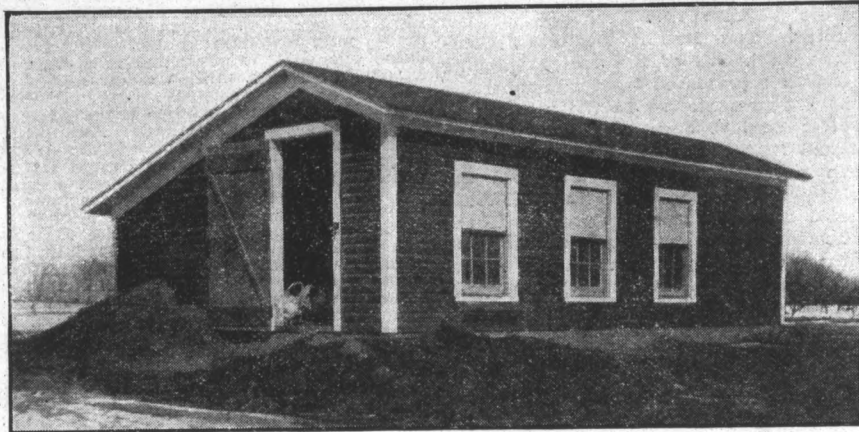
## HOW DATE OF HATCHING AFFECTS EGG PRODUCTION.

Hens never did and never will lay in late autumn and winter as they do in April. If they did, eggs would not reach such high prices at certain seasons. Still that does not mean that we are to fold our hands and say "Kismet," and wait until spring. If we can succeed in getting half as many eggs during fall and winter as in spring the enhanced price will pay well for the extra care and trouble.

The average hen that has been well fed all summer and has kept on laying right up to autumn is sure, if a non-sitter, to have rather a hard moult, and to then rest until February or even longer. Even hens that sat and reared chickens early in summer and have laid during July and August will be in the same position. Pullets hatched very early will lay during the late summer and autumn months but will then moult and be of little more use for winter laying than the hens. In fact, the most profitable pullet is the one hatched and so reared as to commence laying in October or November, as she will, with good management, lay right thru the winter.

Most experienced breeders must have noticed the curious fact that pullets hatched in January will lay at about four months old; some from the same stock hatched in March will probably lay at six months, while others hatched in May will be most likely not to lay until eight months old. I have often wondered at this, and can see only one reason—the original ancestors of the domestic hen laid in spring and reared their young in the season when food was most plentiful, as do all wild birds. The natural impulse, then, is to lay only at that time, and all else we have been able to do is the result of domestication, with its constant food supply, and its shelter from wet and wind during the inclement season.

Nature is always kind to the race, if somewhat hard on the individual. The universal instinct is reproduction. Everything in nature is sacrificed to the continuation of the race. So, as the January pullet approaches maturity early in summer, during the proper breeding season of her kind, nature impels the vital forces in the direction of reproduction. On the other hand, the late-hatched pullet does not gain full development until the cold weather, and her natural impulse, except so far as interfered with by the heredity of the many generations, is to defer laying until the next spring. So there remains the difficulty of filing



Colony Poultry House at M. A. C., designed by Prof. J. G. Halpin.

come an increase in egg production in the state. The fact that there are only a few fowls kept on each farm shows, in my opinion, that the average need of the farmer in the way of houses is what is called the colony house; that is, a house accommodating comparatively few fowls and that is not meant to be enlarged or made into a long house.

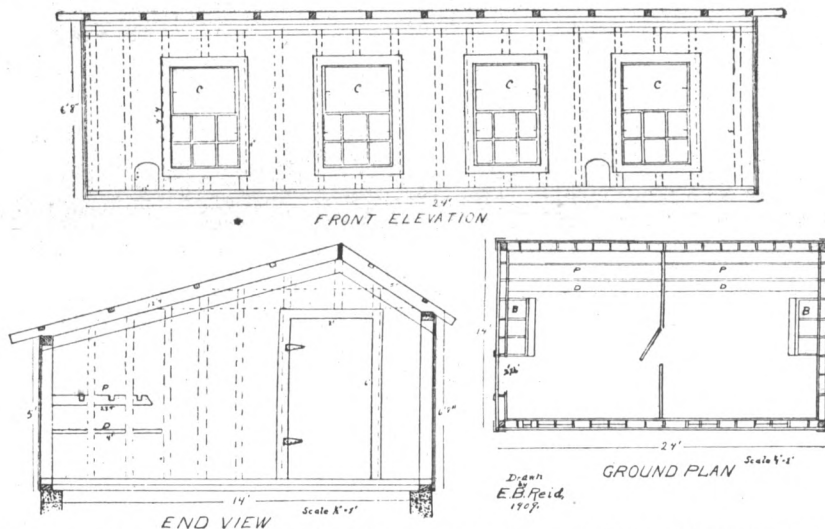
Thinking that one of the colony houses at Michigan Agricultural College, when altered a trifle, would make one of the best colony houses for general use, I submit the plans and specifications to the readers of this paper. The plans are practically the same as Prof. Halpin's except that the house at the college was necessarily built a little different from what the average poultryman would have to have it. The main difference is the addition of a window, a partition down the center, and rearrangement of the interior. As it is now planned it will accommodate 35 hens on one side and 35 pullets on the other. This partition is put in so that the hens and pullets can be kept separate, and the best fowls can be kept separate during the breeding season and at the height of laying time. To so separate the chickens it was necessary to put in the extra window.

One of the best features of this house is the arrangement for ventilation. There are four windows, and the upper half of each window consists of muslin tacked on a frame of the same size as the window sash and set into the sill the same as the upper glass window would be if it were present. This simple system of ventilation is as cheap as can be found and is as practical as any, as ventilation systems, such as the King system which works finely on larger buildings, will not give satisfactory results in smaller buildings. There has been much said concerning this system of ventilation in the press and the muslin windows are used in all of the houses at the college and have proven very satisfactory.

With the house built in this manner there is no room for scratching sheds. In place of the sheds which are practical in some places and when the building is constructed in a different manner, there are runways on each side of the house of same width as the house and about 150 feet long. In winter the chickens are fed their grain by throwing it into the litter that is always kept on the floor. This makes the chickens work for what they get and, to a great extent, does away with the need of scratching sheds.

The perches are made of 2x4's which are rounded so that they will be easy on the chicken's feet. Underneath the perches is a dropping board which can be removed, or the perches swung up so as to facilitate the cleaning of the board. It is necessary that this board be at least a foot from the perches to insure

proper sanitary conditions, for if the droppings are left on the board very long in warm weather they will soon become offensive to the fowls and the health of the flock may be impaired. Early in this article I said that the house would accommodate 35 hens and 35 pullets. The outside dimensions of the house are 14x24 feet, which gives 336 square feet of floor space. Allowing each fowl 4.5 sq. ft. of space, there would be room for 74 fowls. Some breeders claim that there should be at least 5 sq. ft. allowed each fowl, but in my estimation it depends a great deal upon the breed that is being kept. This house is primarily intended for laying fowls, such as Leghorns, and they are among the most active fowls and will do well on 4.5 sq. ft. of floor space.



Diagrams Showing Plan of Colony House at M. A. C. adapted for use on the General Farm. B. indicates location of Nests; C., curtain sash in windows; D., dropping board; P., perches.

The fowls in the one have been just as good layers the past two years as those in the other. On stepping into either house on a cold winter day it was found warm inside and there could be no difference detected between the lined house and the unlined house.

It would be useless to state how much it would cost to construct such a house as is here described, since the kind of lumber that would be used would vary, and the cost of lumber varies so about the state that it would be impractical to attempt it. However, an estimate on the material that it would take might be of some help. The following will be required: Siding: 143 sq. ft., 12 ft. long and 96 sq. ft., 16 ft. long; casing, 40 ft., 4 in. wide; 4 lower halves of windows; 2x4's, 220 ft., 12 ft. long; roofing, 110 sq. ft., 12 ft. long; roofing paper, 110 sq. ft.; floor, 98 sq. ft., 12 ft. long.

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up the gap between the summer laying of these hens and the commencement of the winter laying of the pullets. Two-year-old hens, which always should be culled out at autumn, should be forced during the summer so as to supply the July and August eggs. The yearling hens which are going to be kept thru the following year require very different treatment. These should be fed most sparingly in June or early July—in fact, almost reduced to the natural picking of a grass field. Not only will the change of diet be beneficial, but they will sink rapidly in flesh. This will bring on an early moult. When the hens are deep in moult, and not before, they can be put on to more generous diet, including a little boiled linseed, say one-tenth of their total dry food. They will then rapidly gain condition, and can be brot around to laying by August or September.

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DETROIT, JULY 3, 1909.

## CURRENT COMMENT.

Nearly all who have traveled extensively thruout the country are found to concede that the average Michigan farm is equipped with as good, if not better, barns than the average farm of any other state in the country. The excellent class of our farm buildings is a great advertisement for Michigan agriculture, and we believe it has been a great factor in the prosperity of our farmers. The commodious barn, with its comfortable quarters for the live stock and ample room for the storage of forage crops as well as grain, is not only a source of pride to the owner, but of greater economic value than many of the progressive class of farmers in other states where good barns are less common appreciate. Something of the economic value of the barn in preserving forage crops is demonstrated by some experiments recently conducted to determine the natural deterioration of hay when stacked in the field under average conditions. In Virginia this deterioration was found to be from five to ten per cent when allowed to stand in the stack for from three to four weeks, or until the hay was fit to bale. In Missouri this loss was found to be fully 20 per cent when the hay was baled in December and about 40 per cent when the stacks were allowed to stand until the following March. According to these figures, the loss on 80 acres of hay yielding 3,000 lbs. per acre and valued at \$8 per ton would be \$192 if baled in December and \$384 if allowed to stand until the following March, which would possibly represent the average time it would stand if fed from the stack, in which case the loss would naturally be even greater than if the stacks stood unopened. According to these figures a good barn would pay good interest on the money invested in the saving of the hay alone, to say nothing of the other advantages which need not be enumerated to be appreciated by the average reader.

It is a matter for congratulation that many good barns are being built each year upon Michigan farms, notwithstanding the greatly increased cost of building materials as compared with a few years ago. The good barn in which to store his crops and house his live stock, is second

in importance only to a good house in which the farmer may comfortably house his family, and while the complaint is sometimes heard that it is impossible to realize on the investment in good buildings in case the farm is sold, yet they are always a good investment for the home-owning farmer who desires to enjoy and succeed in his business, and he will find, in a majority of cases, that after he has used them a few years he will have already realized handsomely on the investment required to build them.

In commenting upon American Versus the roads of Germany Foreign Roads. and other European countries and comparing them with the roads of the United States, Consul Thompson, of Hanover, calls particular attention to the width of the roads in these respective countries. He states that the roads of Germany are from 20 to 30 feet wide, while to our roads, even in the sections of the middle west where land is worth \$100 and more per acre, we devote 66 feet to the making of our highways. He adds that in the states of the Mississippi valley alone the reduction of the width of these highways to 36 feet would reclaim for agricultural purposes 2,500,000 acres of land, which, at an average value of \$100 per acre would have a value of \$250,000,000, which would mean an interest or rental value of \$12,000,000, a sum which he suggests might be recovered and which, if applied to the proper scientific construction of roads in the United States would in a few years give us the most extensive and finest road system in the world.

The statements above credited to Mr. Thompson, and the figures which are used to illustrate and emphasize them were furnished us by our Washington correspondent and have not been verified. But, assuming that they are correct, we cannot see that the plan is a practicable, feasible or necessary one to the accomplishment of either the desired saving of what is designated as waste land, or the rapid extension of good roads in the United States. Without question we are overburdened with roads, but the burden consists in their aggregate length rather than their average width. The old country plan of making the main traveled roads more or less direct routes between cities and villages, with a comparatively narrow frontage of abutting property, extending a considerable distance back from the highway, while not so convenient from some standpoints, yet gives a greatly decreased road mileage, as compared with our plan of building a public highway along every section line. But the easy access which these many roads give to the homes of our thrifty farmers who have built their farmsteads on the land they work, makes the increased burden of maintaining them easily worth while. Also for the same convenience of access it is doubtful if our highways are any too wide at the present time. In the winter season, especially in the more northern of the states mentioned above, the drifting snow often blocks the roads as now laid out, and if the fences were moved in to make a narrower road this tendency would be greatly aggravated, thus making the roads more soft and muddy in the spring as well as more frequently blocked with snow in the winter. Then, too, much of the country is broken and hilly, and the present width is none too great for the proper grading of the roads where cuts and fills are necessary. But where conditions are not such that a wide road is needed the abutting property owners can be depended upon to gradually narrow the fence limits of the highway as the old fences are replaced by new ones. So great is this natural tendency that in some of the states mentioned it is the exception rather than the rule to find a highway which is the full legal 66 feet in width.

But all this appears to be but idle speculation in any event, since it is not clear how the interest or rental value of this grand aggregate of land, which is now devoted to highways but which, under the plan outlined, could be saved to agriculture, is to be recovered. So soon as the states abandon the land for use as highway purposes it will naturally revert to the owners in fee, who can be reached only by taxation for the purpose of road construction or improvement, and then only to the extent which is endorsed by the consensus of public sentiment or opinion. In fact, the problem of the width of our roads, or in other words, the amount of land which is devoted to them, will be naturally regulated as the country gets older and the practice of pasturing the entire farm is dis-

placed by a better agricultural method, so that the fence will gradually disappear or give place to shade trees of economic value. In the meantime, however, it is to the interest of all concerned to strive to better the average condition of the country roads, perhaps by building a few permanent roadways in sections where the travel is heavy, but surely by cutting down the grades, improving the drainage and graveling the surface of as large a mileage as possible each year. American conditions are not foreign conditions, and foreign remedies will not solve our road problems.

## The Car Demurrage Problem.

At a meeting of the National Association of Railroad Commissioners, held in Washington during the early part of June, the question of a uniform car service rule was considered, the point at issue being a proposed change in the rules now generally in effect in Michigan, which would make them conform to the uniform rule proposed for the country. The Detroit Board of Commerce, in behalf of the varied shipping interests represented by its membership sent a representative to the meeting to protest against such a change on the ground that the problem is local rather than national in nature, and that the rules which are to apply within the state should be left as much as possible to the judgment of the local commissioners and authorities. It appears from the report of this representative that the railroads are desirous of a uniform rule which will rid them of the complications arising from local rulings on the proposition, and that the sentiment of the Interstate Commerce Commission was represented by its member who was chairman of the meeting. Mr. Franklin Lane, who appeared to favor a uniform rule of 48 hours of free time for loading or unloading cars, placing the burden on the shipper to show that more time was needed on account of weather conditions which might damage the freight or make it impossible to handle it, because of the bunching of car deliveries or other reasons which are mentioned as valid ones for the extension of free time, as mentioned in the code of uniform rules which had been prepared for discussion. The contention of the representative of Michigan shippers was that what is known as the average plan should be applied, in which the shipper may receive credit for prompt handling of freight within the 48 hour limit and benefit by equal extensions of time before the \$1 per day is charged in handling other shipments, and that without the abridgment of the right to extensions for valid reasons, such as are noted above. The legality of this plan was questioned, but it is said that it may be accepted as an excellent method of facilitating the prompt movement of cars. However, the report of the representative of the Detroit Board of Commerce seems to indicate that the result of the meeting was a practical if not specific indorsement of a uniform code of car service rules which will apply alike in all portions of the country, and to the smallest as well as to the largest shipper, based on a 48-hour limit of free time for the loading or unloading of cars, before the levying of demurrage charges of \$1 per day or fraction of a day thereafter, with reasonable provisions for an extension of time under specific circumstances which will be noted in the rules.

## In view of the recent Our Imports of discussion in Congress Hides.

of the tariff schedules on hides, the nature and extent of our imports of hides from foreign countries will naturally be a matter of interest to the producers of this raw material as well as the consumers of the manufactured product. By way of affording the reader accurate information upon this subject we give below the text of a report recently made by the Bureau of Statistics of the Department of Commerce and Labor, as follows:

Importations of hides and skins into the United States will show a larger total in quantity in the fiscal year which ends this week than in any year in the history of the import trade. The value will amount to about 75 million dollars, or slightly less than in 1907, because of the much lower prices which now prevail, but the quantity will doubtless exceed that of any earlier year. Hides and skins are a very important feature of the import trade of the United States, the value of importations of this particular class of merchandise having aggregated a billion dollars, speaking in round terms, in the last quarter of a century. Of the billion dollars' worth of hides and skins imported since 1884, goatskins alone have formed nearly 400 million dollars' worth. The value of the goatskins imported in

the year about to end will amount to about 25 million dollars, or an average of about 2 million dollars' worth per month, and form practically one-third of the value of the hides and skins imported.

The importations of hides and skins divides itself pretty evenly into three great groups—"hides of cattle," "goatskins," and "all other." The group "hides of cattle," is under the present law dutiable at 15 per cent. All other articles entering under the title of hides and skins are admitted free of duty. In the 11 months ending with May, 1909, the value of the dutiable group, "hides of cattle," was \$21,060,982, against \$10,986,529 in the same months of last year; goatskins \$22,997,675, against \$15,498,633 in the same months of last year; sheepskins \$7,331,469, and "all other" \$17,872,322, indicating that the total value of all hides and skins imported in the full year will be about 75 million dollars.

The variety of skins of animals imported into the United States for use in manufacturing leather is much greater than would be supposed. Buffalo hides, for example, amounted in 1908 in quantity to not less than 5½ million pounds and in value to three-quarters of a million dollars; horse and ass skins 13 million pounds, valued at 2¼ million dollars; sheepskins 47 million pounds, valued at 9¼ million dollars; and even kangaroo skins over half a million pounds, valued at one-third of a million dollars.

India is the principal source of the goatskins and buffalo hides imported into the United States; Canada, Argentina, and Mexico supply most of the hides of cattle imported; and the United Kingdom, Russia, Germany, and France send the bulk of the miscellaneous assortment grouped under the general title of "all other hides and skins." Of the 63 million pounds of goatskins imported in the fiscal year 1908, 23 millions came from India, nearly 9 millions from China, over 6 millions from Mexico, nearly 4 millions from Brazil, 3½ millions from Aden in Arabia, 3 millions from France, 2 millions from the United Kingdom, 1¼ millions from Russia in Europe, 1¼ millions from Argentina, and 1 million from British South Africa. Of the 98 million pounds of hides of cattle imported in the same year, 25½ millions came from Canada, 22 millions from Argentina, 11 millions from Mexico, 7 millions from France, 6½ millions from India (largely buffalo hides), 4 millions from Colombia, less than 4 millions from Uruguay, and about 3 millions from Venezuela.

Hides and skins from abroad form apparently about one-third of the value of material of this character used in the manufacture of leather in the United States. The census of 1905 shows the value of leather, tanned, curried, and finished, in 1904 to be 252 million dollars. The value of the hides and skins used by the leather producing industry of the country in 1904 is reported at 145 million dollars. Of this 145 million dollars worth of hides and skins used in producing the 252 million dollars' worth of leather, 27 million dollars worth, speaking in round terms, was goatskins, 10¼ million dollars' worth sheepskins, 15¼ million dollars' worth calf and kid skins, and 89 million dollars' worth hides, chiefly of cattle, but including comparatively small quantities of buffalo hides, of which the importations, as indicated, were in 1908, 5¼ million pounds, valued at three-quarters of a million dollars. The value of the hides and skins imported in the calendar year 1904, the year covered by the census report of 1905, was, according to the figures of the Bureau of Statistics of the Department of Commerce and Labor, 57¼ million dollars, or a little more than one-third of the stated value of the hides and skins used by the manufacturers of leather in that year. In quantity the material imported formed apparently about one-fourth of the total used by the manufacturers.

From the same report it appears that we have not used all of the leather manufactured from these and other hides for home consumption, the exports of leather and its manufactures having grown from 7 million dollars' value in 1880 to 12¼ millions in 1890, 27 millions in 1900, and 40¼ millions in 1908. Of these exportations boots and shoes form an important item, now aggregating more than 10 million dollars' value per annum, and being on a practical parity with the exports of the United Kingdom. An interesting feature of this trade lies in the fact that while the aggregate value of our exports was greater than that of the United Kingdom in 1907 and nearly equal to it in 1908, the number of pairs of shoes representing this value was far less, the average value of the exports from the United Kingdom being \$1.11 per pair, against an average value of our exports of \$1.68 per pair, which is an evidence of the superiority of the American product, made in American factories and by American workmen. It is not, however, an argument for free hides, and may account for the reconsideration of the determination reached in the House to place hides on the free list.

## HAPPENINGS OF THE WEEK.

## Foreign.

The Canadian minister of marines announced last week that the government had resolved upon the maintenance of a navy and that Quebec would have the preference for a dry dock for large vessels.

The German reichstag last week voted to impose a yearly tax on stocks and (Continued on page 13).



# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

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

The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

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

## A PAINTER OF PATRIOTISM—BY FRANK H. SWEET.

IN a little village in Ohio, nearly seventy years ago, A. M. Willard was born. His father was a country minister, and his grandfather a Revolutionary soldier. Religion and patriotism and a love of fun were all his by inheritance, but it was the last of the three which first expressed itself in his early attempts at art. He became a carriage painter in the town of Wellington, and from that place went as a soldier to the Civil War.

While camping near Cumberland Gap he made pictures of that picturesque military situation, which, being photographed, were purchased by his comrades and their friends as home mementos of army life. This photography brought him into relations with James F. Ryder, of Cleveland, with whom he established a lifelong friendship. Ryder was a photographer of unusual skill, and besides had that rare quality of invention and suggestion which later proved a great advantage to both himself and Willard.

