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FARM NOTES.

Spraying Potatoes for Blight.

At what stage should potatoes be sprayed for blight and how often? Should the Bordeaux mixture be allowed to stand after being mixed together, or should the vitriol and lime be kept separate?

Branch Co.

W. S. H.

Please give me full directions how to spray potatoes to prevent blight. My early ones seem to be affected but they are so far along I do not think it will hurt them. I want to save the late ones, which are just coming up.

Washtenaw Co.

G. E. S.

Our practice has been to begin spraying as soon as the potatoes are about eight inches high, provided the weather is such as seems favorable for the development of blight, and continuing at varying intervals, depending upon weather conditions, until the crop approaches maturity. The efficiency of this preventive depends on keeping the vines covered at all times. For this reason the frequency of spraying depends a good deal upon the weather. Blight develops most rapidly in cloudy, damp weather, for which reason spraying need not be so frequent in bright sunny weather, both because the blight spores will not develop as rapidly in such weather and because the mixture stays on the vines longer. It will not often be necessary to spray the late crop before August, after which from three to five applications may be made as the judgment of the grower dictates.

It will not answer to make the Bordeaux mixture ready for use and let it stand from one spraying to another. It should be mixed fresh each time and this is very easily accomplished, provided "stock mixtures" are used. These may be prepared and kept ready all thru the season without any loss of efficiency. The fresh stone lime should be slacked in some convenient receptacle and kept in the form of a thick paste ready to be mixed with the other ingredients. For this purpose the writer uses a large cauldron kettle, but a box or large barrel will answer the purpose just as well and will save the trouble of slacking the lime each time it is desired to make up some of the mixture. The copper sulfate solution can also be prepared by taking a tight wooden barrel and dissolving the copper sulfate in water by suspending it in a coarse sack at the top of the barrel. The water will dissolve about 3 lbs. of copper sulfate to 1 gallon of water, which makes what is known as a saturated solution. A wooden barrel should be used because the copper sulfate will corrode iron and the copper sulfate should be suspended at the top of the barrel because the solution is heavier than the water and will settle to the bottom, consequently the crystals will dissolve much more quickly if suspended at the top of the barrel.

Having this stock mixture on hand it is a comparatively small task to mix the Bordeaux mixture as needed. Since the

copper sulfate solution contains 3 lbs. of copper sulfate to 1 gallon of water you have only to measure it out to get the desired strength. The writer has always used a sufficient quantity to make 6 lbs. of copper sulfate to 50 gallons of the mixture.

Recent tests seem to indicate that 4 lbs. is sufficient. We have, however, continued to use 6 lbs. for the reason that our sprayer, which is an old type, does not apply a very heavy coating to the vines. It is best to mix the desired quantity of this stock solution in about 25 gallons of water before adding the lime. Then add sufficient lime, also diluted in water before adding, to neutralize the vitriol, straining the lime solution thru a coarse sack so there will be no lumps to clog the spray nozzles. Various quantities of lime are used, varying from 4 to 6 lbs. to 50 gallons of the mixture, but where the stock solution is used the more convenient way is to apply a simple test to determine when the lime content of the mixture is sufficiently high. A very satisfactory test, and one which the writer has used with success, is what is known as the ferrocyanide of potassium test. Get ten cents worth of this drug, commonly known as yellow prussiate of potash, and dissolve in water. When it is that that sufficient lime has been added, dip out a little of the solution and add a few drops of this test solution. If no discoloration of the liquid occurs, it contains sufficient lime to neutralize the copper sulfate so that the foliage will not be harmed. If a discoloration occurs more lime should be

times without any additional labor in the making.

The late blight of potatoes is much more destructive than the early blight, for which reason many growers of late potatoes are planting as early as possible so as to get the crop well along toward maturity before the late blight injures them, should it be prevalent. But with the late planted crop it is more important to spray thoroly, to keep the vines covered with the mixture at all times in order to secure a desirable degree of immunity.

Eradicating Wireworms.

The farmers in this locality are troubled this spring with wire worms working in the oat fields, especially on sod fields that were plowed down a year ago for corn and then plowed again for oats. If any of the Michigan Farmer readers have had experience in fighting them successfully, would like to hear from them thru the columns of The Farmer. One party here says as soon as you see that they are working on a crop, to go right on and sow about two bushels of salt to the acre, that it does not injure the crop or clover if seeded, and will stop them. Would it not be all right to sow the salt a few days before you intend sowing the crop?