Willard returned from the war with a great plan in mind. He would represent on large sheets of canvas the war scenes which he had seen and sketched, and make a fortune by exhibiting them thruout the north. So he labored long at a great panorama mounted on rollers, and undertook to exhibit it in various northern towns. But the plan was not a financial success. People had heard and seen too much of war. The result was a disappointment to Willard, and a serious loss in both time and money. Even the cotton cloth represented a considerable investment for a man of small means, and the paintings were washed out to save at least that part of the investment.

Willard settled down to his carriage painting in the shop of a man named Tripp. It was monotonous work after army life and an ambition to achieve fame before the public; but he put so much heart into his carriage painting that Tripp's wagons and carriages became famous. A little vignette painted on the glistening side of a buggy gave it almost as much distinction as a coat-of-arms. Particularly did Willard display his skill upon those vehicles constructed for exhibition at the county fairs, and the row of blue ribbons which adorned Tripp's shop testified to not only the honest construction of the carriages and wagons, but to the excellence of their painting. When a farmer brought in a buggy for a new top, it was no unusual thing for Willard to seize upon the discarded leather, and at some noon hour transform it into an amusing painting.

The turning point in his career came when the little daughter of his employer brought to him a children's magazine with a crude woodcut of a dog hitched to a wagon and chasing a rabbit, and asked him to paint her a picture like that. Willard smiled

broadly, for he saw a larger possibility in the picture. Using the woodcut only as the suggestion of an idea, he painted his picture known as "Pluck," and sent it to Cleveland to be framed by Ryder. When exhibited in Ryder's window, it blocked the sidewalk and had to be taken inside. Thousands of people stopped to look at it.

Ryder sent for Willard, and together they evolved a plan. Willard painted a companion picture in which the dog was represented as having caught the rabbit, tho the wagon went to wreck in the victory, spilling out the little boy and girl, the former of whom still clung to the lines. Ryder arranged a chromo representation of the pair, and it is impossible to tell how many thousands of these went into homes thruout the country. Willard now gave up carriage painting and went to New York to study. Then he returned to Wellington and established a studio, but spent much time also in Cleveland.

Humorous sketches now came rapidly

from his brush and were reproduced by camera and lithography. Newspapers began to copy them, and this introduced a feature which survives in the comic pictures in the daily press. One of Willard's comics, published in 1874, represented a scene at family worship, where a cat pursued by the family dog took refuge on the back of the kneeling old man, while two small boys, choking with laughter, encouraged the dog, and the mother vainly endeavored to restrain them. It was as close an approach to irreverence as Willard's art at any time had come, but had the saving grace of homely life and genuine fun. Ryder arranged with Bret Harte to write a poem to accompany the picture, and paid him well for the job. The poem, which gave the title to the picture, "Deacon Jones' Experience," helped greatly to sell the reproduction. Another similar venture was the union between John Hay's poem, "Jim Bludsoe," and the picture of "Jim" which Willard made to illustrate it. The poem took a strong hold on Willard's

imagination, and he wrought out with ardor the resolute face of "Jim" at the wheel, but full of courage, and doing his duty tho it cost his life.

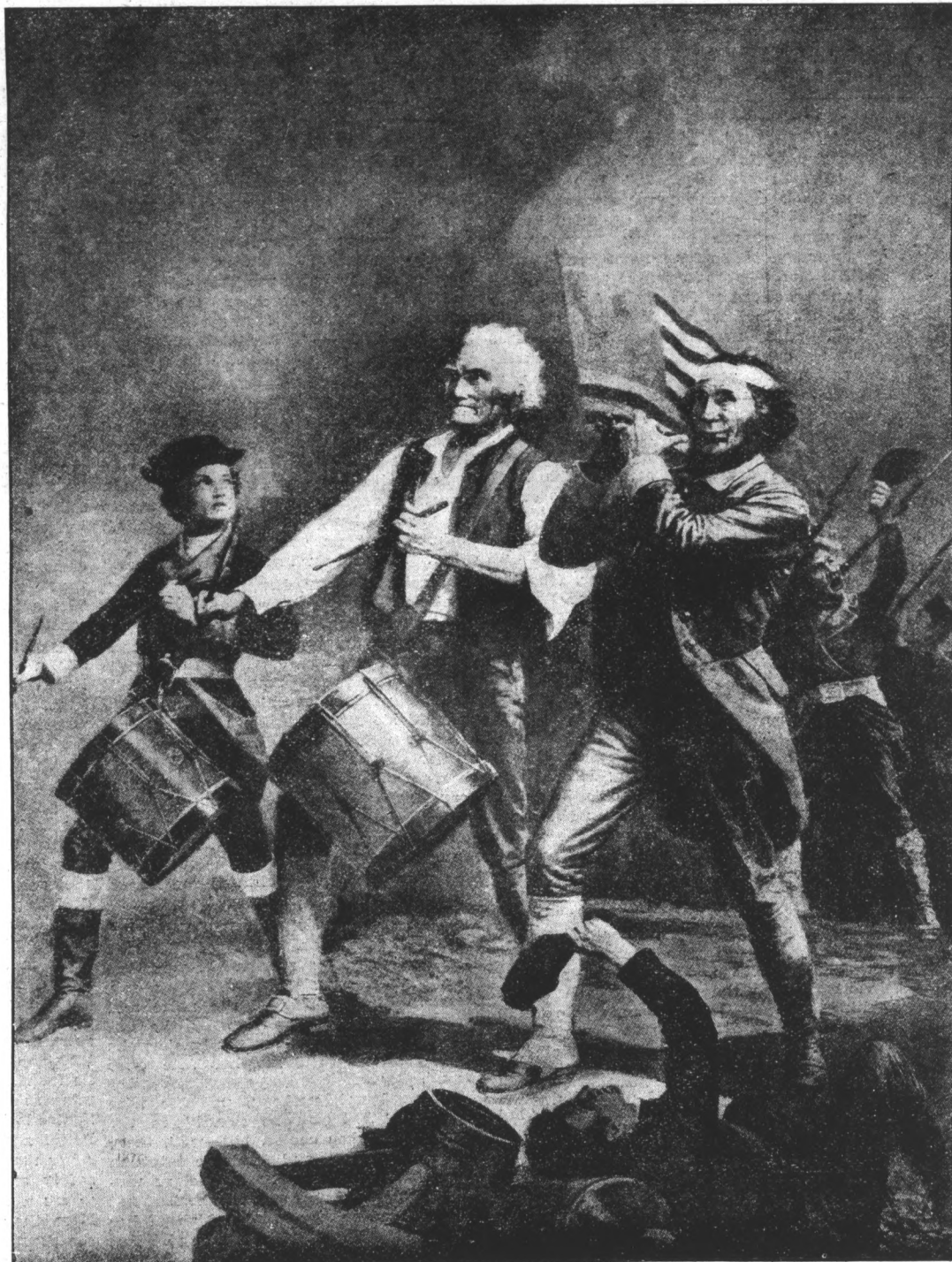
Willard's career as a painter of humorous pictures and a successful interpreter of the merry side of child life was now well established. The Centennial Exposition was approaching. It seemed to Ryder that a successful picture might be launched upon the wave of that great enterprise. Willard undertook to make and produce a picture embodying the grotesque features of a country Fourth of July band. He had known a mirthful old drummer who tossed his drumsticks and performed feats of skill if not of grace while marching in a country parade, and a fifer whose cowhide boots evinced great skill in treading on the toes of other people. These two and a younger drummer from the hay-field, who banged his instrument as part of the day's work, formed his group.

He secured models to represent these characters and made preliminary sketches, but did not finish them until years afterward, when at the request of a friend he went back to his original idea and painted his "Fourth of July Musicians," to illustrate the idea from which his most famous picture took its origin.

The fifer who served him as model was a well-known local character, Hugh Mosher, and Willard's own father, then retired from the active work of the pastorate, stood with his drum for the central figure, while Harry Devereux, then a student in a military academy, posed for the third figure.

One day an inspiration came to Willard. If he could only transfer these citizen soldiers to the battlefield they would exhibit qualities to excite admiration rather than mirth. He looked in the faces of the three models—the fine, young lad, the strong, resolute veteran, and his old father with his inheritance of righteous ardor and Revolutionary blood. Then Willard threw aside his humorous sketches and began anew, and the result was the painting, "Yankee Doodle," which thrilled the heart of the nation.

While in the midst of this undertaking his father was taken sick, and Willard divided his time, until the death of the old man, between caring for him and finishing his painting. Day by day he wrought into it more of heroism and of purpose, and the last vestige of fun was lost in the smoke of conflict. The scene was a battlefield from which "the old Continentals in their ragged regimentals," had been driven back in disorder; but the three men were marching on undismayed. The shrill notes of the fife and the steady roll of the drum rose above the din of warfare as they marched on oblivious to the fact that they marched alone. But their fearless-



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REPRODUCED FROM THE ORIGINAL PAINTING.

The Spirit of '76.



ness inspired others. To the rear, the nothing appeared clear, the flag was seen to have turned, and here and there a hat in air bore witness to a rallying shout. The army had turned and was rushing to support the intrepid musicians. It was impossible to doubt the result—victory was sure.

Willard named the picture "Yankee Doodle," the tune which he assumed the Continentals were playing; but it came to be almost as well known under the title of "The Spirit of '76." Willard did not intend to suggest any relationship between the three musicians, but the public saw in them three generations of rugged American stock, and Willard cheerfully accepted the interpretation, and the three are known as father, son and grandson.

The picture is one of the best illustrations of the way in which the easy step from the sublime to the ridiculous may be retraced in a leap of genius from the ridiculous to the sublime.

It was exhibited at the Centennial in Philadelphia. No other painting attracted the attention received by this. When Hugh Mosher attended the Exposition and stood before it with his wife, it seemed as tho the whole country had assembled in the art gallery. At the close of the Exposition General Devereux bot the picture for his home town of Marblehead, Mass., and it still is there in Abbott Hall. A replica in life-size was burned a few years ago in the Cleveland Armory. The final crayon sketch, as well as the drawing embodying the first ideas, "The Fourth of July Musicians," are owned by the writer of this article. It may be doubted whether any patriotic picture painted in America has been more popular than this.

Willard's more recent work includes a painting of the first Thanksgiving at Plymouth, made originally for a magazine cover, but carefully studied in its typography and history. The Colonial Club of Cleveland is the happy possessor of one of his newest paintings, "The

Battle of Concord," sketched on the field of battle, and looking toward the old bridge across the Concord river.

Many of Willard's friends regret that he has not painted more pictures of this class in which he so easily excels; but he has made a distinct contribution to American art. He has interpreted its child life in the free and happy atmosphere of the outdoor world, with none of the insipidity of the storybook child, and none of the cruelty or extravagances which characterize some recent reproductions of child life. His children are natural, healthy, mischievous, unspoiled little people, overflowing with fun, but with no trace of viciousness or wanton destructiveness.

He has given people something to laugh at, and that without scoffing at what is sacred, or ridiculing what is weak or pathetic. He has brot home a lesson in patriotism, strong and sincere, and has given it its place in history and in modern thought. And in all this he has been simply, genuinely American; his models, his motives and his compositions are those of real life, and these, with his thoro human interest and his absence of anything unworthy, constitute the secret of his power. "Why did you wound Hugh Mosher?" the writer once asked Willard.

"Because," he answered, "I wanted to show that patriotism is more than the effervescence of physical strength. The old man must rise above his weakness; the young lad, overcoming the timidity of youth, catches confidence and fervor from the old man's face; both have something to overcome."

"But the strong man in middle life might be going into battle only because he had strength that easily led him there and without that or conviction. So I gave him something to struggle against; he is wounded but undaunted."

"So all three tell of a love of country which is the more certainly genuine because it has something to overcome. It is the victory of intelligent and heroic love of liberty."

## AN OLD MAID'S FOURTH.

BY DAISY W. FIELD.

For ten years they had both courted her. For ten years she had fully expected a declaration from one or both of them. For ten years she had been ready and willing to accept either of them, and for a corresponding length of time, each wooer had ardently desired her for a wife. But—and there's the rub—the Squire was the most bashful man in the county, with one exception; that exception was his rival, the Major. And so it seemed destined that Priscilla Wiggins was to remain Priscilla Wiggins to the end of the chapter, unless she should become desperate and do the proposing herself.

There were moments when that wild idea, as a last resort, found entertainment in her harassed mind. It was not so much a husband that she yearned for as a home where she should be the ruling goddess. For she had been, all her life, at the beck and call of a very trying sister-in-law, a virtual slave of the household, having grown thin and querulous and unlovely in the service of her tyrant. So it came to pass that she gazed longingly, but impartially, upon the pleasant country home, bursting barns, and sleek cattle of the Squire, and the Major's more handsome town house, and prosperous grocery.

Of course, she had had her romance. At eighteen, she had loved, and the attack had been quite as severe as the first case usually is. But "they had met and they had parted," and she had tried to forget. In fact, tho I am aware that it destroys half the romance to admit the truth, she had succeeded, so well that Will Franklin's name had not crossed her mind a dozen times in the past five years. So, along with the home, and the welcome prestige that marriage would give her in the village circle of matrons, where she was usually as much at home as a fish out of water, she did not at all mind the idea of an incubance in the form of a husband—be he fat or lean, sandy or dark, bachelor or widower—in other words, Squire or Major.

The Fourth of July drew near. Rickville decided to celebrate, lest the shades of George Washington and others of our patriotic fore-parents feel slighted, for Rickville had never before put the stamp of her approval upon the good old Dec-

laration of Independence by indulging in a "Fourth of July picnic." For days beforehand, elaborate preparations for the great event—which was exploited in the columns of the Evening Screamer as "one more stride forward of our booming little city,"—were in progress. The town-band practiced so fiercely and assiduously that all the loose windows in town rattled, until nervous people sometimes hinted darkly at approaching earthquakes. Matrons baked mountains of tri-colored cake, and maidens concocted marvelous costumes with the indispensable touch of red, white and blue. Youths ransacked the supplies of Rickville's one dry-goods store, "The Emporium," in their mad attempts to outdo each other in the stunning style and quality of "glad-rags" for the approaching festivities.

Conspicuous among the latter, (tho the crime of youth could no longer be laid at their doors, as each had celebrated his fortieth birthday so long ago that he had lost count of it), were the Squire and the Major. Each had gone the limit in the purchase of a new outfit, for each had a deadly purpose in mind. They had, singly and individually, of course, made up their minds to do or die—in other words, to pop the long-delayed and important question to Priscilla Wiggins. Unfortunately, they had chosen the same day for the deed—the day of the forthcoming celebration.

As the eventful day approached, each found himself the victim of a nervous dread lest the other should get ahead of him, and escort Miss Priscilla to the picnic. The one who accompanied her would, of course, have a distinct advantage over the other, so each determined to be the lucky one. As fate would have it, they set out from home at the same hour of the same day to obtain her consent, and at the precise moment met, or rather collided, at her gate.

"Beg pardon," began the Major, "but were you—"

"I am calling on Miss Priscilla," was the quick retort, while the Squire's brows drew together ominously, and his fat cheeks puffed out with self-importance. "And you, no doubt, have some appointment with her brother?"

"Her brother, indeed!" snorted the irate Major. "I—well, to be frank, I intend

escorting the lady herself to tomorrow's picnic."

"Indeed! I flatter myself that that honor will belong to me!"

The gate opened outward, and as both were firmly wedged against it, neither could enter. They simply stood there, glaring at each other, and there is no knowing when the quarrel might have ended had not the object of this controversy came down the walk from the house, presently, looking anything but charming in the curl-papers that bristled in a prim and soldier-like row upon her brow. Yet they both gazed yearningly upon her, across the frail wooden barrier that separated her from them, and both began at once:

"Miss Priscilla—I—er—we—that is—will you—m'm—"

Miss Priscilla was slightly embarrassed. A sudden wild hope crept into her heart that it might be a proposal of marriage that, trembling, unable to escape, upon their devoted lips. But this was too good to be true. It must be that they were trying to ask her to accompany them—one of them, of course—to the celebration. Or maybe they had formed some kind of a compromise, and were going to escort her in partnership. But all her doubts on this point were soon settled by the glare of hate that passed from one to the other, as their voices died away in chorus.

"Horrid nuisance," thot the Squire, "to have him standing around in the way. For her sake, he ought to have better manners!"

"Such a bore," soliloquized the Major, "talking to one's lady-love in the presence of a third party. Can't the fool see that he's unwelcome."

Then the Major tried, unobtrusively, to get inside the gate. But the portly form of the Squire held it as immovable as the Rock of Gibraltar, and he gave up the project in despair.

Miss Priscilla coughed apologetically, and came to the rescue.

"Nice evening. Tomorrow will be a lovely day for the parade, I fancy."

"Beautiful."

"Heavenly."

"Of course you're going with me?"

"Of course you'll ride over in my buggy?"

Miss Priscilla blushed like a girl. When she blushed that way, and looked down, you quite forgot that she was nearly thirty-five, and even the curl-papers could not take away the charm of her confusion. There was a dimple near the corner of her mouth, and it was fuel to the flames that consumed the hearts of Squire and Major. They turned on each other.

"Squire Williams, if you think for a minute that I—"

"Major Duncombe, if you have the remotest idea that she—"

"Gentlemen," Miss Priscilla's voice was oil on the troubled waters; "this quarrel is perfectly useless. I promised to spend the night in town with my cousin, who is here with her team, and I shall not, therefore, require anyone to take me to the picnic. But," and here she smiled, artfully, first on one, and then on the other, "I hope I shall see you both there!"

In spite of their disappointment, each went on his way exulting.

"If ever a smile meant anything," the Major congratulated himself, as he wended his way homeward, "her's did, awhile ago. I could see that the dear girl wanted to talk to me alone, and she only endured his society because she had to." While the Squire's meditations ran in a similar strain. Of course, she had smiled on his rival, but then, she was so tender-hearted that she wouldn't willingly have hurt the feelings of a fly. And there was a subtle quality in the smile she had bestowed on him that was obviously missing from the one vouchsafed the Major.

And they were both, in a measure, right. For Miss Priscilla had formed a desperate resolution, born of deferred hope and painful suspense. It was leap year. Tomorrow she would have a fair chance. Under cover of the noise and excitement, and buoyed up by the exhilaration of the day, it might be that she could contrive to settle her fate once for all.

She need not, perhaps, put the trite question, "Will you be mine?" to the gentleman of her choice, but—well, there were other ways, and feminine intuition must help her when the auspicious moment arrived. One question she had not quite settled in her mind—which of her admirers to honor with her hand. But the events of the day, she concluded, should decide that.

The Fourth of July morning dawned,

serene, cloudless, with a soft breeze blowing away all traces of the rain that had fallen the night before, except a few mud-puddles here and there that had been left by the sudden shower. The Squire and the Major were early on the grounds, but Miss Priscilla was nowhere to be seen, tho the crowd was beginning to arrive from all directions. The same thot struck them simultaneously. Her cousin lived at the other end of town, and the streets were a bit muddy. Perhaps she would rather ride in, than to walk the distance. So the Major sprang into his shining new top-buggy, and the Squire into his old family carriage, and away they went like the wind.

It was a swift race and a merry one, for some blocks, but the odds were so great that the result seemed a foregone conclusion. Polly was a faithful old mare, but she had seen a decade of service in the Squire's family, while the Major's young bay was fresh and fleet. Soon he distanced Polly, and the crowd not to be lightly outdone, and Polly's own spirit was up, so on they went, valiantly.

Pride, however, oftentimes goeth before a mighty hard fall. Just as the Major turned the corner at the home of Miss Priscilla's cousin, he rose in his seat and turned to cast a triumphant smile at his unsuccessful rival. But, alas! It was just here that the dashing bay took it into his unruly head to put on an extra spurt of speed, with the result that the Major was precipitated into a mud-hole conveniently and unfortunately near, while his buggy rapidly disappeared around the next corner.

As the Squire rocked past him, behind the puffing old white mare, he smiled tauntingly, and remarked, "Ah, Major, the race is not always to the swift!"

Priscilla herself was just coming down the path, in all the bravery of curls, ribbons, and sky-blue lawn, with fluttering roses in her hat, and a perfectly useless chiffon parasol in her hands. The Squire alighted, bowed, assisted her into the rickety old carriage with as much grandeur as if it had been a coach and six, and they rode away with apparent indifference to the fate of the poor Major, who still sat in the mud, cursing his ignominious fate.

A few minutes before, he had been resplendent in new blue serge, gaily colored vest, and shining patent leathers. Now he was mud from head to foot, and that unrecognizable object over yonder against the curb was what had recently been a jaunty piece of head-gear. Ten minutes ago, the star of love had beckoned adown a path of roses; now—now, its light had been eclipsed, perhaps forever, by a sea of mud! Slowly, painfully, he dragged himself up from his involuntary bath, and wended his way to the nearest hotel.

Meanwhile, Priscilla and her escort were enjoying the morning. On the grounds the crowd had reached surprising proportions, augmented every few minutes by the arrival of a fresh bunch of town-folks, or a wagon-load of rural pleasure seekers. With every crowd, a huge basket appeared from whose capacious depths emanated a pleasant jingling and rattling that was suggestive of the coming feast. The appetizing odor of hot popcorn and roasting peanuts mingled with the tinkling of ice in pitchers of pale red lemonade, which consisted of the juice of one lemon diluted with more or less water, sugared lightly, and retailed to thirsty revelers at five cents per glass. The Ladies' Aid had an ice-cream booth, where the ice-cream was distributed infinitesimally, accompanied by a wafer of cake so thin that it was not visible to the naked eye when turned edgewise. Hither the victorious Squire piloted his lady-love, and together they partook of the cooling refreshments, to the rapid depleting of the Squire's pocketbook, and the corresponding enrichment of the Ladies' Aid Society, who waited upon them in a body. When Priscilla had at last declared that she couldn't touch another mouthful, they sauntered away toward the little sideshow where a short-skirted dancer gave high-class (?) exhibitions to a shocked but admiring public for the trifling sum of two bits. A few minutes later they reappeared, the Squire looking disconcerted and indignant, Priscilla as red as the roses in her hat. After that painful experience, they sought safety and seclusion in a shady corner where a double swing had been erected. Here they were quite alone, as most of the youngsters were indulging in a platform dance, under a hastily-erected arbor of evergreens, and as they sat there, side by side, the trees above murmured



encouragement to two palpitating hearts. "Now is my time," soliloquized the Squire, but at the very thought of the task before him great beads of sweat popped out on his florid brow. "There will never be a better opportunity," Priscilla said to herself; "I can hint ever so gently that I am getting old and lonely, and that it is quite sad to spend one's declining years—" then, for all her qualities were distinctly feminine, Priscilla choked up and grew red at the mere idea, and remarked that she thought it was going to rain, after all.

Considering that there was not a single cloud visible, and that the sun was pealing down with unabating ardor, the Squire might have sought some explanation for this untimely remark had he not had troubles of his own at that particular moment.

"Miss Priscilla," he began, trying to throw the sentimental note into his voice that would have marked the wooing of a younger and more impulsive man, "I have been thinking, and the more I think, the more I am convinced that—that—that—"

"Yes?" Priscilla encouraged, rather absently it must be admitted, because her own brain was busy.

"That the last selection the band played was such a dreamy, beautiful waltz," he ended lamely.

Priscilla opened her eyes very wide. "Why, Squire, they were playing 'Yankee Doodle.'"

And so the conversation drifted on, dealing with generalities and inanities, but perversely remaining miles away from the subject each had at heart. Now and then Priscilla cast admiring glances at her companion. He wore "ice-cream" trousers, jauntily wide and beautifully baggy, a cerise-red tie that spread a deeper glow all over his naturally ruddy countenance, and yellow low-shoes, with a liberal display of artistically embroidered hose above.

"I had no idea dress could make such a difference in a man," thought Priscilla, gazing upon him in awe. "It will be the Squire, I suppose. Fate seems to have decided for me."

Then, woman-like, she began to sigh a little, and think of the absent, and to pity the poor, luckless Major. Pity, you know, is second cousin to love, and before she realized it she was beginning to veer around to the Major's side, and wishing that he would appear.

The dinner hour arrived and they sauntered back to the tables. At that moment the Major hurried up, hat in hand.

"I've been looking everywhere for you, Miss Priscilla," he began, quite ignoring the withering glance of the ruffled Squire. "I am commissioned to ask you to come and eat with our party. Mother says—"

"Miss Priscilla and I—" The Squire had only got thus far with his indignant protest when he stumbled backward over a low bench, clutching wildly at the nearest objects to stay his mad flight. These happened to be the table-cloth and Miss Priscilla's skirt, in consequence of which the latter was half ripped from the waist-band, and the former came off the table, bringing with it cakes, pies, pickles, ice-cream, coffee, etc.

The Major's sarcastic laugh rang out, accompanied by the giggles and horrified screeches of women, and the squalling of frightened youngsters. But as the half-drowned Squire arose, dripping with soft custard and assorted jellies, and with hot coffee streaming from his bald head, the last drop was added to his bitter cup

by Priscilla's indignant exclamation, "Careless wretch!"

He mopped the gravy off his mustache and shook his greasy fist at the grinning Major.

"Y-Y-You be d-d-d—"

What he might otherwise have been heard to say was mercifully drowned by the yells of mirth on all sides, and the facetious advice of a small urchin: "Say, mister, take that pickle from b'hind yore left ear."

The Major, now thoroly renovated, and blissfully happy at the turn of affairs only remained on the scene long enough to remark: "It's a long lane that has no turning, Squire!"

The he marched away, head up, with martial tread, Priscilla on his arm, beaming and blushing.

"Fate is wonderfully kind," thought Priscilla. "How could I have seriously considered the Squire, who is so fat and unromantic, and displays such a shocking temper? How fortunate that I found him out in time! Now, the Major is so tall and dark and interesting. I'm quite sure I prefer the Major."

The Major's mother, a little withered, pale-faced woman with a smile whose sweetness had survived the trying winters of a long life, made much ado over Priscilla, whom she had long coveted for a second daughter-in-law, and fluttered around her with little motherly pats and mischievous nudges. The excitement of the morning, and all the attention she was receiving, quite upset poor Priscilla's appetite, and she only made a pretense of eating as she sat in her place beside the Major, with a deep red spot on either cheek and a terrible certainty in her heart that she would never be the Major's bride unless he spunked up and did the wooing unassisted.

This the Major was even now steeling himself to do, fortifying himself with long draughts of cold lemonade and huge slices of pie for the coming ordeal. When the feast was ended, he nervously escorted Priscilla to a secluded corner, where, under cover of noisy renditions of popular and unpopular airs by the local band, perhaps with the aid of their martial stimulation, he might manage to learn his fate.

Their nook was almost deserted, and no one was looking their way. He ventured to clasp the slender hand that lay on Priscilla's blue lawn knee.

"Dear Miss Priscilla," he began, "There is something I wish to say to you. In fact, I have desired such an opportunity as this for a long time." ("That was a fine beginning," he thought, as Priscilla smiled encouragingly, and forgot to remove her hand; "Now, what shall I say next?")

What he might have said next is to this day an undivulged secret, for at that moment a party rounded into view, headed by Priscilla's cousin, a plump matron with an all-pervading voice.

"Dear me, here you are at last," she exclaimed, with a sigh of relief. "I've been looking for you everywhere. I want to introduce Tom's friend from the city, Mr. Franklin. He just came in on the noon train."

A second later, Priscilla's eyes fell upon her cousin's companion, a tall man with a merry eye and an iron-gray mustache. There was a long pause, freighted with a thousand things—old memories, first love, moonlight nights, faded roses.

"Will!"

"Prissy!"

Well, the rest is soon told. As Priscilla stood with her hand in that of her old

lover, the Squire and the Major were equally cast to the winds of oblivion.

It is doubtful if she even heard the Major's stammered excuse, as he unobtrusively departed, perfectly conscious that his carefully concocted cake was, to use a popular expression, uncompromisingly dough.

After the first breathless greetings were over, Mr. Franklin led his unresisting companion to the double swing, mercifully untenanted at that particular moment; and for the next few hours they lived, not in this prosy, work-a-day world, but in the fairy world of a re-incarnated past. Before the sun went down, Priscilla had been really proposed to, and had accepted without a regret for her two former suitors. For this time, Cupid reigned supreme, and all was forgotten, save that old dreams come true.

When they finally strolled back to the crowd, trying to look natural and unconscious, and failing entirely, the Squire took one long, lingering look at them. Then he turned to the Major, who stood near, the picture of dejection and defeat.

"The race is not always to the swift," sure enough," he quoted, "and, also, 'it's a long lane that has no turning!' Come, Major, let's go home!"

#### A RATTLING GOOD NOISE.

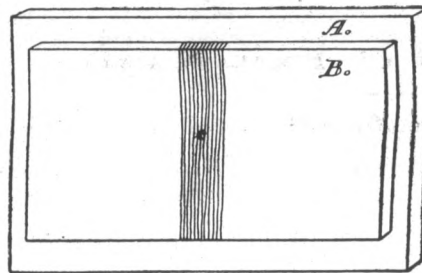
BY X. Y. Z.

There are few boys, perhaps, who do not appreciate anything which makes plenty of noise. This rattler will certainly "fill the bill" in this respect, and is very easily made, requiring no other tools than a good jack knife.

It can be used for the purpose already mentioned, or for scaring away birds on the farm, or in the garden. It may be used also as a call arrangement between the members of a boys' club.

##### To Make the Rattler.

Cut from a piece of wood, about half an inch thick, a strip four inches wide by six inches long, and bore a hole in the center for a strong string or cord, about



one yard in length. This strip is marked A, in the illustration. B is another strip of wood, about half an inch less in width and length than A, and one-quarter or three-eighths of an inch thick.

A hole is bored in the center of this piece, also, and the cord, or string, passed thru both, with a good sized knot on the end to prevent it being pulled out. At the other end of the string a loop is tied.

##### To Make the Rattler Rattle.

Wind the string round and round the smaller piece of wood, B, leaving enough string at the loop end to take a good hold. Rest the rattler upon the fist of the left hand, (unless you happen to be left-handed), allowing the loop end of the string to hang down between the thumb and fingers of the closed fist. Taking a firm hold of the loop, with the right hand, give a good long quick pull, which will unwind the cord on B, causing it to make enough noise to satisfy the ambition of any boy. You try it!

#### INDEPENDENCE DAY.

BY JOHN E. DOLSEN.

The echoes of the Independence Bell  
Ring thru the land today from east to west,  
And blood that dyed the height where  
Warren fell  
Still surges crimson thru the nation's breast.

#### THE FOURTH OF JULY HISTORICALLY.

BY GEORGE BANCROFT GRIFFITH.

This is the oldest holiday of which our nation can boast, being, in fact, the day on which the nation was born. And yet, so far as years are concerned, our Fourth is a mere infant compared with Switzerland's national fete day, established on August 1, 1291, and which has been kept up without interruption during the more than six centuries that have since elapsed. At Berne, this year, the day is to be observed in the most spirited, patriotic manner, and the fireworks in the evening on the mountains above the city are planned to be the grandest ever exhibited abroad. How shall we be celebrating the Fourth of July in the year 2376, six centuries from the date of its inception?

It is very interesting to know the part that grand old Bostonian, Samuel Adams, played in the great struggle. Few men had greater influence over the minds of their contemporaries than this early patriot. He has been called the "Father of the Revolution," "the tribune of the people," "the last of the Puritans." Three statues have been erected to his memory—one at Lexington in 1875, one at Washington, and the third in Boston. To him, more than to any other man, must be assigned the honor of initiating the measures and guiding the deliberations which led to political independence. In the caucus and town meetings he was without a peer. Most of the important state papers issued from the legislature from 1765 to 1775 were written by him. His appearance in the council chamber after the Boston massacre to demand of Hutchinson the removal of the troops has been described as perhaps the grandest scene in his life.

He was not only a signer of the immortal declaration, but its chief promoter. For seven years he remained in Congress, filling at the same time many important offices at home. He was afterward president of the Massachusetts Senate and a member of the council, devoting his time wholly to public affairs. On the death of John Hancock, who with Washington and John Adams, did so much in the cause of liberty, Samuel Adams was annually elected governor from 1793 to as long a period as he would consent to be a candidate. He died in the 82d year of his age. He will always be remembered as a man of the simplest and purest personal character.

Yes, the Fourth of July is a sacred day to every American. No matter under what flag or in what clime the day overtakes him, his independence, his love of liberty, his devotion to country, must needs make manifest, and he celebrates in some form or another. It is a pleasure to read of the patriotic observances of the day by American colonies in other lands. They will continue to fling "Old Glory" to the breeze, sing the national songs, hurrah for Washington, toast the United States and boom America generally.

The love of country never dies. Year by year the patriotism of our young men will be increased.

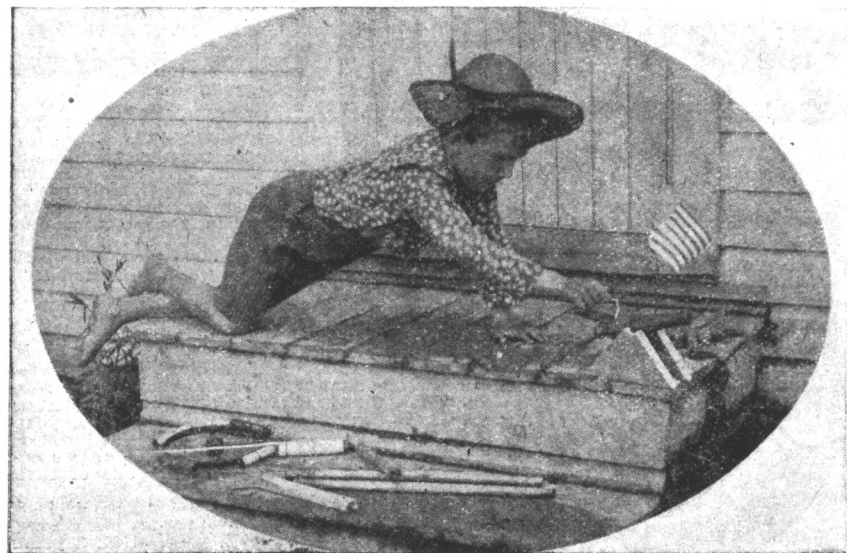
#### THE MISSING.

BY D. W. F.

The Glorious Fourth was a thing of the past,  
With its glaring of colors and blaring of noise;  
The remains had been tenderly gathered at last,  
And patched up again into small girls and boys.

Into the bedroom all darkened and dim,  
Father crept silently, holding his breath,  
The odor of arnica floated to him,  
But, save for a moan, all was silent as death.

These his wild, noisy girls and his boys?  
With doubt and misgiving, he questioned, "All here?"  
Weakly and mournfully answered a voice,  
"All but three fingers, some toes and an ear!"



7 a. m., July 4th.



7 p. m. of the Same Day.



# THE PRESSING NEED FOR VENTILATION IN RURAL SCHOOLHOUSES.

BY THOMAS S. AINGE,  
Sanitary Engineer, Michigan Department  
of Health.

To anyone, even with limited opportunities for observation, who has been in touch with the world during the past decade or two, the fact must have become indelibly impressed on the mind that this is an age which, for progress in almost every avenue of human life and activity, is without a parallel in history. And this progress has not been confined to the dwellers in the cities alone, but has extended to the remote and, at certain times of the year, comparatively isolated places of the earth, the very many evidences of which fact it is needless to enumerate. There is, however, one very important and vital point—the ventilation of our rural schoolhouses—which seems to have been overlooked, at least in this state, in our movements for improved conditions of life in its manifold phases; and it is highly essential that we pause in our activities along other, and less important, lines in order that we may grasp the full meaning and importance of this question.

To live we must breathe; and to live healthy lives—one of the greatest blessings we can enjoy while on the earth—we must, at least, breathe pure air.

By the wonderful laws which control life upon the earth, an inexhaustible supply of pure air is everywhere about us at all times, but by shutting ourselves up in buildings which are comparatively tight, for privacy and protection, we poison the air faster than the purifying processes of nature can restore it to its normal condition, and thus bring about a deteriorated condition of the body and pave the way for attacks of many of the most dangerous diseases.

Where only one person occupies an ordinary sized room, as in a dwelling, by reason of the leakage of air thru walls and crevices, the contamination of the air by the exhalations from the body is relatively small when compared with that due to the congregation of many persons in a room with much less air space for each person, as in a schoolroom.

It has been determined that the amount of fresh air which should be admitted to and the amount of vitiated air which should be removed from a schoolroom for the maintenance of a wholesome condition of the air in such room should not be less than 30 cubic feet per minute for each occupant. That this amount of air cannot leak thru the walls or crevices of the building will be apparent to anyone familiar with the construction of buildings in the northern latitudes; neither can the required changes of air be secured in the cold weather by means of open windows. To accomplish this we must have at least two special openings of ample size—one for the admission of fresh air from outside the building and one for the escape of vitiated air; and the changes of air must be effected without draft or discomfort to the occupants of the room. In a one room schoolhouse, the ventilation may be best effected by means of a fresh-air duct, extending from a point outside the building to a jacketed stove or furnace, and a vitiated-air flue, extending from the floor line to a point above the roof. By this arrangement we can secure warmth as well as ventilation and, where properly arranged, this method of warming will secure an even temperature of air thru-out the room instead of the usual roasting of one portion and the freezing of another portion of the occupants incident to schoolrooms heated by means of the ordinary stoves. Such an arrangement as that outlined above can be installed in any rural schoolhouse of one room, only, at a cost of not to exceed \$125, and where the existing smoke flue is of sufficient size for the removal of both smoke and vitiated air, the cost can be reduced somewhat below this figure.

By reason of the fact that the efficient working of any scientific method of warming and ventilation will depend, in the main, upon the correct sizes and proper installation of the various parts of the apparatus, the design and superintendence of such work should be intrusted to a competent person, only.

I am informed that in at least two states—Wisconsin and Minnesota—the warming and ventilation of the rural schoolhouses by the plan outlined above is general, and that the boards having control over these buildings would not go back to the old and uncomfortable method of warming by ordinary stoves

for many times the cost of the apparatus. There are, however, benefits far greater than that of comfort to be derived from the proper warming and ventilation of a schoolroom. In the first place, the teacher and scholars can do much more effective work, as has been demonstrated in the schools of Detroit and elsewhere; and as may be demonstrated to the satisfaction of any person who will do work requiring close application, first in a room unevenly warmed and without adequate means of ventilation, and afterwards in a well ventilated room with an even temperature. But the most important benefit—and which may not be apparent until the scholars have completed their education and entered upon the work of earning their livelihood—will, as a rule, be manifest in the sound bodies of those who pass a considerable portion of their student years under such hygienic surroundings.

As a result of an investigation, conducted by the State Board of Health of Indiana, relative to the ventilation of school buildings in that state, it was found that, in a single term, 80 per cent of the pupils suffered from colds or coughs, and that 90 per cent of these ailments were due to the bad air of the schoolrooms. Commenting upon this condition, it was stated by the secretary of the board that as 20 per cent of all deaths from consumption in that state are in the age period of 15 to 25 years, the probability that the lungs of the decedents were prepared for the consumptive germ by breathing bad air at school is great.

In Michigan, over 90 per cent of the cases of pneumonia and at least 80 per cent of the cases of consumption, in recent years, were reported to have had their beginning in a bad cold or cough, and many of these were probably due to the attempt to regulate the temperature and improve the condition of the air in schoolrooms by the opening of windows.

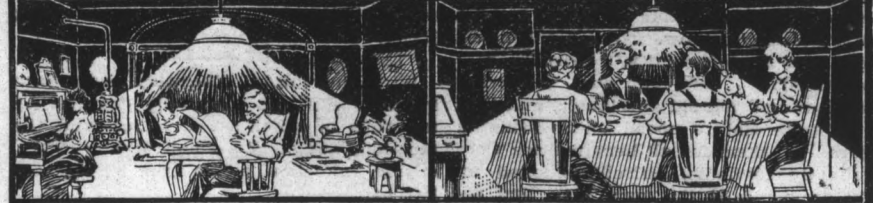
In the list of occupations of persons who died from tuberculosis in Michigan in the past thirteen years, farming occupies the second highest place. At first glance this would appear to be an error because the outdoor life of the farmer is and must always be conducive to good health and long life. Many reasons have been advanced for this apparent anomaly, chief among which are the carelessness of farmers in regard to keeping their clothing dry and the lack of attention which they pay to the sanitary condition of their surroundings. There is every reason to believe, however, that one of the most potent predisposing causes of the excessive mortality from tuberculosis among farmers is the unventilated and improperly warmed schoolrooms in the rural districts.

From the time of its establishment to the present day, the Michigan State Board of Health has repeatedly urged upon those having charge of our schoolhouses the necessity for the proper ventilation of such buildings, and this is being done in very many of the larger buildings and at considerable cost. As the question of the necessity for proper means of ventilation in schoolhouses is not governed by the size of the building, any movement for securing such ventilation should not be limited to larger buildings but should include even the smallest and most isolated of our rural schoolhouses.

In discussing the question of ventilation for our rural schoolhouses, the opinion is sometimes advanced that what was good enough for the parents, in the days when the state was young and our knowledge of the laws of health comparatively limited, is good enough for the children. This is to infer that the primitive methods of life and labor in the country are to be preferred to the present day conditions, and I am loathe to believe that anyone who has caught the progressive spirit of the age would desire to turn back the hand of time to what are sometimes designated as "the good old days," were such a thing possible.

We are constantly reminded thru the Press of the many ways in which the state and subordinate granges and kindred organizations are working for the welfare of the dwellers in the rural districts, and I can conceive of no better way in which these organizations can render valiant service for the people whom they represent than that of inaugurating and vigorously prosecuting a general movement for hygienic surroundings for those who must soon shoulder the responsibilities of life and upon whose physical fitness the future welfare of the state will largely depend.

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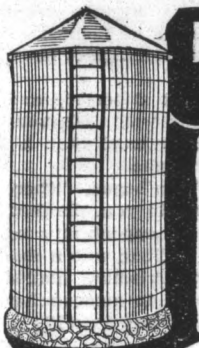
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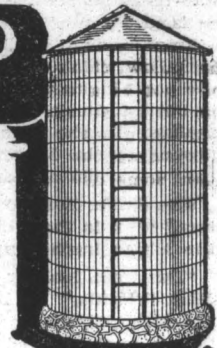


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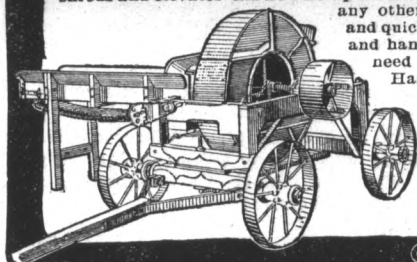
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Yours truly, WEEKS BROS.



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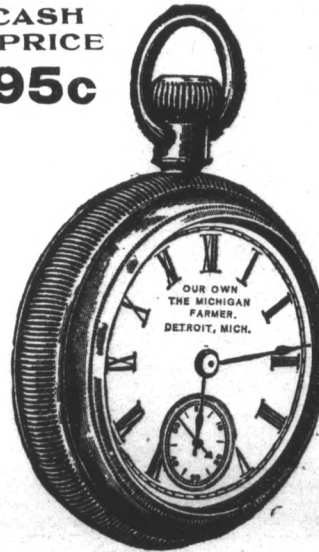
is built on lines that make it a very fast worker—it's the result of years of development and we confidently offer it as the highest attainment in a silo filling machine. It cuts or shreds and elevates all at one operation, and does it faster and with less power than any other machine on the market. It is easy to operate and quickly moved from place to place. Is low-down and handy to feed; quickly adjusted; traveling apron need not be taken apart when machine is moved. Has very strong fan blades, heavy gear and a simple stop and reversing mechanism. Write for interesting free catalogue—a regular Silo Filler Dictionary. You ought to read it through before you buy a Silo Filler.



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**THE MICHIGAN FARMER, Detroit, Michigan.**



## OF INTEREST TO WOMEN

### HOME CHATS WITH FARMERS' WIVES.

BY ELLA E. ROCKWOOD.

#### Summer on the Farm.

In many ways the summer months are the pleasantest of the year upon the farm. People who profess a dislike for country life at other seasons admit that it is charming in its setting of green fields and shady trees, with the beauties as well as the bounties of nature at first hand.

Whatever the occupation which may employ one, far from these peaceful scenes, thru the other seasons rare, indeed, is it to find a person who would not be glad to seek the open country during the heated period which, altho somewhat belated the present year, is now at hand.

However latent this love of nature may be, deep down in the heart most people possess it. We see men in the great world of business, men who are captains of finance, whose word or will dominates markets and controls prices, seeking out some favored spot far from the brick and pavement of cities and here building a home where they may retire to dwell for awhile. And men with lesser means those of professional and business life, many of them possess farms in the management of which they take great pleasure.

Coming down the financial scale still further we reach those with the monotonous grind of clerical or office life as their daily portion, and upon interviewing these men we find this same ambition to own a piece of land, a little home in the country. In fact, it is hard to find a man who has not this ambition, whether or not he is ever able to realize it. To these the man who owns a farm is a king, and his lot the envied one. The hand-to-mouth existence so common in our larger cities and towns among wage-earning families would drive sleep from the pillow of the farmer who, while he may not be a man of wealth, has plenty and to spare for his family in case of sickness or accident to himself.

But there is work to be done in the farm home as well as in the fields. As I have said, summer is in many ways the most delightful season, yet from another view-point it is the hardest. With the extra amount of labor demanded by renewed activities outside there is added the seasonable work of the home proper. The preparation of fruits and jellies for the coming winter is no small task but it is one which the provident home-keeper does not neglect. Beginning with the first of these she is not content until the last ones are secured and her shelves over-flowing with well-filled jars of canned, preserved and jellied sweetness and goodness. How much this means in a family none but the housewife herself fully understands.

Summer is the time when city people long for an invitation to spend a few days of weeks in the country. And not infrequently they do not wait to be asked but invite themselves to partake of the hospitality of their friends. Probably every country matron knows what it means to have the house filled with these guests, to have to get extra meals at considerable inconvenience and additional hours of labor. Indeed, it has come to be a standing joke, this entertaining of city cousins during haying and harvest. Yet it is in real life no joke. At the same time I am convinced that the extreme cases occasionally cited represent comparatively few out of the great number of actual experiences. As to the selfishness of this class of guests who demand so much and give no adequate return, it is matched time and again by the number of people whom it is a pleasure to have in the home. There are for me many, many delightful remembrances of chats in the dairy-room, or in the garden picking berries with guests who cheerfully shared my tasks even to the last and whose pleasant conversation and helpful suggestions lightened many a long hour. When later in the day came the resting time it was as frequently the hostess as her guest who swung in the hammock or read the new book brot from the city for all who would to enjoy. And to one of these same summer visitors I owe my initiation into the mysteries of various dishes which I had long wanted to attempt making. The hungry men gath-

ered round the long dining-table were not lacking in appreciation when the big-aproned city-woman, flushed of countenance yet with eyes beaming with good will, set upon it the result of her efforts over the kitchen fire.

Yes, we must admit that there are two sides to this question. There are guests who give as much as they receive, whose departure gives actual pain and there are those whose going is hailed with positive rejoicing.

Summer days are long days. Early rising is encouraged by the sun himself whose coming is heralded by the birds at first peep of dawn, softly twittering to their mates, then boldly singing loud and long as he rises above the horizon. Thrifty farmer folks are not far behind him and work begins at an early hour. This, to the housewife, should be a matter for congratulation since she is enabled thereby to get the bulk of her duties out of the way during the forenoon. With sweet and peaceful slumber commencing at a seasonable hour no healthy person need complain because they must rise at five or even earlier than that hour.

I smile now when I recall my youthful ideas on this subject which were to the effect that city people were not compelled to get up in the morning and go to work as early as farmers. The other day I asked the man who brings me ice at what hour he had breakfast and he replied, five o'clock. I doubt if there are many in the country who rise in time for a five o'clock breakfast. Of course, there are those in town who need not reach their place of business until seven or eight o'clock, possibly later, but the great mass of laboring people must be early at work. The whistles blow at 6:30 and every man must be at his post if he would work in a factory, and here is where thousands are employed.

So a large proportion of the population rise betimes even in the city.

Summer heat is enervating. Perspiration streams from every pore at the slightest exertion. We feel physically uncomfortable with the mercury toying with the nineties. Yet, in the open country there is usually a cool spot somewhere and a cool breeze playing thru the trees. The heat is nothing compared to that which radiates from brick and mortar with the same temperature. Read the mortalities of the big cities, this month and next, ye favored ones, and think of your blessings in being able to live in a home where the pure, sweet air can enter from every side. That is something denied all but the very wealthy in any big city, where houses crowd in on every hand and where many rooms are of necessity not even passably well ventilated.

Not long ago I was talking with a friend who was once a country school-teacher. Knowing my love of the country she was relating some of her earlier experiences when, a city girl, she went to teach in a back district where the tiny log schoolhouse was set in a small clearing in the virgin forest. Here it was that she learned to love the things of nature. "The wild creatures came to the very door," she said, "and birds in summer flew in at the open windows. In the long, quiet evenings a whip-poor-will came and, lighting on the well-sweep at my boarding place, sang its sweetly monotonous song, so near its form could be distinctly seen outlined in the gathering shadows. Squirrels were everywhere. They chattered as they munched fearlessly the crumbs from the dinner pails. They scampered about the place here and there, undisturbed by human presence. I learned to love the works of the Creator as never before, and altho when I married I returned to town to live, it has always been my ambition that we might some day own a home in the country and live there."

#### When Summer Skies are Blue.

The busy bee goes humming over fields, white with fragrant, blooming clover.

Sips here and there its nectar sweet Then hies away to his retreat, When summer skies are blue.

The birds sing sweetly as they fly From tree to tree—their nestlings high— Safe housed, secure from all alarm, Watched and kept safe from every harm, When summer skies are blue.

The whispering leaves, the blossoming flowers, Make "av and sweet all nature's bowers,

And waving grain and fruitful vine Bespeak the love of God divine When summer skies are blue.

The shady dell, the sparkling rill, Where sweet-breathed cattle drink their fill, The flocks of sheep beneath the trees— The open country's full of these When summer skies are blue.

### GROWING PERENNIAL FLOWERING PLANTS.

As I have for several years raised perennial plants from seed, my experience may be of benefit to someone else who would like to engage in this branch of floriculture.

July is about the best month for starting perennial plants, that is if the weather is warm and dry, for the very hottest, driest month in the whole year is best.

If you were going to try ten or fifteen varieties then you would want to prepare a seed bed by building a frame 3x6 ft. having a board say a foot wide for the north side of the frame and one six inches for the south side, with slanting boards three feet long to form a bottomless box. This should be set on ground slightly higher than the surrounding surface, and filled in with good, rich porous garden soil, about an inch deep. Of course, the soil should be worked before the box is placed loosening the soil to make good drainage. A slat frame should then be built just large enough to fit over the top of the boards, and on this slat frame should be tacked as tight as possible a covering of new unbleached factory or muslin. The muslin should be of a light grade as this admits more air and sun and at the same time excludes the wind and rain, making a warm hothouse atmosphere, much better than the hotbed covered with glass, as the sun cannot strike the plants strong enough to burn as is often the case where glass is used.

After the seeds are sowed water according to the weather. If the weather is very hot such as we had last summer in July, the ground can be thoroly wet, but if the nights are cool then water sparingly. It takes longer for perennial seeds to germinate than annuals, and the plants grow slowly at first. The watering should be attended to often enough so that the ground will not become dry at any time. Some plants will come in eight days and some will not appear in less than a month, but they nearly always come if one is patient and painstaking. Should the weather be wet, it is best to raise the frame on one side to admit air or the soil may sour or become covered with mold. After the plants are all up another frame should be made with screen or two thicknesses of mosquito netting. This will admit more air and yet protect the tiny plants from hot sun and winds. If it rains put the cloth frame on while the storm lasts. There is little left to do now but keep the plants watered and transplant or thin out. If the plants are transplanted set them about two or three inches apart each way. If they are kept close together they are easier cared for than if set in the permanent bed. The plants can be put in the permanent bed after the fall rains set in and will require no further care unless they dry rot.

While the plants are in the hotbed there is one danger to be guarded against, called "damping off." This is caused by too much moisture or too cool weather, or both. It is a little mouldy growth over the top of the soil and causes the plants to rot off just where they come thru the soil. Work the soil with a harpin or toothpick, admit more air, sprinkle sulphur thinly over the soil, are all remedies. Also, thin out the plants so only one stands in a place.

There are several good varieties for the beginner which are offered by nearly every seedsman. Some of them are Aquilegia, Delphinium, Crimoneye, Hibiscus, Stokesia, Perennial Pea, Linum Perenne, Double Daisy, Oriental Poppy, and Feverfew.

The carnation and pink and double hollyhocks can be started in pans of earth in the house quite early so as to make a large growth. They will endure the winter without protection, and bloom finely the next summer.

Now I have a word to say to the man who is in the habit of ridiculing his wife's efforts to have flowers. A contented and happy woman will be a better wife, so if flowers will add to her happiness, why should you object. The price of a pound of "fine-cut" will start her up in the floral business and afford her pleasure for years if invested in perennial flower seeds.

K. T.

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## A HEALTH EXHIBIT.

BY CHARLOTTE A. AIKENS.

Two years ago I was asked to visit the Michigan state fair, look it over and make some suggestions as to how it might be made more attractive and valuable for the "women folks." One of the suggestions I made at that time was that some small portion of it might be devoted to "health matters." I would like now to address this article "To whom it may concern" and repeat that suggestion. Perhaps some very practical "financier"-sort-of-man feels inclined to ask, "What is there to exhibit about health, and how?" and to add "Aren't the people of Michigan as healthy as you'll find anywhere?"

I am willing to admit that the Michigan folks whom I have seen are, on the whole, pretty fair specimens of humanity to look at, but I'd like to remind the "financier" man that statistics go to show that Michigan averages over 2,500 deaths a year from tuberculosis alone, more than that number from pneumonia, the thousands of little children who go to their graves before they are five years old, to say nothing of all the deaths that occur from other preventable diseases. If the directors of the state fair could have, for one year, all the money that is spent for doctors and medicines they could retire from business wealthy, or they could put up buildings on that fair ground that would rival the buildings of the Alaska-Yukon-Pacific Exposition. In regard to that question, "What is there about health to exhibit?" time and space forbid me to mention more than a few of the things that might properly find a place in a health exhibit. A committee of five or seven of the right sort of people could get up a health exhibit that would be more attractive and infinitely more valuable than all the attractions of midways and pikes and wanderlusts and "pay streaks," and it wouldn't need any "barkers" to persuade the people to go to see it.

A few months ago while in New York I had a chance to go to see the tuberculosis exhibit which was held in connection with the International Tuberculosis Congress. I had only about two hours to spend there, and I saw only a little corner of it. One could have spent two entire days without seeing it all for it was so immense and so interesting. Over 38,000 square feet of floor space and 51,000 square feet of wall space were needed for the display for that one disease. Twenty different states had exhibits there. Michigan was one of them and had a very creditable display. England, Germany, Russia, France, Sweden, Switzerland, Hungary, Belgium, Ireland, Austria, Brazil, Uruguay, Cuba, Porto Rico, New Zealand and Canada were all represented. Hundreds of thousands visited the exhibit while it was in New York, and each afternoon and evening there were demonstrations and explanations and talks given by physicians and others. If the "financier man" had been there he would never have asked the question, "What is there in the line of health to exhibit?"

One of the first things exhibited was a cow in a little sanitary cow-shed who supplied pure milk. Next there were all the known appliances for keeping milk clean and sanitary from the time the cow gave it till the city baby or invalid got it—milk dairies, refrigerators, milk bottles, milk pails, nursing bottles, etc. There were photographs and charts illustrating conditions which breed the disease; there were appliances for fumigating rooms which had been occupied by consumptives; there were working models of window tents, shacks for taking the fresh air cure at home; roof tents; pictures and schedules of diet in the various stages. There were sleeping bags and hoods, sputum cups and spittoons, immense banners with pictures, each conveying a lesson on how to avoid the disease. There were models of sanitary dwelling houses free from dust catchers; models and plans of out-door play grounds and sanatoria, and hospitals for crippled children. There were wax and plaster figures of children and adults with limbs distorted by tuberculosis. There were apparatuses for lessening the dangers in various trades, a pathological exhibit showing sections of lungs with cavities formed by tuberculosis, etc. This will give an idea of what there is to exhibit about only one disease. When it comes to a general health exhibit, there is almost no end to what might enter into it. The only question would be how to use the

space so as to make the exhibit of most educational value.

Some years ago I attended a Health Exposition which ran in New York city for several weeks. An admission fee of 25 cents was charged and every afternoon and evening the place was crowded. After all, there are few things in which people are more interested, than in their health, and the more intelligent they are on the subject the more interested they are. At this Health Exposition there were all sorts of sick room conveniences and appliances for the comfort of the sick. There was a sanitary sick room and the other kind. There were wax figures illustrating how to bandage properly; how to bathe to reduce fever; model kitchens with all sorts of labor-saving appliances and sanitary devices; models of ventilating devices; pure foods; pure soaps; hygienic underwear; laundry conveniences and contrivances. A number of the large hospitals had special exhibits—all on different lines. There was an exhibit of nurse uniforms on dolls to which hospitals all over the country had contributed. There were talks and demonstrations going on all over the building. And the health exposition paid its promoters a good profit, to say nothing of the educational value of it.

In the east, exhibits such as I have mentioned have been conducted by anti-tuberculosis associations at the county fairs for several years. In Maryland the Grange has taken a leading place in such work. At a great farmers' picnic, lasting for three days and attended by 10,000 people from Carroll and Frederick counties, where such an exhibit, with demonstrations and lectures had been arranged for, a police force had to be organized to get the crowd into line and marshal them in order to hear the lectures.

There is no good reason why a health exhibit might not be made a great and attractive educational feature that would teach lessons on health and healthy living to hundreds of thousands every year at the state fair. Might not the state board of health co-operate and provide information and leaflets for free distribution? Two years ago, at the fair, I was handed a leaflet on how to prevent the ravages of the San Jose scale, and how to prevent the blighting of grapes, potatoes, etc. Wouldn't it be quite as sensible and humane, and altogether finer if we should have supplies of leaflets for free distribution, telling how to prevent Michigan children being blighted or Michigan mothers and fathers. Isn't the farmer himself, and his health, of more consequence than his crops or herds or machinery?

The medical societies would help. Women's clubs, hospitals and sanatoria and private individuals and firms would all co-operate and help to make such an exhibit a success if once the ball were set in motion.

It should need no argument to convince any intelligent person that the health of the farmer and his family constitutes their most valuable asset and that anything which will tend to promote health and prevent illness contributes toward the upbuilding and the highest welfare of the people of the state.

## MORE ABOUT CANNING PEAS AND CORN.

**Canning Peas.**—Fill the jars full of very young uncooked peas, then fill them full of cold water, adjust the rubbers and lay on the tops. Put straw or hay in the bottom of a wash boiler, place the jars on this, and pour in sufficient cold water to half cover them. Put the boiler over the fire, cover it closely with the lid, and boil steadily for three hours. Take up the jars, see they are filled to overflowing, and screw on the covers as tight as possible. Stand aside to cool. When cold, again screw the covers, and keep in a dark cool place. Asparagus and lima beans may be canned in the same way. Asparagus requires one and one-half hours cooking and beans require three.

**Canning Corn.**—For this select fine, fresh corn. Remove the husk and silk, and carefully cut the corn from the cob. Pack into jars, pressing it down closely, and fill to overflowing. Put on the tops and screw them down. Place hay or straw in the bottom of a wash boiler, stand the jars on top of this, and pour in sufficient cold water to half cover the jars. Cover the boiler tightly, and boil continuously for four hours, watching carefully that there is sufficient water to make a full volume of steam. When done lift the jars and screw down the covers as tightly as possible, stand aside to cool. When cold screw again, and keep in a dark, cool place.

Monroe Co. Mrs. A. D. SCOTT.

To clean ivory handles of knives rub on them a paste made of whiting and lemon juice. If they are much discolored it may be necessary to let it remain on for some time. Then wash off in warm water, and polish with a soft cloth.

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cottages, bungalows, flats, pleasure and health resort buildings, office and factory buildings, new partitions in old buildings, finishing attics, back porches, laundries, cellar ceilings, garages, poultry houses, dairy barns and buildings—in short, it is the ideal material for a hundred purposes.

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## KINKS.

Kink I.—Four States.



Kink II.—Word Squares.

First: 1, A vital part of one's anatomy; 2, mistake; 3, to get up; 4, a kind of tree gum; 5, to lead.

Second: 1, A despoiler; 2, to admire; 3, garments; 4, obliterate; 5, rearrange.

Kink III.—Fourth of July Charade.

My first, it smacks of a ship,  
My second to music does run,  
My third is found in all light,  
My fourth can rhyme with shun.  
My fifth and my sixth are "preps,"  
So also my seventh in French;  
In my eighth they keep the "disreps,"  
My ninth, it sounds pretty dense.

Prizes for Straightening Kinks.

To the first 25 who send us correct answers to ALL of the above Kinks, we will give choice of a package of 50 post-cards representing a trip around the world, a copy of "Concrete Construction on the Farm," or a good paring knife. Where contestant or some member of his family is not a regular subscriber a year's subscription (75c) must accompany answers. Answers must not reach us later than July 30, as correct solutions will be published in issue of Aug. 7. Address answers to Puzzle Dept., Michigan Farmer.

Answers to June 5 Kinks.

Kink I.—Near-Sighted Hunter's Lost Dog.—The line leading from the letter A in the key to Kink I, points out the dog.  
Kink II.—Initials.—T is for trials the dairymen meet, H for their homes in the country so sweet, E for their enterprise lightening their toil.

M is for milk, their farms' Standard Oil,  
I for the intellect needed to bring  
C ash returns largely without laboring  
H ard to the injury of body and mind.  
I is for innings for them of the kind  
G ained by other producers who join  
A nd win their full share, and more, of  
N eeded to live and make the work pay.

F is for farmers who prune and who spray;  
A for the apples they gather this way;  
R is their reason for sorting them well,  
M for their marketing methods which sell,  
E nding in making "sure thing" for the man  
R aising the very best fruit that he can.

D is for daughters, true girls of the farms,  
E lecting to use their wits and their charms  
T o brighten and broaden the neighborhood life,  
R efute the magazine articles rife  
O n the dreadful condition of the farmer's wife.

I 's for ingenious ideas these girls  
T hink out beneath hats and their curls.  
M aking on farms a field for their wits  
I ndeed full as big for adv. writers' hits  
C alling the trade as any that ever  
H appily opened for city brains clever.

June 5 Prize Winners.

The first 25 solvers of the Kinks of June 5, to whom prizes are awarded, are as follows: F. S. Church, W. H. Ruesink, Alice E. Hammond, Sadie Spoelstra, Mrs. Ella Roberts, G. Holmes, Leta Ranson, Pauline Troost, Eva Scott, Rae Greek, Frank Sperry, Hulda Kern, Ralph Moerdyk, H. L. Ballard, Mrs. Fred Adie, Esther Matthews, Mrs. James H. Carey, Ella Melow, Mary B. Spencer, Mrs. Hesper Goodwin, Mrs. James N. Burt, Mrs. L. E. Webb, Oliver L. Deake, Mrs. L. J. King and Roswell M. Hall.

## CATALOG NOTICES.

The Rockford Gas and Gasoline Engines, manufactured by the Rockford Engine Works, Rockford, Ill., are fully described and handsomely illustrated in the new 50 page catalog issued by this well known firm.

The Light Draught Potato Harvester, manufactured by Stevens Manufacturing Company, Marinette, Wis., is illustrated and described in a new folder showing the construction and working of this 2-horse digger.

(Continued from page 6).

bonds. The tax is calculated on the basis of the average quotation for the preceding year, and the rate of interest on this amount which the current dividend yields. The tax will then be deducted by the companies before the payment of the dividends.

The 100th anniversary of the birth of Charles Darwin, the great evolutionist, was observed in the old college town of Cambridge, England, last week. Scientists from all parts of the world were in attendance, 235 universities and learned bodies being represented, 30 of which were American. The gift of America was a bust of Darwin.

The cholera epidemic has assumed alarming proportions in St. Petersburg, and the government has undertaken extraordinary precautions to check it by enforcing sanitary measures. Against these the working classes are said to show great hostility.

## National.

Gov. Hoke Smith, of Georgia, has suspended the chairman of the state railroad commission because he refused to order the railroads of the state to reduce the "port rates."

A proposition to issue \$1,950,000 of San Francisco city bonds for reconstructing the Geary street railroad as a municipally owned line was defeated at a special election.

The first ground was broken at Sandwich, Mass., last week in the projected construction of the canal across the narrow neck of Cape Cod to Buzzard's Bay, a distance of twelve miles.

The American Envelope Manufacturers' Association in session at Buffalo, formulated plans to induce the federal government to stop competing with private business by printing and distributing its own envelopes in the postal service.

The Pennsylvania Supreme Court has ruled that the teachings of Emanuel Swedenborg are not contrary to the laws of the state or repugnant to public policy, thus reversing the opinion of the lower court in a case involving the will of F. J. Kramph, made fifty years ago, in which about \$40,000 was left to the Church of the New Jerusalem for the establishment of a university. In the course of a long-drawn dispute between factions of the church, the heirs of the Kramph estate sought to break the will by alleging that the conjugal teachings of the founder of the church were immoral.

Racial antipathy toward the Chinese, the high social standing of the girl victim, and questions of church policy in mission work have combined to give unusual and national prominence to the circumstances surrounding the death of Miss Elsie Siegel, the 20-year-old granddaughter of Gen. Siegel of Civil War fame, whose body was found concealed in a trunk in the Eighth avenue den of a New York Chinaman, known as William A. Leon, an Americanized version of Leong Lim, or Leong Ling, on June 19. The young woman had been engaged with her mother in the work of Christianizing the Chinese residents of the city who came to the Mott Street Mission. Latest accounts state that the suspected murderer is still at large.

The City of Cleveland, Ohio, thru the action of its council, has undertaken to prevent the firing of crackers on the coming Fourth of July or the lighting of fireworks except for certain specified public displays under the direction of the city authorities. The hope is to make the day noiseless, bloodless and deathless. The measure was passed last July after a Fourth of unusually disastrous accidents. The ordinance makes it a crime punishable with thirty days in prison or \$100 fine for anyone to sell, buy or have in his possession any sort of cracker, fireworks, toy pistol or other form of explosive.

## State.

Judge Frank E. Knappen permanently enjoined the city of Kalamazoo from enforcing the ordinance which required all city printing to bear the union label. The ponderous concrete caisson for the new government light being constructed at Banks Point in Muskegon harbor was sunk Monday. It is the first step in the construction of the new experimental light, and if it proves a success will probably revolutionize the method of marking the great lakes.

James L. Lowden, of Ypsilanti, a member of the legislature of 1889 and 1891, died suddenly early this week.

The vacancy in the 28th judicial circuit occasioned by the resignation of Judge Chittenden has been filled by Gov. Warner, Frederick S. Lamb, of Cadillac, receiving the appointment.

Eaton county officials report the county treasury empty and there is talk of calling an extra session of the supervisors that steps may be taken to submit to the people a bonding proposition to cover expenses until the year's taxes fall due.

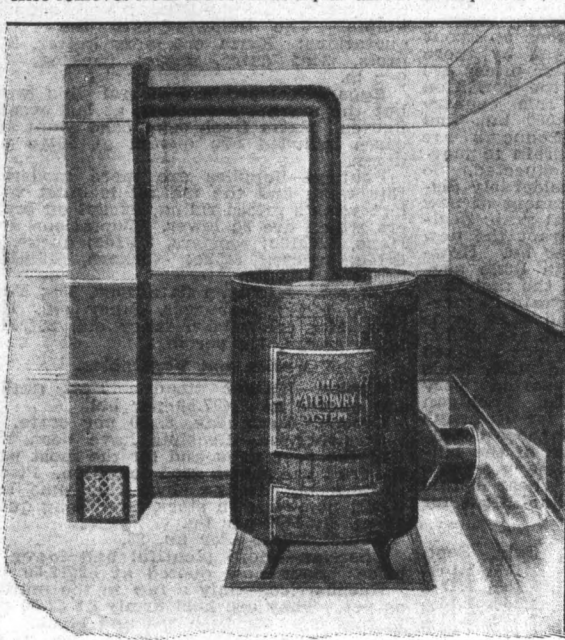
Phillip H. Schantz, father of Representative Schantz, of Barry county, died last week at the age of 93.

## Elaborate Horse Show at State Fair.

At a meeting of the Michigan State Fair officials and representative horsemen arrangements were made for holding one of the most elaborate horse shows at the coming exhibition, which opens September 2nd, that has ever been given in the middle west. Prominent horsemen and breeders thruout the state have been appointed to work up this enterprise and with the energetic management of the fair, its success is already foretold. The show will be held in front of the grandstand, beginning at seven o'clock sharp and continue for two hours. Mr. M. W. Savage has written that Dan Patch and Minor Heir, two of the fastest horses in the world, are in the pink of condition and being worked every day to keep them in trim for the coming championship race at the fair. Mr. Savage owns them both and has given orders that no distinction shall be made in the training or driving of the animals.

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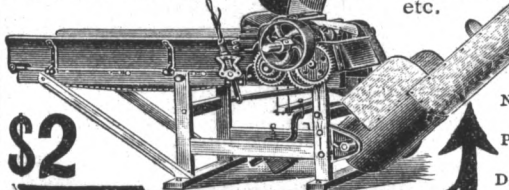
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# MARKETS

## DETROIT WHOLESALE MARKETS.

June 30, 1909.

### Grain and Seeds.

**Wheat.**—At last week's close cash grain in this market had advanced 2c over the low point for the week, and so far this week the market has shown increasing strength, a bullish turn on Tuesday sending the July and September options up about 1½c. The factors relied upon by those who profess to look for higher prices are the good export demand, the condition of the visible supply in this country which is now below 12,000,000 bu., and further indications that producers are not going to rush the new grain to market as rapidly as had been expected. So far the bears have been considerably disappointed at the small movement of new grain. In some sections local grain dealers are endeavoring to contract the new crop at prices around \$1 per bu. However, they are meeting with little success, and this, together with the fact that the cash quotation for new grain in markets like St. Louis is around \$1.30 leads to the conclusion that growers are bullish in their views and therefore not inclined to sell like St. Louis is around \$1.30, leads vesting conditions are reported very favorable. In some states, Michigan among them, the outlook for a heavy yield was never better, and these conditions tend to offset the effect of the bullish factors noted above. One year ago the price paid for No. 2 red wheat in this market was 89½c per bu. Quotations for the past week are:

	No. 2	No. 1	No. 3
Thurs. ....	1.43	1.43	1.40
Fri. ....	1.45	1.45	1.42
Sat. ....	1.45	1.45	1.42
Mon. ....	1.45	1.45	1.42
Tues. ....	1.45	1.45	1.42
Wed. ....	1.45	1.45	1.42

**Corn.**—As noted last week, favorable weather is having its effect upon the corn market. At Chicago the market has wavered several times during the past week under heavy selling but each time it has recovered to such an extent that little change in values is noted. In the local market this grain is quoted fractionally higher than at this time last week. The market was comparatively easy at Tuesday's opening but firmed up near the close. The visible supply shows a slight gain for the week. One year ago the price was 71½c for No. 3 corn. Quotations are as follows:

	No. 3	No. 3
Thursday .....	75½	76½
Friday .....	75½	76½
Saturday .....	76	77
Monday .....	76	77
Tuesday .....	76	77
Wednesday .....	76	77

**Oats.**—This market is very weak and prices are off 2½c. A drop of a full cent occurred on Tuesday, the market being well supplied and buyers were loth to take hold except at a good concession in price. The September option held steady until Tuesday when a decline of ¾c occurred. One year ago the price for No. 3 white oats was 55c. Quotations for the week are:

	No. 3 White.	Sept.
Thursday .....	59½	45
Friday .....	59½	45
Saturday .....	59½	45
Monday .....	58	45
Tuesday .....	57	44½
Wednesday .....	56½	45

**Beans.**—Cash beans remain inactive, the interest being centered in October beans. This option advanced 1c late last week but suffered a 4c decline on Tuesday under news of improved crop conditions, with practically nothing doing at the new figure. The following are nominal quotations for the week:

	Cash.	Oct.
Thursday .....	\$2.50	\$2.05
Friday .....	2.50	2.06
Saturday .....	2.50	2.06
Monday .....	2.50	2.06
Tuesday .....	2.50	2.02
Wednesday .....	2.50	2.02

**Cloverseed.**—This market has taken on new life with considerable interest manifested in both October and March seed. The demand since this time last week has been sufficient to advance prices 10¢ 15c per bu. Quotations for the past week are:

	Oct.	March.
Thursday .....	\$6.85	\$7.00
Friday .....	6.85	7.00
Saturday .....	6.90	7.05
Monday .....	7.00	7.15
Tuesday .....	7.00	7.15
Wednesday .....	7.00	7.15

**Rye.**—This market is dull with quotations merely nominal. The selling quotation for cash No. 2 this week is 89c per bu.

### Visible Supply of Grain.

	This week.	Last week.
Wheat .....	11,280,000	12,944,000
Corn .....	3,374,000	3,201,000
Oats .....	6,287,000	6,704,000
Rye .....	170,000	175,000
Barley .....	697,000	752,000

### Flour, Feed, Provisions, Etc.

**Flour.**—Market steady, with quotations unchanged. Quotations are as follows:

Clear .....	\$6.70
Straight .....	3.85
Patent Michigan .....	7.10
Ordinary Patent .....	6.95

**Hay and Straw.**—Market steady at last week's prices. Carlot prices on track are: No. 1 timothy, new, \$14.50@15; No. 2 timothy, \$13.50@14; clover, mixed, \$13@13.50; rye straw, \$11; wheat and oat straw, \$9 per ton.

**Feed.**—Steady. Bran, \$29 per ton; coarse middlings, \$30; fine middlings, \$31; cracked corn and coarse corn meal, \$31@32; corn and oat chop, \$30.

**Potatoes.**—Market very easy, altho last week's lower values have, in the main, been maintained. New stock becoming

more plentiful and consequently lower in price. Good old stock is quoted at \$50@60c per bu. New potatoes from the south are quoted at \$1.10 per bu.

**Provisions.**—Family pork, \$22@23; mess pork, \$21; light short clear, \$21; heavy short clear, \$23.50; pure lard, 12½c; bacon, 15½c; shoulders, 11c; smoked hams, 14c; picnic hams, 10½c.

### Dairy and Poultry Products.

**Butter.**—This market is steady at last week's lower range on creamery; dairy goods and packing stock are ½c lower this week. Demand good and supplies ample. The following are the ruling quotations: Extra creamery butter, 25c; firsts, 24c; dairy, 19½c; packing, 18c per lb.

**Eggs.**—Receipts are liberal this week but the market holds firm at last week's figures. Extra fresh eggs, case count and cases included are quoted at 20½c per dozen.

**Poultry.**—Supplies are more moderate this week and the market is quiet with last week's prices ruling, except on broilers which are 2c lower. Quotations are: Hens, 12@13c; roosters, 9@10c; ducks, 14@15c; geese, 8@9c; turkeys, 16@17c; broilers, 20@22c.

**Cheese.**—Michigan flats, new, 13c; York state, 16½c; limburger, fancy old, 17c; new, 14c; schweitzer, fancy old, 20@21c; brick cream, 15c per lb.

### Fruits and Vegetables.

**Apples.**—Market steady. Best grades are quoted at \$7@7.50 per bbl.

**Onions.**—Bermudas, \$1.50 per crate.

**Strawberries.**—Receipts have been liberal the past week and for the most part the fruit has shown good condition. Prices show a big decline since this time last week, home-grown stock now being quoted at \$1.50@2 per bu.

**Gooseberries.**—Per bu, \$3.

**Cherries.**—More plentiful and lower in price. Sour now quoted at \$2@2.50 bu.

**Raspberries.**—Only a few in the market as yet. They are held firmly at \$3.50 per 24-pint case for both red and black.

**Blackberries.**—Firm at \$4 per 24-qt. case.

**Vegetables.**—Green onions, 10c per doz; radishes, 10@12c per doz; cucumbers, 30@45c per doz; lettuce, 50c per bu; head lettuce, \$2@2.25 per hamper; watercress, 20@25c per doz; spinach, 50c per bu; oyster plant, 40c per doz; asparagus, \$1.50@1.75 per case; rhubarb, 40@50c per doz; green peas, \$1.25@1.50 per bu.

### OTHER MARKETS.

#### Grand Rapids.

Strawberries on the city market Tuesday morning were soft and of poor quality, selling at 75@80c per 16-qt. case, fancy stock at \$1@1.25. There are many berries still to come, the rush is over. Home grown cherries are in, sweets selling at \$1 per half bu., sour at 90¢ @ \$1 per case. Sweet cherries are reported to be rotting and the crop will not be large. Sour cherry trees are loaded with fruit. First home grown cabbage was in this week, selling at 75c per doz. Head lettuce goes slow at 35@40c per bu. Prices paid on the city market Tuesday were as follows: New turnips, 12½c per doz; bunches; asparagus, 50@60c per doz; radish, 5c doz; cucumbers, 25@35c doz; spinach, 50c bu; carrots, 10c doz; beets, 40c doz; old potatoes, 50c; tomatoes, 10c lb; peas, 90¢@\$1. Dressed hogs remain firm at 9½c. Eggs are ¾c lower. In grains, corn is off 2c, oats 3c.

Quotations follow:

Grains.—Wheat, \$1.45; corn, 75c; oats, 57c; buckwheat, 60c per bu; rye, 80c.

Beans.—Machine screened, \$2.25.

Butter.—Buying prices, Dairy, No. 1, 18@20c; creamery in tubs, 24½c; prints, 25c per lb.

Cheese.—Michigan full cream is selling at 16@16½c per lb; brick, 17c; Swiss, 17c; limburger, 17c.

Eggs.—Case count, 18½@19c.

Cherries.—Sweet, \$2 per bu; sour, 90¢ @ \$1 per case.

Michigan Strawberries.—75c@81 per 16-qt. case.

Cattle.—Cows, \$2.50@4 per cwt; steers and heifers, best quality, 3@5½c; dressed mutton, 9@10c; dressed veal, 6@9c; dressed beef, cows, 5@6½c; steers and heifers, 7½@9½c.

Hogs.—Dressed, 9½c.

Live Poultry.—Fowls, 10@12c; roosters, 7@8c; turkeys, 17@18c; broilers, 1½ to 2 lbs., 20@22c; spring ducks, 15@17c.

#### New York.

Butter.—Western factory firsts, 18@21c; creamery specials, 25½@26c.

Eggs.—Irregular. Western firsts to extras, 21@23½c; seconds, 20@22c per doz.

Poultry.—Alive, steady. Western chickens, broilers, 21@22c; fowls, 15½c.

Dressed, steady. Western broilers, 18@22c; fowls, 12@16c per lb.

Grain.—Wheat, No. 2 red, \$1.47 per bu; corn, No. 2, 81½c; oats, mixed, 60c.

Potatoes.—Per 180 lbs., state, \$1.60@2; Mich., per 150 lb. bag, \$1.50@1.60.

#### Chicago.

Wheat.—No. 2 red, \$1.45@1.55; July, \$1.16½; Sept., \$1.11½.

Corn.—No. 3, 71@71½c; July, 70½c; Sept., 67½c.

Oats.—No. 3 white, 55@56½c; July, 49½c; Sept., 43½c.

Butter.—Steady. Creameries, 22½@25c; dairies, 20@23½c.

Eggs.—Steady to a cent higher. Firsts, 20c; prime firsts, 21c per doz.

Potatoes.—Steady. Carlots in bulk, 40c; new red, 80c per bu.

#### Boston.

Wool.—The local wool market is apparently waiting for indications of future prices in finished goods. Altho sales have been less heavy than in the previous weeks, prices are still high, and with the fabric situation settled, it is expected that there will be a resumption in the buying by manufacturers. New territory wools are moving steadily, with Montana selling at 27½@28c in the grease, or 72@73c scoured. The market for bright wools is also quiet, but Ohio quarter-blood fleeces

bring 34@35c, and washed delaine 40@41c. Foreign wools are in but little demand, but prices remain firm.

#### Elgin.

Butter.—Market firm with last week at 25c per lb. Sales for the week amounted to 1,131,400 lbs., as compared with 1,090,700 lbs. for the previous week.

### THE LIVE STOCK MARKETS.

#### Buffalo.

June 28, 1909.

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

Receipts of sale stock here today as follows: Cattle, 165 loads; hogs, 9,000 head; sheep and lambs, 3,200, calves, 1,600. The good dry-fed cattle sold strong today while the common and grassy kinds were slow sale and a quarter lower than last week. Fresh cows and close up springers sold about the same as last week but the late springers are not wanted and are very hard to sell. We would still advise caution on the common and grassy kinds.

We quote: Best export steers, \$7@7.25; best 1,200 to 1,300 lb. shipping steers, \$6.50@6.80; best 1,000 to 1,100 lb. do., \$6@6.25; light butcher steers, \$5.25@5.60; best fat cows, \$4.50@4.75; fair to good cows, \$3.75@4; trimmers, \$2.50@3; best fat heifers, 5.75@6; fair to good, \$4.50@5; common, \$3.75@4; best feeding steers, 800 to 900 lb. dehorned, \$4.25@4.50; 700 to 750 lb. dehorned stockers, \$4@4.25; common stockers, \$3.25@3.75; best bulls, \$4.75@4.50; bologna bulls, \$3.50@4; stock bulls, \$3.25@3.50; best fresh cows and springers, \$4@5; medium, \$3@4; common, \$2@3.

Our hog market opened 10@15c higher than Saturday, with a good demand for all the good hogs. The market closed strong with everything sold and we think the prospects good for the near future.

Medium and heavy, \$8.30@8.40; mixed, \$8.25@8.35; best yorkers, \$8@8.25; light yorkers, \$7.75@7.80; pigs, \$7.40@7.50; roughs, \$7.10@7.15; stags, \$5.50@6.

The lamb market today was fairly active at the prices but sheep were very dull. The heavy veal calves are not wanted and they cannot be sold for within a dollar a hundred of what the best ones bring.

We quote: Spring lambs, \$8.50@8.75; fair to good, \$6@8; culls, \$5@6.50; skin culls, \$4@4.50; yearlings, \$6.75@7; wethers, \$5.25@5.50; ewes, \$4@4.25; cull sheep, \$2@3.50; best calves, \$7.75@8; fair to good, \$6@7; heavy, \$4@5.

#### Chicago.

June 28, 1909.

Cattle, Hogs, Sheep.  
Received today, 18,000 28,000 20,000  
Same day last year, 21,785 31,041 42,166  
Received last week, 38,455 113,280 64,754  
Same week last year, 45,395 134,455 81,402

Cattle supplies continue much smaller than two years ago, when the market was in normal condition, with a good sale for beef, but, in spite of complaints from stock feeders, decidedly higher prices are paid on an average than then. At that time beef steers sold at \$4.60@7.10, the greater part going at \$5.65@6.80, whereas last week steers sold at \$5@7.25, largely at \$5.90@6.95, while a sale was made of 10 fancy 1,122-lb. steers from the Indiana Experiment Station at \$7.35. Plain heavy and grassy light steers were slowest sellers, while fat little yearlings were prime favorites, and there was a sale of 96 Indiana-fed 855-lb. steers at \$7.25. Direct arrivals of Texas grass cattle consigned to packers weakened native grassy cattle, and buyers were particular in making selections. A good many distillery-fed steers went at \$6.10@6.90, and northern fed Texas cattle brot \$6.15@6.85. Exporters were light buyers of 1,275 to 1,400 lb. steers at \$6.40@6.85. Cows and heifers sold poorly or well according to whether grass-fed or dry-fed, sales being made of butcher lots at \$5.55@6.75 and of canners and cutters at \$2@3.50. Bulls were in poor demand and ruled much lower at \$3@5.35, while stags sold at \$4.50@6. Calves were less active at \$2@7.25 per 100 lbs., while milkers and springers moved off moderately at \$25@58 per head. Buyers of stockers and feeders did not show much enthusiasm, and sales dragged at \$3@5.40. Prices have had such a fall that it is reasonable to expect a large demand after haying.

During the latter part of last week cattle firmed up under meager offerings, and to a marked extent sales of attractive offerings were 10@25c higher, yearlings advancing the most. The supply today was moderate for Monday, and prices were strong, with a sale of yearlings at \$7.30.

Hogs of the best heavy class shot up to \$8.20 a short time ago, the best price ever seen in June, the boom being due to remarkably small offerings and vigorous competition between buyers, shippers taking more than one-quarter of the receipts. The inevitable reaction after such a sudden rise came last week, the advance bringing in larger supplies, and prices in two days broke 30@35c. Sentiment is favorable for high prices, and hogs may go to \$8.50 later, yet it is best to market swine whenever ready to come, for recent prices are unusually high. Even grass-fed hogs are netting good profits. Average weight of recent receipts is 222 lbs., compared with 217 lbs. a year ago and 235 lbs. two years ago. The average has risen to the heaviest since last September. Country shippers are cautioned against overloading cars this hot weather, for heavy swine are apt to succumb to the heat. Since the break in prices the receipts have been greatly curtailed, and the fall has been nearly recovered, a stiff advance today on meager Monday offerings sending values to \$7.25@8.15.

Sheep and lambs were inclined to go lower last week, and sales were very largely at reductions of about 25c. A band of Texas range grass-fed sheep went at \$4.75, and large numbers of California range sheep, mainly on the feeder

order, sold at \$3.65@4.90, with yearlings among them selling at \$6.50 to killers and at \$5.25 to feeders. Some Utah range stock arrived, and increasing supplies of range stock are looked for from now on. Breeding ewes are in big southern demand at \$5.25@6, Kentucky taking large numbers. Packers have been getting the bulk of the southern spring lambs direct from Louisville. Today's receipts were larger than usual, including some Washington and Idaho range flocks, and prices were lower in some instances. Spring lambs have been selling at \$4@8.75, clipped lambs at \$4.50@8, ewes at \$2.50@4.85, wethers at \$5@5.50, yearlings at \$6@6.75, and rams at \$2.25@3.50.

Horses arrived on several days last week in larger numbers than a week earlier, but offerings usually continued smaller than a year ago. There was the usual slow summer trade, and numerous transactions indicated declines of \$5@10 per head, but choice animals sold at steady values. A few big draft feeders sold at \$175@225 per head, while draft horses sold fairly at \$190@300 for desirable ones and at \$165@185 for commoner ones. Expressers were salable at \$190@350 and drivers at \$150@325. Mules sold fairly at \$160@225 for heavy drafters and at \$75@150 for common to fair light grades. Eastern buyers report a slower demand for horses.

### LIVE STOCK NOTES.

William Rea, the big sheepman of Montana, reports grass on the range as good as was ever seen and flocks of sheep fattening rapidly, but he says shipments from the range this season will depend on whether prices in western markets are satisfactory to owners. Sheepmen are independent and in a position to hold on to their sheep and lambs unless they can get satisfactory prices for marketable stock.

The demand for native breeding ewes has started in early this season, and a Kentucky order for 500 head was filled recently at the Chicago stockyards at from \$5.25@6 per 100 lbs.

Recent developments show plainly that the hog shortage is even more serious than it was at first reported to be. For weeks regular hog shippers have been reporting the hogs nearly all shipped out of their respective districts, and late meager marketings are full of confirmation of their statements. The shortage is traceable in part away back to the great panic in the autumn of 1907, causing a heavy marketing of brood sows, followed by the short spring pig "crop" of 1908. But it is due very largely to the free marketing of pigs and immature hogs several months ago in order to avoid feeding high-priced corn, stockmen fearing that this would not pay a sufficient profit. Great numbers were marketed last winter and spring, and the present shortage is the inevitable result. It is going to take a long time to bring the matured hog supply up to normal proportions once more, and various states report a spring pig "crop" below the average. Such reports come from Illinois, Missouri, Iowa, Kansas, Nebraska, Minnesota and South Dakota, and these same states also report a shortage of swine of marketable condition. Under all the circumstances it is not surprising in the least that hogs have sold higher recently than was ever known before in June, for consumption of pork products has overtaken production, despite a recent marked falling off in southern consumption due to the extraordinarily high prices. Recently pork has sold in the Chicago wholesale market more than \$6 per barrel higher than a year ago, and other hog products have shown a similar boom in values. So far as heavy hogs are concerned extremely few are left, and these command a big premium. "Mess pork costs \$21 to make at the present ratio, and this is supposing the heavy hogs are available to make it," said a provision specialist. "But the heavy hogs cannot be secured. This, taken in conjunction with the small stocks and the large concentrated long interest, makes me believe in higher prices for pork regardless of the future course of the ribs and lard markets."

With the appearance of hot summer weather cattle buyers have bot heavy cattle much less freely, and these are among the first to decline in price, with grassy lots the most unsatisfactory sellers of all, the latter natives coming into close competition with Texas range grass-fed lots. Fat little yearling steers and heifers are much the most satisfactory sellers. The Chicago packers are getting liberal supplies of Texas steers direct, and a few days ago they received 27 car loads from St. Louis. This cannot fail to have an extremely disturbing influence on short-fed and grassy natives, such as have been selling at the stockyards at \$5.50@6.25 per 100 lbs. Nebraska stock feeders are marketing a great many heavy steers, being of the opinion that these should not be carried any longer, as prices are evidently bound to go lower. Kentucky distillery-fed cattle are also coming to market freely. Country activity in cultivating corn must be held largely responsible for the unusually contracted demand for feeding cattle in the market recently, and it will undoubtedly continue a big factor until this work is completed. After corn is "laid by," however, a partial recovery in the demand for feeders may be expected, altho high prices would be again a hindrance. Grass is so abundant everywhere that few farmers are disposed to sell their thrifty growing cattle of the feeder class, and while ordinary stockers are usually offered freely, they are not in strong demand at any time. "Haying will claim farmers' attention for awhile, and a fine large crop is expected, in spite of much meadow land that has been plowed up and turned over to raising corn this year. The country has been experiencing splendid corn growing weather, and a bumper crop is now promised. The recent advance in handy fat cattle may prove an incentive to stocking up pastures.



## THIS IS THE LAST 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.

July 1, 1909.

## Cattle.

Receipts, 1,001. Market active; good stuff strong; other grades steady.

We quote: Extra dry-fed steers, \$5.75 @ 6; steers and heifers, 1,000 to 1,200, \$5 @ 5.75; steers and heifers, 800 to 1,000, \$4.25 @ 5; grass steers and heifers that are fat, 800 to 1,000, \$4.25 @ 5; grass steers and heifers that are fat, 500 to 700, \$3.75 @ 4.25; choice fat cows, \$4.50; good fat cows, \$3.50 @ 4; common cows, \$2.50 @ 3; canners, \$1.75 @ 2.25; choice heavy bulls, \$3.75 @ 4; fair to good bolognas, bulls, \$3.50; stock bulls, \$3 @ 3.25; choice feeding steers, 800 to 1,000, \$4.50 @ 4.75; fair feeding steers, 800 to 1,000, \$4 @ 4.50; choice stockers, 500 to 700, \$4.25 @ 4.50; fair stockers 500 to 700, \$3.75 @ 4; stock heifers, \$3 @ 3.50; milkers, large, young, medium age, \$4 @ 5; common milkers, \$2 @ 3.

Roe Com. Co. sold Kamman B. Co. 6 butchers av 53 at \$4.50; to Caplis 5 do av 510 at \$3.50; to Thompson Bros. 8 do av 880 at \$4; to Sullivan P. Co. 13 steers av 1,107 at \$5.50, 3 do av 960 at \$5; to Mich. B. Co. 17 do av 850 at \$4.75; to Goose 8 butchers av 782 at \$4.50, 1 steer av 970 at \$3.75.

Bishop, B. & H. sold Hammond, S. & Co. 8 steers av 871 at \$5, 11 do av 937 at \$5, 2 cows av 1,240 at \$3.75, 1 steer weighing 900 at \$4; to Jonghin 1 cow weighing 1,000 at \$3.20; to Mich. B. Co. 25 steers av 780 at \$5, 14 do av 843 at \$5, 1 cow weighing 870 at \$4, 2 do av 1,140 at \$3.75, 1 bull weighing 1,400 at \$3.75; to Prince 3 stockers av 775 at \$3.75, 5 do av 675 at \$4, 2 do av 625 at \$3.25; to Bresnahan 3 cows av 1,073 at \$3.25, 7 do av 800 at \$2.25, 3 do av 900 at \$3.65, 3 do av 1,033 at \$3.25; to Kamman 1 steer weighing 860 at \$5, 7 butchers av 492 at \$3.30; to Sullivan P. Co. 2 bulls av 935 at \$3.50, 6 cows av 911 at \$3.50; to Diebold 4 stockers av 460 at \$3, 10 do av 475 at \$3.75; to Goose 9 butchers av 400 at \$3.25, 3 do av 643 at \$3.50, 9 do av 843 at \$4.10; to Mich. B. Co. 2 heifers av 675 at \$3.75; to Jonghin 3 cows av 973 at \$3.75, 2 do av 781 at \$3.75; to Monin 13 stockers av 500 at \$4.25; to Lacalt 4 butchers av 775 at \$4.40, 2 do av 775 at \$4.10; to Fitzpatrick Bros. 2 cows av 915 at \$3.25, 4 steers av 920 at \$5.35; to Bresnahan 5 do av 1,006 at \$5, 8 butchers av 1,103 at \$3.75; to Wilcox 4 stockers av 745 at \$4.25, 6 do av 711 at \$4.25, 13 do av 767 at \$4.25.

Spicer, M. & B. sold Bresnahan 2 cows av 1,100 at \$3.25, 2 do av 1,125 at \$4; to Jonghin 4 do av 975 at \$2.90, 2 do av 750 at \$3, 4 do av 907 at \$2.95, 2 bulls av 800 at \$3.45; to Cole 14 stockers av 600 at \$3.75; to Fry 1 cow weighing 1,000 at \$3.50; to Merritt 12 stockers av 520 at \$3.75, 5 do av 382 at \$3.25; to Bresnahan 2 cows av 925 at \$3; to Dombette 2 do av 860 at \$3.50, 2 bulls av 510 at \$3, 3 do av 700 at \$3.25; to Sullivan P. Co. 1 bull weighing 1,380 at \$4, 1 do weighing 970 at \$3.75, 10 steers av 1,100 at \$5.75, 3 bulls av 563 at \$3; to Mich. B. Co. 1 bull weighing 890 at \$3.50; to Caplis 3 cows av 883 at \$3.85, 6 heifers av 546 at \$3.75, 4 cows av 912 at \$2.50, 13 butchers av 654 at \$3.90; to Merritt 8 stockers av 600 at \$3.50; to Brown 2 steers av 875 at \$5.15; to Hammond, S. & Co. 5 butchers av 948 at \$3.75, 3 cows av 1,083 at \$4, 2 do av 960 at \$3.75; to Kamman B. Co. 10 steers av 922 at \$5.50; to Cook 3 do av 660 at \$4.30, 1 do av 1,180 at \$5.50, 6 do av 883 at \$5.15, 4 do av 1,100 at \$5.15; to Hammond, S. & Co. 3 bulls av 1,125 at \$3.75; to Bresnahan 2 cows av 1,300 at \$4.25; to Kamman 4 butchers av 660 at \$4, 2 heifers av 420 at \$3.75.

Haley sold Bresnahan 3 heifers av 466 at \$3.65.

Kendall sold same 14 steers av 850 at \$5.

McCormick sold same 6 do av 750 at \$4.60.

Belheimer sold same 1 bull weighing 1,450 at \$4, 2 cows av 1,105 at \$4.

Johnson sold Mich. B. Co. 1 bull weighing 930 at \$3.75, 3 steers av 923 at \$5, 2 heifers av 740 at \$4.50.

Belheimer sold same 6 butchers av 830 at \$4.55, 14 do av 743 at \$5.

Lachlin sold Sullivan P. Co. 9 butchers av 570 at \$3.60.

Johnson sold same 2 cows av 1,170 at \$3.75, 7 butchers av 867 at \$4.75.

Leahy sold same 4 bulls av 565 at \$3, 3 butchers av 976 at \$4.25, 1 cow weighing 1,040 at \$3.50.

Johnson sold same 6 butchers av 716 at \$4, 2 bulls av 730 at \$3.50.

Jedele sold same 3 cows av 966 at \$3, 4 steers av 1,025 at \$5.50.

Haley sold Schlischer 3 heifers av 703 at \$3.80.

Same sold Prince 6 stockers av 420 at \$3.60.

Smith sold Thompson 2 butchers av 685 at \$3.25, 11 steers av 1,032 at \$5.35, 2 cows av 965 at \$4, 4 do av 823 at \$4.

Downing sold Fitzpatrick 1 heifer weighing 970 at \$4.50, 1 steer weighing 1,270 at \$6, 3 cows av 1,096 at \$4.

Laughlin sold Marx 9 butchers av 800 at \$4.50.

## Veal Calves.

Receipts, 1,135. Market 25@50c lower than last week. Best, \$7 @ 7.25; others, \$3.50 @ 6.50; milch cows and springers good, steady; common, dull.

Bishop, B. & H. sold Mich. B. Co. 1 weighing 160 at \$7.50, 2 av 250 at \$6, 35

av 150 at \$7.25; to Goose 5 av 125 at \$5, 34 av 140 at \$7.10; to Sullivan P. Co. 11 av 150 at \$7, 2 av 120 at \$5, 11 av 155 at \$7.25, 2 av 120 at \$5, 9 av 150 at \$7.25; to Caplis 9 av 160 at \$7, 1 weighing 100 at \$6; to Newton B. Co. 15 av 150 at \$7, 2 av 95 at \$5, 13 av 140 at \$7, 8 av 150 at \$7, 30 av 155 at \$7; to Parker, W. & Co. 32 av 130 at \$6.50; to Hammond, S. & Co. 1 weighing 230 at \$5, 56 av 155 at \$7, 46 av 140 at \$7, 12 av 115 at \$5.50, 4 av 145 at \$7.25; to Sullivan P. Co. 3 av 170 at \$5, 17 av 140 at \$7; to Bresnahan 14 av 125 at \$6.50; to Fitzpatrick Bros. 16 av 150 at \$7, 1 weighing 200 at \$5, 16 av 155 at \$7.25, 2 av 105 at \$5; to Mich. B. Co. 16 av 160 at \$7.25.

Roe Com. Co. sold Thompson Bros. 8 av 155 at \$7; to Parker, W. & Co. 11 av 135 at \$6.75.

Smith sold Caplis 11 av 135 at \$6.60.

Haley sold same 15 av 130 at \$6.75.

Johnson sold Parker, W. & Co. 10 av 136 at \$7.

Sharp sold same 16 av 125 at \$6.75.

Haley sold Newton B. Co. 8 av 150 at \$5, 21 av 135 at \$6.75.

Spicer, M. & R. sold Mich. B. Co. 1 weighing 210 at \$5, 9 av 145 at \$7.25, 5 av 155 at \$5, 21 av 145 at \$7; to Brown 46 av 145 at \$6, 2 av 100 at \$5, 5 av 150 at \$7, 2 av 135 at \$5, 9 av 150 at \$7, 6 av 155 at \$5, 5 av 125 at \$7; to Mich. B. Co. 17 av 160 at \$7.25; to Burnstine 2 av 160 at \$6, 15 av 150 at \$7; to Brookoff 6 av 150 at \$6.25.

Leahy sold Mich. B. Co. 11 av 166 at \$6.50.

Downing sold Fitzpatrick Bros. 4 av 155 at \$5, 7 av 135 at \$6.50.

Johnson sold Hammond, S. & Co. 2 av 170 at \$5, 11 av 155 at \$7.

Merritt sold Sullivan P. Co. 3 av 150 at \$7.25.

Lovewell sold same 11 av 145 at \$7.25.

## Sheep and Lambs.

Receipts, 941. Good stuff steady; common grass stuff 50c lower.

Best lambs, \$8; fair to good lambs, \$6.50 @ 7.25; light to common lambs, \$4.50 @ 5; yearlings, \$6 @ 7; fair to good sheep, \$4 @ 4.25; culs and common, \$2.50 @ 3.

Spicer, M. & R. sold Mich. B. Co. 1 buck weighing 90 at \$2.50, 4 yearlings av 95 at \$5.50, 1 do weighing 110 at \$5.50, 5 lambs av 60 at \$7, 2 yearlings av 85 at \$6, 3 sheep av 90 at \$3.25; to Fitzpatrick Bros. 5 do av 60 at \$3.75, 17 lambs av 100 at \$7.75, 13 do av 65 at \$7, 3 sheep av 100 at \$7; to Harland 12 lambs av 63 at \$7.75; to Parker, W. & Co. 26 do av 60 at \$7.75.

Bishop, B. & H. sold Harland 7 lambs av 65 at \$7.75; to Fitzpatrick Bros. 18 sheep av 120 at \$2.50, 16 lambs av 65 at \$7.25; to Mich. B. Co. 38 do av 66 at \$7.75, 10 do av 67 at \$7, 1 buck weighing 170 at \$2.50, 11 sheep av 70 at \$4.25, 35 lambs av 70 at \$7.75, 9 do av 90 at \$7, 4 sheep av 135 at \$2.50, 4 do av 100 at \$4.25, 8 do av 105 at \$4.50, 16 lambs av 63 at \$7, 12 sheep av 105 at \$3.75; to Parker, W. & Co. 18 lambs av 60 at \$7.50; to Caplis 3 do av 50 at \$7.50, 7 sheep av 60 at \$4.

Haley sold Caplis 2 sheep av 125 at \$3.50, 3 yearlings av 70 at \$6, 36 lambs av 70 at \$7.10.

Johnson sold Mich. B. Co. 5 yearlings av 75 at \$6, 2 sheep av 125 at \$3.

Roe Com. Co. sold Sullivan P. Co. 4 lambs av 80 at \$8, 6 yearlings av 75 at \$5; to Thompson Bros. 7 sheep av 88 at \$2.50.

Merritt sold Fitzpatrick Bros. 33 lambs av 60 at \$8, 7 yearlings av 70 at \$6.

Kendall sold Eschrich 10 sheep av 80 at \$2.50.

## Hogs.

Receipts, 2,731. Market 20c higher than last week.

Range of prices: Light to good butchers, \$7.60 @ 7.80; pigs, \$6.75 @ 7; light yorkers, \$7.25 @ 7.50; stags, 1/2 off.

Roe Com. Co. sold Hammond, S. & Co. 87 av 180 at \$7.65, 7 av 220 at \$7.75, 59 av 215 at \$7.80.

Spicer, M. & R. sold same 155 av 185 at \$7.70, 29 av 220 at \$7.80.

Bishop, B. & H. sold Parker, W. & Co. 138 av 190 at \$7.80, 383 av 150 at \$7.55, 112 av 150 at \$7.60, 152 av 145 at \$7.50, 220 av 160 at \$7.65, 270 av 170 at \$7.75, 206 av 165 at \$7.70.

Sundry shippers sold Sullivan P. Co. 72 av 173 at \$7.70, 34 av 172 at \$7.50, 25 av 192 at \$7.80.

## Friday's Market.

June 25, 1909.

## Cattle.

The run of cattle Friday was light and all grades brot steady Thursday's prices. Good milch cows are selling well, but common cow stuff of all kinds are dull and selling low.

We quote: Dry-fed steers, \$6; steers and heifers, 1,000 to 1,200, \$5 @ 5.75; steers and heifers, 800 to 1,000, \$4.25 @ 5; grass steers and heifers that are fat, 800 to 1,000, \$4.25 @ 5; grass steers and heifers that are fat, 500 to 700, \$3.75 @ 4.25; choice fat cows, \$4.50; good fat cows, \$3.50 @ 4; common cows, \$2.50 @ 3; canners, \$1.75 @ 2.25; choice heavy bulls, \$3.75 @ 4; fair to good bolognas, bulls, \$3.50 @ 3.75; stock bulls, \$3 @ 3.50; choice feeding steers, 800 to 1,000, \$4.50 @ 4.75; fair feeding steers, 800 to 1,000, \$4 @ 4.50; choice stockers, 500 to 700, \$4.25 @ 4.50; fair stockers, 500 to 700, \$3.75 @ 4; stock heifers, \$3 @ 3.50; milkers, large, young, medium age, \$4 @ 5; common milkers, \$2 @ 3.

Bishop, B. & H. sold Bresnahan 1 cow weighing 910 at \$3.25, 2 do av 1,135 at \$3.25, 13 steers av 963 at \$5.25, 4 cows av 1,072 at \$4, 3 steers av 943 at \$5, 1 heifer weighing 650 at \$3.50.

Miller Bros. sold Sullivan P. Co. 3 cows av 1,080 at \$4.10, 12 steers av 1,023 at \$5.10.

Bishop, B. & H. sold same 6 cows av 1,046 at \$4.

Same sold Schuman 2 cows av 910 at \$4, 11 steers av 951 at \$5.60, 1 bull weighing \$7.50 at \$3.

## Sheep and Lambs.

The sheep and lamb trade was steady with Thursday. Common heavy sheep are not wanted and when sold have to go at very low price.

Best spring lambs, \$7.50 @ 8.25; fair to good spring lambs, \$6 @ 6.50; light to common lambs, \$5 @ 5.50; yearlings, \$6.50 @ 7; fair to good sheep, \$3.50 @ 4; culs and common, \$2.50 @ 3.

Bishop, B. & H. sold Hammond, S. & Co. 2 sheep av 110 at \$4.50, 4 do av 145 at \$3.25, 13 do av 90 at \$3.

Same sold Newton B. Co. 8 lambs av 70 at \$7.

Miller Bros. sold Sullivan P. Co. 6 lambs av 60 at \$8.

## Hogs.

The hog market was strong at Thursday's prices, the quality being much better than on Thursday.

Light to good butchers, \$7.50 @ 7.60; pigs, \$6.40 @ 6.60; light yorkers, \$7 @ 7.25; stags, 1/2 off.

Bishop, B. & H. sold Parker, W. & Co. 41 av 190 at \$7.60, 194 av 175 at \$7.50.

Sheepmen met with such bad luck last year in marketing their flocks that very little feeding was done last winter, and the meager marketings this season resulted in big profits for those who carried on the business properly. Unfortunately, there are many feeders who fail to produce the right kind of mutton, and these are apt to come out behind even in the best of times. Of late Chicago receipts have consisted largely of southern spring lambs of superior quality, but before long range sheep and yearlings will be marketed freely and later on range lambs.

The first of these received this season consisted of prime Washington yearlings that sold the highest ever known, \$7.50 per 100 lbs., but they were exceptionally fancy. Since then some wethers have arrived from the California range. Sheepmen should not forget that the popular taste is for lambs and yearlings rather than for sheep, and fatness is always essential. Already there is an urgent demand for breeding ewes, and later on the call for feeders will be lively.

## VETERINARY.

(Continued from page 4).

over a half inch long. What can I do to remove the swelling of gland and clear that section of the matter milk? This heifer is a full blood Jersey from a very valuable cow and a very promising heifer, and I want to get her fixed up if possible to do so. E. J. R., Yale, Mich.—Your heifer was no doubt injured while being assisted in calving. Give her 3 drs. citrate potash at a dose in feed or water three times a day. This will make her urine less irritating. Also feed her grass or laxative food of some kind. Put 1 1/2 ozs. acetate lead in a gallon of water and wash out vagina twice a day. Continue using the milking tube and if the test has but one opening you should leave it alone; however, if it has two the one near the udder should be stitched and make an effort to heal it up. Apply one part iodoform and four parts borax acid to wound twice a day. Give 1 oz. hypodermic soda at a dose in feed twice a day.

Enlarged Fetlock.—I have been a subscriber to the M. F. paper for a number of years and like it very much. If not asking too much tell me what to do for a lame yearling colt which was hurt when only a week old. The mother was taken out of box stall and the colt's foot became fast in stall door and he twisted the fetlock joint, which is now twice as large as it should be. What can I do to make it well? J. T. Holton, Mich.—It is possible that the joint was twisted out of place and if so remaining in this position for a year it will be difficult to effect a cure. However, you will obtain fairly good results by applying 1 part red iodine mercury and 8 parts lard twice a week. Don't apply enough to blister, just counter irritate and stimulate.

Indigestion—Lack of Proper Nutrition.—Supposed Hollow Horn and Wolf in Tail.—I would like to have your opinion regarding a disease that is prevailing among the cattle in this locality. When the cows first come fresh a little blood appears to be mixed with the milk. Their horns become hollow and the bone of the tail is eaten out. My neighbors tell me it is hollow horn and wolf in tail. I am a new subscriber to your paper and am also an inexperienced farmer; therefore, I wish you would tell me what to do. H. W. J. G., Custer, Mich.—First of all, let me say there are no such diseases as hollow horn or wolf in tail; these are conditions the result of other diseases and emaciation. The cows in your locality are perhaps in low flesh and require more nutritious food. Mix equal parts powdered sulphate iron, powdered nitrate potash, powdered gentian, powdered fenugreek, and ginger. Give each cow two tablespoonfuls of this compound powder at a dose in feed night and morning for they need a little grain with the grass. Giving bloody milk indicates that the udder has been injured. Put 1/4 lb. sugar lead, 8 ozs. tincture arnica in a gallon of water and apply to udder after milking twice a day.

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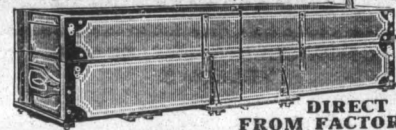
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## HORTICULTURE

### CONTROLLING THE PEACH YELLOWS.

The danger from peach yellows can be seen from the fact that no tree that has been attacked by it ever recovers and even tho the disease appears to be confined to the tip of one of the branches and the entire limb is cut off close to the trunk, the remainder of the tree will soon show indications of the presence of the disease. When a tree has been attacked and is allowed to remain in the orchard for two or three years other trees in the vicinity will soon be infected, and unless prompt measures are taken, every tree may soon be destroyed. Long years of experience with the disease, however, show conclusively that if the trees are removed as soon as the disease shows, its spread will be checked. To be effectual, however, the concerted action of all the owners of peach trees in the locality will be required. In many townships where the disease some years ago was very troublesome the owners had been able to check its spread until the loss is only nominal; in some entire townships the annual loss being kept down to not more than one tree in one thousand.

Upon bearing trees peach yellows shows itself in the premature ripening and spotting of the fruit which enlarges and begins to color in a week or two before the proper time for healthy trees and the surface becomes more or less mottled with dark red spots from each of which a red streak extends to the pit, giving the fruit when cut open a spotted and streaked appearance. Soon after this branched, wiry shoots appear upon the branches. These are very slender and the leaves are quite small and very sharp-pointed. Later on the leaves turn yellow and the branches gradually die so that a tree attacked by the disease seldom lives more than two or three years.

Altho the disease has been carefully studied nothing is known regarding its nature or the method and time of its distribution. The only remedy is the prompt removal of the infected trees.

For the protection of the up-to-date fruit grower against his more careless neighbor, the state of Michigan has enacted what is known as the yellows or orchard inspection law. This requires the owners of trees infected with yellows to destroy them and provides for the appointment of three inspectors in each township, village, or city, where this disease or other dangerous diseases or destructive insects are known to exist, whose duty it is to inspect the orchards and require the owners of trees infected with yellows to destroy them within a certain specified time. Many persons are backward about entering complaint against their neighbors but in every section of the state where peach yellows, the San Jose scale and other pests are found, fruit growers should for their own preservation demand from the township or village boards the appointment of orchard inspectors.

Agl. College, Mich. L. R. TAFT.

### FRUIT NOTES.

The last month has been a difficult and in some ways a discouraging one for fruit growers. The outlook for fruit is quite good, but the weather is such as to make it very difficult to get the plantations in shape before the harvesting season for strawberries is on, or to spray trees with effect. We managed to get out blackberry and raspberry plantations pretty well cleaned out, and had cultivated the new strawberries several times, but they were badly in need of hoeings, and there has been little time to give them as all time when the ground was suitable was needed in cultivating. We have just got thru them for the first time with the hoe and feel a little relieved for they were certainly getting pretty ragged. Wet weather is a poor time for effective hoeing, however, as the weeds, and especially the grass, takes root and grows on top of the ground when the sun does not come out to dry them. On such a season hoeing both ways is a great advantage as it reduces the time taken for hoeing to a minimum.

We have just finished spraying our apple trees for the second time since blossoming. There has certainly been plenty of rain to wash off the poison, and we are glad we used arsenate of lead and put it on strong. The orchards that bore well last year did not blossom to any

extent this season, tho the Spy seems an exception. These trees try to bear every year. A rented orchard mostly of Spy trees has a fair crop.

Calhoun Co. S. B. HARTMAN.

### VEGETABLES WHICH MAY STILL BE SOWN WITH SAFETY.

This particular period brings us to a point practically between "hay and grass" so far as sowing or planting is concerned, as but few kinds of vegetables can be safely sown now. However, there are some exceptions to this general rule; and among those worthy of note are some of the wax and green podded beans.

There is still ample time for maturing a crop of either of these with favorable soil and cultural conditions; and any surplus above home supply is always sure of ready sale either for table or pickling purposes. Then, too, it often occurs that just at this season there is plenty of vacant space, thru other crops having matured, and such places can always be profitably utilized for this crop with good chances of augmenting our bill of fare and still adding a profitable crop to the market list. Care, however, must be exercised at this season of year to select the quick-growing sorts, and a list of the best varieties will be helpful. Six to eight weeks ought to bring the quick-maturing sorts up to fine condition either for home or market purposes, and this would only bring us to mid-September.

As to the wax podded sorts, the Challenge Dwarf Black Wax is about the earliest under cultivation. The pods are clear white, round and quite fleshy, and in the "snap" stage are absolutely stringless. When fully ripe the seeds are jet black, which color does not show in the green or pickling stage. It is of fine quality and an excellent cropper. Michigan White Wax is a desirable sort and will be safe in most localities. The quality is excellent and the clear white color does not change in cooking, making it very desirable, either for table or pickling purposes. Davis' Wax is our favorite and we know of no variety that we consider better for general purposes.

As to the green podded sorts, the Extra Early Refugee is doubtless earliest of all and is desirable either as a snap or pickling bean. It will easily mature in nearly all localities that will give a season of six to seven weeks between planting and frost time. Early Yellow Kidney Six Weeks has a very long name but requires only a very short season in which to mature and is desirable as a shell bean. Dwarf Horticultural will be almost certain to get under the wire before being caught by Jack Frost, unless he is far ahead of his usual time schedule. They are desirable as shell beans and most people are glad to get them at this late season.

### Radishes and Turnips, Also.

Radishes are still seasonable, but late summer or winter sorts should be sown now, as the weather is too hot for the earlier kinds. There are plenty of varieties available for this season of the year and they never come amiss for home use and the market demand is always brisk for a good article.

Another profitable way of utilizing the vacant ground is to grow rutabagas or turnips. Sown up to July 15, or a little later, the former will still make a good crop, provided the soil is what it should be and good culture is given. The ground should be rich and the seed sown shallow. When plants are well established thin to ten or twelve inches. They will still make a good crop, as early frosts will do no harm and they can stand, with safety, up to near the time of hard freezing. Turnips can go in up to August 1, and still give a good yield. Both are becoming more sought after each year and with present high prices for grain there is little danger that they will not find sale for feeding purposes. With the above list of available vegetables for late sowing there is little excuse for the ground lying idle.

Wayne Co. J. E. MORSE.

### SCALDING PEACH BORERS.

The hot water cure is recommended by many for peach tree borers. It is a somewhat drastic treatment—for the borer—tho it does not hurt the tree. The borers work either at or directly beneath the surface of the ground, around the trunk. The tree may be filled up in the form of a saucer, the dirt packed a little and the scalding water poured in. This will invariably bring out any borers. It is not believed to hurt the tree, altho

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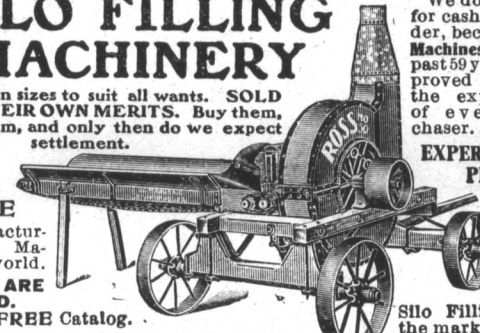
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## THE DAIRY

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### DAIRY BREEDS AND BREEDING.—III.

#### Atavism.

In every herd of pure-bred dairy cattle we find a few individuals unlike their immediate sires and dams but closely resembling some remote ancestor. This phenomenon is designated by scientists and practical breeders of domestic animals as atavism.

Breeders are many times sorely disappointed because they fail to form a correct opinion of the powers of prepotency possessed by the animals that they select for breeding purposes. It is quite common to hear practical breeders discussing the relative value of pedigree and individuality. Many claim that an animal that is an excellent individual, but possessing a poor pedigree, is more desirable as a breeding animal than an inferior individual from a line of creditable ancestry. Others claim that pedigree is of paramount importance in selecting breeding animals, and look to the animal's breeding rather than its individual merit.

A careful analysis of the question, and a study of the evidence presented by both sides, shows that one is of equal importance with the other when the matter is considered from the standpoint of the breeder of pure-bred cattle. In the act of procreation every breeding animal performs a double mission. It acts not only in consequence of its own powers of prepotency, resulting from its constitution, condition, age, size and influences by which it is surrounded, but it also acts as the representative of its ancestors from which it inherited peculiarities that they had inherited from their ancestors. This double mission may be considered as a two-fold principle—a complex force. The first is the hereditary transmission of qualities; the second is "atavism."

Therefore, "heredity" indicates individual influence, while atavism represents a collective influence. An animal that is an excellent individual, but from inferior ancestry, may reproduce its good qualities in its immediate progeny, while the inferior qualities of its ancestors may lie dormant for a number of generations and reappear in the subsequent progeny. This shows us how very important it is that we consider both the individual merit of the animal that we are selecting for breeding purposes, as well as its pedigree. **Breeding Stock Should Be "Well Bred" as well as Thoroughbred.**

The lesson taught by the law of atavism is very plain. It shows the importance of seeking "well bred" as well as thoroughbred animals and such as have descended from a line of ancestors in which, for many generations, the desirable forms, qualities and characteristics have been uniformly shown. In such a case, even if "atavism" does come into play, no material difference appears in the offspring, for "heredity" will keep in control the form, quality and character of the breed.

From a study of breeding from this standpoint we can see in what consists the money value of a good "pedigree." It is the evidence which it brings that the individual is descended from a line of individuals, all of which were alike and excellent of their kind, and that the individual itself has the power of prepotency to transmit similar excellences to its progeny.

Every animal with a high-sounding pedigree is not necessarily of great value as a breeder, for in every race or breed there are many animals which are less perfect and symmetrical than others of their breed, and if they are mated with others possessing similar weaknesses and deficiencies they are certain to retreat by the way of heredity to the scrub ancestors from which the breed originated.

Pedigree is valuable in proportion as it shows an animal to be descended, not only from such as are purely of its own race or breed, but also from such individuals in that breed as were specially noted for the excellences for which that particular breed is esteemed.

In no kind of animal breeding do we find "atavism" playing a more important part than in the improvement of a herd of native dairy cows by the use of a pure-bred dairy sire. Many times the man who undertakes to improve his herd by the use of a pure-bred dairy sire is tempted, by the individual excellence possessed by some bull calf from his pure-bred sire

and native cows, to use it for breeding purposes, but right here is where "atavism" and inbreeding will be at work and the size and contour, as well as the inherited excellence from the pure-bred sire will be lost. In such cases the influence of individual hereditary transmission will be unable to contend against the preponderant action of the ancestors of mixed breeding or "atavism."

On the other hand, by the continual use of pure-bred dairy sires of one breed, with the native cows and the heifers resulting therefrom, the aim is precisely to obtain the triumph of "atavism" which is in the breed from which the sires are selected over the native cows with which they are being mated.

When pure-bred sires are used, each generation goes to strengthen the type of the breed from which the pure-bred sires are selected and to enfeeble that of the natives. It is plain to see that unless the operation is interrupted the time will come when the character of the natives will be overcome and absorbed. The breed which is the most prepotent by its "atavism" causes the type and characteristics of the less prepotent breed or natives to disappear to such a point as not to leave a trace of their characteristics.

New York.

W. MILTON KELLY.

#### WEANING THE CALVES FROM SUCKING.

It seems to be second nature for a young calf to suck something. If they are allowed to suck each other when young in the barn and kept in box stalls, the habit is apt to stick to them and when they become older they will also suck each other or themselves. It is because we have not entirely broken up this habit of sucking that we occasionally have cows that suck each other, and cows that suck themselves. While we are apt to think that it does no particular harm for a bunch of young calves that are kept together to suck themselves after they have eaten their milk, when they get older and begin to do damage, then it becomes quite a serious question.

We have been bothered considerably by this bad habit. One spring I allowed the calves and the yearling heifers to run together for a short time while we were busy with the spring work. Some of the calves got to sucking the heifers and brot them to their milk. The result was that one heifer came to her milk so strongly that we had to milk her and continue milking her for about six months before she dropped her first calf. The result was that the calf when dropped was a delicate thing, had no vitality and, after struggling hard to live for several weeks, it died. The heifer did fairly well, but I always imagined she would have done better had she not been brot to her milk before her first parturition and natural lactation. Then again we have had heifers grow up that had the habit of sucking the cows and we had to put calf weaners in their noses to prevent this. We now have one cow that, every chance she gets, will suck herself. This can only be prevented by tying her on either side of the stall so that she cannot reach her udder with her mouth, and when in pasture by putting a calf weaner in her nose so that it is impossible for her to suck.

When calves are turned by themselves in the back pasture you don't notice the habit very much, but if you turn calves in with cows or with heifers you may get serious results. This spring when we put our last fall and winter calves, and heifers coming two years old, into the pasture for the summer, we put a weaner in each calf's nose. We did not know whether any of them had the habit of sucking or not, but thinking that some of them might, the only proper thing to do was to take precautions. Consequently we put a weaner in each calf's nose. If the calves are in a pasture near the house so that you can watch them occasionally without too much trouble, you can notice if anything of this sort is going on and catch the one with this bad habit and put a weaner in that one's nose; but where they are away from the house and you only see them once a week, or something of that sort, it is impossible to tell, and the only safe way is to put a weaner in each one's nose.

Now, I am inclined to think, after studying this matter somewhat, that the whole thing could be prevented if we didn't allow the young calves to suck at the beginning. They should either be tied with ropes so that they cannot reach each other during the winter, or they should be kept in stalls each by itself. A narrow stall four feet wide and six or

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De Laval Cream Separators skim closer, particularly at low temperature and running heavy cream; have greater actual, if not claimed capacity; run easier and at much less necessary speed; are much more sanitary and easily cleanable; are far easier handled, assembled and unassembled, and are so much better made as to design, materials and workmanship that they last from two to ten times longer than other separators.

They produce cream so much superior to other systems and separators that butter made from De Laval cream scores highest in all representative contests, which, together with their other advantages, has brought about their exclusive use by more than 98% of the world's creamery and butter factories, with their thirty years practical separator experience.

De Laval Cream Separators cost no more than other separators, considering actual capacity. They save an average \$50 per year over other farm sizes of separators and an average \$100 per year over other creaming systems, and they last twenty years as against two to five years for other machines. They are sold for cash or on terms that enable their paying for themselves, and there is no payment of any kind in advance that practically binds the buyer to his bargain.

De Laval Cream Separators are the highest type of farm implement made and invariably prove the most profitable of farm investments. They are guaranteed to be in every way as represented and to fulfil every claim made as a condition of their acceptance by the purchaser. They are sold on as sound a basis as a government bond and their prestige is as solid as the Rock of Gibraltar.

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eight or ten feet long is large enough for a calf, and it is much better to separate them in this way than to have three or four in a stall ten feet square. It is almost impossible to keep three or four in a stall ten feet square and prevent them from sucking after they have drank their milk, and if you allow them to suck they will never get over this habit; that is, some of them will not. Sometimes it is almost impossible to furnish proper room for the calves, where you keep a good many of them, so that you can keep each one by itself. If this cannot be done, they can be tied up with ropes so that they cannot reach each other and in that way soon broken of this habit of sucking. It would certainly wean them from it before they were old enough to turn to pasture, and if something of this sort could be done, all the bother afterward would be entirely eliminated. If they were once thoroughly weaned from the habit I do not believe they would ever take it up again in after life.

#### THE HARRISVILLE DAIRY MEETING.

On June 17 a dairy meeting under the auspices of the State Dairy and Food Department was held at Harrisville, Alcona county, more than 150 miles north of Bay City, on the lake shore. One would hardly look for any intensive dairying in that part of the state. Indeed, in looking at the country from the D. & M. train, one would wonder where the cows were kept. And yet a successful creamery has been operated in Harrisville for a number of years. The meeting had been well advertised and a splendid crowd greeted the writer and Mr. Helmer Rabild, of the Dairy Division of the Department of Agriculture.

Mr. Rabild argued earnestly for the selection of better cows for the dairyman. He stated that according to the census report of the United States the cows of this country on an average produce only 140 lbs. of butter, and that there is practically no profit in a cow that will produce only 140 lbs. of butter. The dairyman who hopes to make any profit out of dairying must get a better cow than the average cow, and he told how to get that cow. Three things must be known about a dairy cow to know her value: first, we must know how much milk she will produce in a year; second, per cent of butter-fat she puts into the milk, and third, what it costs to keep the cow. Knowing these three factors, we can easily determine whether a cow is bringing in a profit or not. If she does not bring in a profit with proper care, then she should be disposed of and a better one put in her place. The dairyman can weigh the milk of each cow separately and keep a record of it. He can test the cow for butter-fat and keep a record of this, and thus determine the pounds of butter-fat which a cow produces in a year. He can carefully weigh the feed that he feeds the cow occasionally, and estimate from this, at the market price, the cost of keeping the cow for a year. The better way, however, to do this is for the farmers of a community to co-operate, for a local business association and hire a man to go from farm to farm to test the cows and keep these records. Such a man makes a business of the work and will do it systematically and correctly and, at the end of the year, the farmer has a correct record of each cow in the herd. This is the way the Danish farmers do business and that is the principal reason why the Danish farmer has made such a great success of the business of dairying. It was only a few years ago that the Danish farmers were beef producers, but they found their market with Great Britain cut off and they must do something besides produce beef. So they decided to become dairymen and, by careful selection, thru this system of keeping track of the yield of butter-fat and the cost of feed they have been gradually weeding out their poor cows and breeding to pure-bred sires until, within a short period of time, they have doubled the average production of butter produced by the cows in the entire country. What the Danes have done, Americans can do.

Mr. Rabild stated that the Dairy Division of the Department of Agriculture is very much interested in the question of co-operative cow-testing associations and is endeavoring to organize associations in all the states of the Union—to get the matter squarely before the dairymen and to get active associations so that the farmers will see just exactly what an association will do for them. He has been successful in organizing associations in Wisconsin, Minnesota, Iowa, Maine, New Hampshire and several other states.

At the close of the meeting the question as to how many in the audience would be interested in a co-operative cow-testing association was asked, and about 20 people signified their willingness to join such an association. The only trouble in forming a cow-testing association in that vicinity is that the herds are so small as to make it difficult to get a sufficient number of cows so that by paying \$1 per cow per year there would be sufficient money to secure a man capable of doing the work.

The writer talked on the subject, "Should the Farmer Keep More Cows?" The argument was made that the average farmer in the state of Michigan should keep more cows, and some of the reasons are as follows:

1. Dairying is a cash business. The farmer does not have to wait for returns. He has the money at once and can use it in his business. He has the cash to pay current expenses and this will not apply to any other kind of stock raising, nor will it apply to any other branch of farming. Then dairying is a reliable business. The ordinary man can depend upon it. It is not affected by seasons nor by crops as much as any other kind of business. It is safe and reliable and the man who puts his faith in a good herd of dairy cows is less liable to be affected by adverse circumstances than men in other lines of farming.

2. Dairying husbands the fertility of the soil. The argument was made that this is one of the most important questions to be considered by the American farmer today. We find in most instances that the natural fertility of our soil is being fast depleted by the growing of crops and selling those crops from the farm. It is only a question of good business that we should endeavor to make the basis of our farming some form of live stock husbandry so that the fertility of the soil can be preserved. This natural resource of our country should be looked after in a business-like way. There is no better way to preserve the natural fertility of the soil than by growing the crops on our farms and feeding them to the dairy cow, getting our cash income from the product in the form of butter, cheese or milk.

If one man makes up his mind to become interested in the dairy business he must go at it in a business-like way and select good cows, selecting them in a business-like and practical way as suggested in the talk delivered by Mr. Rabild. He must feed and care for these cows properly and there won't be any question as to the final results. Dairying in the hands of an intelligent, earnest dairyman will pay a larger profit than any other form of live stock husbandry, or any other branch of farming.

An automobile ride thru the country after this meeting revealed the fact that back from the railroad is a most beautiful agricultural country. Some fine homes were seen. One changes his mind entirely of the agricultural conditions of Alcona county after getting his first impression from viewing the country from the railroad and then taking a ride back from the railroad into the country. The writer was happily surprised to find some of the best kept farms, some of the best tilled fields, some of the best farm homes in Alcona county that can be found in almost any county in the state. It was very gratifying indeed to see these conditions. A story was told the writer of a farmer who bot 80 acres of land a year ago for \$2,500 and paid for the whole of it from the crops he raised last summer. Farmers are giving considerable attention to the growing of contract peas for seed houses. They also raise common red clover seed. The mammoth clover does not do as well there as it does upon some of the lighter land, but the red clover grows to perfection and matures, usually, heavy crops of seed. This, of course, brings the farmers a splendid income. It is a question, however, if it would not be better to take the first crop for hay and feed it to dairy cows, taking the seed that might come from the second crop, rather than to clip the first and put all of the stress and all of the energy upon the crop of seed. By feeding the first crop to dairy cows and carefully preserving the manure and applying it to the land, the soil fertility would be husbanded and the land improved much faster than in growing the crop principally for seed.

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We are often asked the reason for the great success of the

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**U. S. Cream Separators are made of the best material, are most thorough in skimming and most durable in wearing qualities.**

**Every UNITED STATES owner will stand back of these facts.**

**In every line there is one best.** Why? Because that one is the standard. So it is with Cream Separators, the United States is the Standard Cream Separator. Many thousands being operated in all dairy sections have established its value.

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**When some glib salesman claims he has something equal to the United States, make him show you proof. It is one thing to make a claim and another thing to prove it.**



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**Before you decide examine the United States carefully.** Ask any of the thousands of satisfied users and get their verdict, then have a United States selling agent place a United States in your dairy on free trial and it will prove all claims.

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You can earn your own Cream Separator by giving a little time and effort to telling your friends and neighbors about the most wonderful invention in Cream Separator History—**THE CHICAGO SPECIAL**. Its low Supply Can, easy cleaning, easy turning, few parts, dust and oil proof frame, enclosed gearing, high quality construction, and long life are fitting accompaniments of this wonderful new patented Skimming Device. We make an attractive offer on the first machine in a community. Write at once for particulars. **Do It Now.** Address **Kurtz & Company, 626 Monadnock Bldg., Chicago**

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an excess of water should not be used. An emulsion of 1 part of naphtholeum to 150 parts of water is also recommended.

#### HOME CANNING OF FRUITS AND VEGETABLES.

On most farms at some season of the year there is always an abundance of vegetables or fruits which, if not speedily taken care of will rot, thereby counting a dead loss to the grower. In order to utilize these excess crops which cannot be otherwise profitably sold, a home canning outfit is most desirable. The Louisiana experiment station made a number of tests in canning fruits and vegetables and describes an outfit which costs \$10.

The canning outfits used at that station had a capacity of 300 2-lb. cans and 200 3-lb. cans per day—600 lbs. of fruit or vegetables. It consisted, essentially, of a specially constructed, galvanized iron boiler made to fit either a No. 7 or 8 kitchen stove, a basket or carrier that fitted inside the boiler, can tongs and soldering irons. The station ran two of these outfits and the expense for labor and material required to run them one day in putting up 600 2-lb. cans of tomatoes, was as follows:

Picking and delivering fruit, 2 boys at 60 cents per day, each.....	\$ 1.20
Scalding, peeling, filling, 2 boys at 80 cents per day, each.....	1.20
Wiping and soldering, 1 man at \$1.50 per day.....	1.50
Processing, 1 man at \$1.50 per day.....	1.50
Six hundred 2-lb. cans, at 2½ cents each.....	15.00
Solder for cans.....	1.00

Total cost per day.....\$21.40

The price received for the tomatoes was 70 cents per dozen, or a total of \$35, which left a balance of \$13.60 to pay for the tomatoes used.

When high grade peaches or pears were put up in 3-lb. cans and about 1½ lbs. of sugar used for the sirup in each dozen cans, the cost of labor and material for a day's work was as follows:

For labor.....	\$ 5.40
Four hundred 3-lb. cans, at 3 cents each.....	12.00
Fifty lbs. of sugar, at 6 cents per pound.....	3.00

Total.....\$20.40

For this grade of goods \$1.75 was received per dozen cans, or \$58.33. This left a balance of \$37.93 for the fruit used. Peaches were also put up without sugar, using simply clear water. This grade sold as pie peaches and brought \$1 per dozen.

The station found that "pears yielded a larger profit than peaches, other things being equal, as one bushel of pears filled an average of 24 3-lb. cans, and one bushel of peaches only 16 3-lb. cans." It costs as much to put up pears as peaches, and they sell for about the same price, grade for grade. It will be noted that the 3-lb. cans are proportionately cheaper.

The details observed in the canning of tomatoes with this outfit is thus stated by the report. In canning tomatoes the first step is to scald the fruit just sufficient to loosen the skin so that it can be slipped off. To do this, use a large iron kettle. The tomatoes are placed in a cheap tin vessel that has been punched full of small holes, and dipped into boiling water and allowed to remain about one minute or until the skin will slip readily. The fruit is then peeled, sliced and filled directly into the empty cans. The cans must be well filled for good results. This finishes the first step. The filled cans are then passed to the second stage of the operation. The tops of the cans are wiped dry with a clean cloth, the cap is placed on and soldered around the rim, the small hole or vent in the center of the cap being left open. Then we are ready for the third step, that of exhausting—expelling the air out of the cans. This is accomplished by submerging the cans in the boiling water (in the boiler) about two-thirds of their length. They are held there until they come to a boil, or for tomatoes ten minutes. They are then removed, the small hole in the center of the top closed with solder, and the cans are then completely submerged in the boiling water and boiled or processed for twenty minutes, which is the fourth, and last, step in the operation.

The following vegetables and fruits can be successfully canned in a somewhat similar manner: String beans, asparagus, rhubarb, okra, cauliflower, strawberries, blackberries, raspberries, peaches, pears, plums, cherries, apples, figs, etc. Corn and peas cannot be successfully preserved by this method unless the cans are processed from three and one-half to four hours. But even then there will be many losses from swelled and spoiled cans.

Washington, D. C.

G. E. M.

## GRANGE

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

#### THE JULY PROGRAMS.

##### State Lecturer's Suggestions for First Meeting.

"The people will sustain no better schools and have no better education than they personally see the need of."—Horace Mann.

The Annual School Meeting, (occurs July 12, 1909).—1, duties of members of school boards: (a) itemized reports at school meeting; (b) report of care of school premises and property. 2, duties of school patrons: (a) what taxes must be voted by the people? (b) what repairs or improvements are needed? (c) how may the Patrons assist in making a better school? 3, appointment of school visiting committee (to report in October).

Forage Crops.—1, what crops shall we grow for summer forage? 2, when should a cow have forage to supplement pasture?

By what means may we improve on our usual celebration of the Fourth?

Lists of 10 handy, but somewhat uncommon, labor-savers in the home, by five women, each to exhibit at least one of the articles named in her list.

Plenty of patriotic and school songs throughout this program, selected by a teacher or school pupil.

#### BUSINESS IN THE GRANGE.

There are four distinct lines along which the Grange may work to the accomplishment of results that directly benefit its members. They are business, legislation, social work and educational effort. It is my purpose to discuss the business line of work briefly in this article. The old-time Grange store has gone. It fell a victim to a variety of foes that must ever threaten that sort of co-operative enterprise. It will never come back and, the now and then we find a Grange with the desire to revive the experiment, we are turning our attention very generally to other ways of distributing goods that must be bot and used on the farm.

Our system of Grange contracts affords, as we believe, the best means of bringing the producer and consumer together. This system has grown steadily in favor with our people and has already accomplished much good. We cannot get rich out of it, but we can save a dollar here and a dollar there, and these small savings, often occurring, tend to make, in the long run, a sum that is not to be despised.

Perhaps the greatest advantage in this system is that thru it we learn to work together. The trouble with most co-operative effort is that people do not co-operate. This system of buying affords an opportunity for the members of the Grange to unite in business effort and thus learn and practice business co-operation.

The time has come when the farmer must get in closer touch with the world around him. It is quite true today that "no man liveth to himself." I have sometimes thought that the greatest advantages after all in co-operative buying lies in the getting of a business education. Such knowledge and experience will pay out very often, and if we did not make a dollar upon the goods purchased, the knowledge gained would still make the practice worth our while. But the Granges have saved much money in the aggregate thru this system. Our twine contract has always been right and has not only enabled the Patron to buy cheap twine but has tended to lower the price thru competition to the man outside as well. Large quantities of clover and timothy seed were not last spring at prices that were reasonable. In the neighborhood where the writer lives we use large quantities of cottonseed meal. Three years ago we bot half a carload. The following year a minimum car of 35,000 lbs. The next year we bot and used thirty tons and last fall our orders aggregated fifty tons. We received this meal at the lowest possible rate, distributed without the least trouble, and collected every cent of the pay. Our practice results well for the dealer, for we advertise the product and there are always a large number of people who do not order with us who will buy at home a little at a time. Every Grange should study the trade catalog carefully and note its advantages. We ought to make this year a record breaker in the patronage of trade contracts. It will strengthen our local Grange by tending to secure a better attendance at the meetings and thus greater interest in all lines of work. It will encourage co-operation along other lines that will result in great good to

the neighborhood. It will save us money as individuals. It will bring us in touch with the world and provide better relations between the country and town, for we shall learn some of the drawbacks, and experience a lot of the trials that come to the business man.

I cannot close this article without a few suggestions which I trust will not be that unkindly criticism. I believe the State Grange should watch our contracts closely. Samples of goods should be collected here and there, carefully examined and the results published. This precaution would accomplish two things: First, the different companies would be very careful to have the quality of goods sent out up to the standard, and, second, members of the order at large would be given greater confidence in the companies with whom they deal.

Oceana Co.

W. F. TAYLOR.

#### POMONA MEETINGS.

##### Barry County.

Barry Pomona was entertained by Irving Grange, June 2. Dinner was served in a grove to over 100. School Commissioner E. J. Edger was absent but his paper, "Agriculture in the Rural Schools" was discussed at some length, the majority believing agriculture can and should be taught in the rural schools. The subject then drifted to the law which compels our children to attend high school (if they attend any) after they have finished the eighth grade. Many deplored their being deprived of the home influence at the early age of 12 and 14 years, and held that the ranking and passing of the pupils in our schools are carried to extremes. Also that we would have better teachers in the rural schools if county normal teachers were required to take the teachers' examination.

Mrs. Hartley, being absent, her paper, "Poultry Raising for Women, is it Profitable?" was discussed. Some thought that with feed and eggs at present prices it would not be profitable.

Can the general farmer afford to grow apples? How to improve neglected orchards, and the importance of spraying, were topics that were well discussed and many new ideas brot out.

#### FIVE MORE NEW U. P. GRANGES.

**Flat Rock Grange.**—Deputy John Wilde instituted a Grange of Patrons of Husbandry at Durancou's hall in the Flat Rock settlement, Delta Co., Thursday evening, June 17, with the following officers: Master, Wm. C. Hodge; overseer, John Dansey; lecturer, Mary Barron; steward, Thomas Jones; asst. steward, Arthur Barron; lady asst. steward, Mrs. E. Hodge; chaplain, Cora Dansey; treasurer, Clifford Barron; secretary, Owen Jones; gatekeeper, Raymond Barron; Ceres, Catherine Dansey; Pomona, Jennie Barron; Flora, Lizzie Dexter.

**Bark River Grange.**—State Deputy Wilde organized a Grange at Bark River, Delta Co., Saturday evening, June 19, with the following officers: Master, Chas. D. Hakes; overseer, John Heim; lecturer, Eva Hakes; steward, Frank Heim; asst. steward, Ebrath Peterson; lady asst. steward, Della Hakes; chaplain, Dora Hakes; treasurer, Gust Swanson; secretary, Frank Olson; gatekeeper, Rotie Hakes; Ceres, Augusta Swanson; Pomona, Lorena Olson; Flora, Allie Heim.

**Shafter Grange.**—A Grange was organized Monday evening, June 21, at Shafter, Delta Co., by Deputy Wilde. The following are the officers: Master, Alside Leroux; overseer, Alphonse Derocher; lecturer, Mary Duford; steward, Paul Terrien; asst. steward, Arthur Fillion; lady asst. steward, Minnie Leroux; chaplain, Achle Derocher; treasurer, Alphonse Le Claire; secretary, Eugene Daigneault; gatekeeper, Emile Woblet; Ceres, Adelaide Daigneault; Pomona, May Le Claire; Flora, Dorothy Pilon.

**Ford River Grange.**—A Grange was organized Tuesday evening, June 22, at Hyde, Ford River township, Delta Co., by Deputy John Wilde. The following are the officers: Master, Wm. Temple; overseer, Henry Kasten; lecturer, Joseph Dubord; steward, John Ettenhofer; asst. steward, Chas. Richard; lady asst. steward, Amelia Dubord; chaplain, Minnie Johnson; treasurer, Peter Blake; secretary, Wm. Van Enkerost; gatekeeper, Stephen Porenke; Ceres, Mrs. W. Temple; Pomona, Louisa Van Enkerost; Flora, Mrs. J. Pepin.

**Bay de Noquette Grange.**—Deputy John Wilde organized a Grange at Stonington, in Bay de Noquette township, Delta Co., Wednesday evening, June 23. The following are the officers: Master, Ole Erickson; overseer, John Champ; lecturer, Lynwood Smith; steward, Hans Hanson; asst. steward, Chas. Erickson; lady asst. steward, Nora Stratton; chaplain, Arthur Smith; treasurer, Harry Bonefield; secretary, James E. Stratton; gatekeeper, John Buckle; Ceres, Mrs. F. Embs; Pomona, Lulu Stratton; Flora, Julia Thorson.

#### COMING EVENTS.

##### Pomona Meetings.

Clinton Co., with Banner Grange, Wednesday, July 7.

Bay Co., at Pinconning, Tuesday, July 13.

Rosford Pomona (Roscommon Co.), at Roscommon, Saturday, July 31.

##### Picnics and Rallies.

Kent Co. Pomona Grange will hold a farmers' picnic in Byron township, Kent Co., Wednesday, August 25. Fourth and fifth degree session with Carlisle Grange in the evening. Master N. P. Hull, state speaker.

## FARMERS' CLUBS

#### OFFICERS OF THE STATE ASSOCIATION OF FARMERS CLUBS.

President—A. L. Chandler, Owosso.

Vice-President—Mrs. Clara L. French, Pompeii.

Secretary—Mrs. W. L. Cheney, Mason.

Treasurer—D. K. Hanna, Caro.

Corresponding Secretary—Clayton Cook, Owosso.

Directors—D. M. Beckwith, Howell; D. M. Garner, Davisburg; T. B. Halladay, Norvell; E. C. Hallock, Almont; B. A. Holden, Wixom; Wm. H. Marks, Fair Haven.

Address all correspondence relative to the organization of new Clubs to Mrs. W. L. Cheney, Mason, 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.

#### FARMERS' CLUB PICNICS.

The following clubs have fixed the dates of their annual picnics, as noted. Other clubs are invited to forward the dates of similar events for publication in this department.

The Lenawee-Hillsdale Farmers' Club will hold its annual picnic on the banks of Devil's Lake, on Thursday, August 12.

The Odessa Farmers' Club, of Ionia Co., will hold its annual picnic in the grove near the pavilion at Lake Odessa, on the second Saturday in August.

The Ellington-Almer Farmers' Club, of Tuscola Co., will hold their July meeting in the McCrea grove. Date not specified in the report, but June meeting was held on the second Wednesday of the month.

Napoleon Farmers' Club, of Jackson Co., will hold its annual picnic at Stony Lake, on the third Saturday in August.

The Thornapple Farmers' Club, of Barry Co., will celebrate the national holiday by holding a joint picnic with the Ladies' Literary Club, of the Prairie, in Aaron Adams' grove, on Saturday, July 3.

#### CLUB DISCUSSIONS.

##### Keeping the Children on the Farm.—

The Napoleon Farmers' Club met in June at "Mapleton," the pleasant home of M. F. Covert and wife, and was attended by a large and enthusiastic crowd. The meeting was called to order by President Andrews and after prayer by Chaplain Galusha and the usual preliminaries the roll call was responded to with "my favorite flower." Mrs. Lester read a paper on "Keeping Children on the Farm," which brot out a lively discussion. Mrs. Merriman says teach agriculture, give good education; our great men have come from farms. She was followed by Nellie Russell, Mr. Peters, Mrs. Peters, Mrs. Morse, Mrs. Harrington and F. M. Andrews. It seemed evident that what the home is, and right occupation has much to do with keeping the children on the farm. Mrs. Galusha read a paper on "The Care of Flowers," which was enjoyed by all. Mr. Elliott opened discussion in the absence of Mrs. Watson and was followed by Mrs. Tracy, Mr. Andrews and Mrs. Harrington. A good literary and musical program was rendered. After the club adjourned the Andrews' band gave several selections, after which a sumptuous supper was served. It was decided to hold the annual picnic at Stony Lake on the third Saturday in August.

##### Descriptive Talk Feature of Meeting.—

The June meeting of Ingham County Farmers' Club, was held at Brookside with Mr. and Mrs. W. A. Melton. Too much wet weather and a good day to work helped to make the attendance smaller than usual for a June meeting, but those that could take a day off felt well repaid for doing so. President Ives called the meeting to order promptly at two o'clock, and a good program was rendered. Rev. Simmons was present and gave a descriptive talk of northern Michigan. His first visit to this state was in 1875, when he was two weeks going from southern New York to Manistiquia, a lumber town in the upper peninsula, where the soil is out of sight, the river divides the town and on one side you see sand, the other rock. Indian Lake is only three miles away and he spoke of an Indian church, a log building built by the Catholics. The two industries there are manufacturing and mining, and he spoke of the Ludington mine, 1,100 feet deep, and he had been down to the ninth level, or 900 feet. Hamilton mine is 1,600 feet below the surface. He also spoke of compressed air and the work of rescuing



the miners when there had been an accident. Rev. Cook was called upon and told of other things worth mining, and Miss Dorothy Mae Mudge pleasantly gave an original production, "Wandering Jew."

**Discuss New School Law.**—The Indianfields Farmers' Club held its June meeting on the 17th with Mrs. Ellen Purdy, at Prospect Hill Farm, with an attendance of fifty. After a pleasant social hour, president J. M. Miller called the club to order and the program of the day was carried out. Mrs. M. H. Oakley gave an interesting description of their winter in "The Land of the Sky." "A Stroll in the Garden" was the subject of an entertaining paper by Mrs. Clara Miller. Mrs. Maud Purdy rendered fine instrumental music, and Mrs. Edna Van Buren gave a reading. The topic "The New School Law," in regard to the district paying for high school tuition, created considerable discussion. Many thought the law put an added burden to the taxpayer and were not in favor of it. A unique feature of the afternoon was a guessing contest. "A Musical Romance in Rhyme," conducted by Mrs. Mary Fournier, assisted by Mrs. Maud Purdy, which furnished a good deal of amusement. Prizes were given. A strawberry luncheon was served by the refreshment chef, Mrs. Wm. Eldridge. The club will meet in July with Mrs. Joe Fournier.—M. R. P. Sec.

**Contagious Diseases.**—The regular subject on the program, First Aid to the Injured, was not discussed, as Dr. Thomas was unable to be present, and W. L. Cheney briefly talked upon contagious diseases and the duties of the health officer. He gave statistics regarding the number of deaths during the past year, that from consumption being 2,585, and only eight from smallpox, yet public opinion is such that one would go by a case of smallpox quickly, yet stop and chat and even shake hands with one suffering from consumption, where even more danger lurks. The duties of the health officer were to placard the house where anyone was suffering from a contagious disease, and when the patient was dismissed by the physician, to go and disinfect the house and report the same to the state board of health.

**Germ Diseases.**—Dr. Mudge was present and spoke of the germ, especially of the typhoid fever patient, and said that if one would be thorough about changing the clothing and the bed of the patient every 36 hours there would be no danger of spreading the germ, for then it was in a plastic condition, and after it once became dry and floated in the air, no one could tell where it would go. Boiling water was the best thing to use to kill the germs and a very cheap disinfectant. Take off the sheets and immediately turn boiling water upon them, not let them lay around after being taken from the bed.

After a brief discussion of lightning rods, in which all agreed that it was important to have the conductor reach down to moist earth, the club adjourned to meet in August with Mr. and Mrs. N. A. Crittenden, at Rockwell, there being no meeting in July.—Mrs. J. E. Tanswell, Cor. Sec.

**Organization for the Farmer.**—The Odessa Farmers' Club met with Mr. and Mrs. Wm. Shumway, Saturday afternoon, June 12. The meeting was called to order by President Curtis. After the rendering of a good program, Mr. Lawrence read a paper on "Organization for the Farmer." Many good thoughts were given; we will only give a few. "The subject is of great breadth; one hundred thousand members of the Grange have great influence. A great deal of good can be brot to farmers by organizing and being loyal. Socially, are we doing enough? We should be prepared to do better work; farmers do not pull together; they lack capital."

**The Value of an Ideal.**—Mrs. Brown read an excellent paper, "The value of an Ideal." The discussion led by Mrs. Leigh served to impress the fact on the minds of those present that all should have an ideal and keep it high. The committee reported arrangements made for the annual picnic, to be held in the grove near the pavillion at Lake Odessa this year, the second Saturday in August.

**Discuss Agricultural Topics.**—The Perry-Bennington Farmers' Club met Friday, June 4, at the home of Mr. and Mrs. W. H. Beckley. The attendance was small, for many were busy planting corn. The meeting was opened by a couple of selections by the orchestra. Secretary's report read and approved. Mr. Back spoke on the cultivation of the corn crop. He liked to have the weeds get started before planting so it can be dragged to kill them. After the corn comes up, go over with a spike tooth drag both ways. Cultivate just as long as possible before ears form. When is the best time to sow beans? Wm. Morrice says to sow when the ground is ready, that it made no difference in the sign of the moon. Experiments have proven that there was nothing in it. A good time to sow is from the 12th to the 15th of June. How is bordeaux mixture made? Mr. Winegar gave his receipt as follows: Four lbs. of blue vitriol, 5 lbs. of slacked lime and 50 gals. of water. It is better not to mix it too far ahead.

**The Young People and the Club.**—Why are not the young farmers interested in the Farmers' Club? Mr. Beckley thought because a great many took farm papers and bulletins sent out from the different experiment stations, so by reading they think they don't need the work of the Farmers' Club. Should we give to beggars or tramps? The general opinion was that there was plenty of work for them so they do not have to beg. Giving to them encouraged them. Many tell a pitiful story and when they strike a town they spend all they have at the saloons. The program closed with music by the orchestra. The club then adjourned to the dining room, where many good things were served.

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