St. Clair Co.

R. W. VEITCH.

While some farmers claim great results in lessening the damage done by the application of salt, and while it may keep them in check to a certain extent, yet from the life history of the worms it is apparent that this remedy should not be depended upon too implicitly in their eradication. The larvae of the wireworm lives for two or three years in the soil before completing this stage of its development to the mature insect.

crop until the worms have matured and left the field before it is reseeded, and a shorter rotation is practiced in the future, the best results will be secured in keeping the fields free from these troublesome pests.

Effect of Fertilizer on Seed.

In this vicinity a great many farmers have sown fertilizer in their beans this year and I know of a number of poor stands. Some lay the poor stand to too much dry weather and the fertilizer burning the beans, and some attribute it to too much wet weather. What do you think about this, where 50 to 100 lbs. per acre was sown in the rows with the seed?

Sanilac Co.

W. E. POMEROY.

It is generally admitted by those who have used fertilizer on beans, that it is possible to injure the germinating quality of the seed by applying too much fertilizer in the row with the beans. For this reason where fairly heavy applications are used it is customary among experienced growers to sow the fertilizer thru one drill on each side of the row as well as thru the hoe in which the seed is dropped. In the writer's opinion a still better way is to apply the fertilizer broadcast and thoroly mix it with the soil while it is being fitted for the crop. If it is thus well distributed and mixed with the soil it will be reached by the plant roots and will be held in a more available condition to be appropriated by them. However, it hardly seems possible that a comparatively small application such as is mentioned would injure the seed, and if the case were the writer's he would look for other reasons for the poor stand before attributing it to the fertilizer. Bean seed is very rarely tested for its germinating quality, altho it will often be found to germinate as poorly as the average sample of seed corn which has not been carefully selected, dried and stored so as to keep its germinating quality unimpaired. Then, too, a poor stand of beans sometimes results from unfavorable weather just after the crop is planted. When heavy rains occur which cause a crust to form on the surface before the beans come up, the tender plants sometimes find it difficult to break thru the surface and will come up unevenly and make a poor stand. We had a field of beans a number of years ago that made such a poor stand on account of these conditions that it was cultivated up and replanted. Many of the first planting survived this refitting and came on afterward, which convinced us that perhaps the stand could have been saved by a timely harrowing after the crust formed. With the weather conditions un-

favorable, as they were at bean planting time this year, it would appear that this would be a more likely cause for the poor stand of beans than the one suggested in the above inquiry.

However, good distribution is an important factor in the results secured from fertilizer as well as from manure, and it would be better to sow it as above suggested rather than with seed alone.



A Roomy, Well Shaded Porch Adds Much to the Comfort of Farm Life at this Season.

added and, as the addition of the lime has no harmful effects, it is best to add enough to be sure, altho the mixture should be kept of the right consistency so that it will work well in the sprayer. In our practice we have the stock mixture on hand thru the summer and the Bordeaux mixture is made each time the spray barrel is filled. In this way an absolutely fresh mixture is had at all

For this reason no method will serve to eradicate them completely and at once. The best results have been secured by fall plowing the land, as the action of the elements will destroy quite a proportion of the larvae during the winter. The sowing of crops that are distasteful to the worms, such as buckwheat, or rape for a forage crop is also recommended. But if the land is kept in some

THE DRAFT OF FARM WAGONS.

Most farmers believe that a load on a long geared wagon draws heavier than the same load on a short geared one. Is this true? Is there any law in natural philosophy to substantiate this fully? It seems that the draft must be in proportion to the weight of the load and friction. Is there any other item that enters into the question of draft?

Barry Co. C. H. PALMATIER.

There are a few simple facts concerning the draft of wagons which are involved in the problem submitted.

1. On a perfectly smooth road bed the height of wheel does not materially effect the draft.

2. On all ordinary road beds the height of wheel does effect the draft.

3. Depending on the second proposition, the distribution of load upon a wagon whose front and rear wheels are different in height does make a difference in the draft.

Starting a wagon over an obstruction say of one inch, the ease with which the wagon will be lifted over the obstruction will be uniformly proportional to the height of the wheel. For example, if a pull of 200 lbs. will lift a 35 inch wheel carrying a gross load of 1,000 lbs. over the above named inch obstruction, it will require a pull of only 160 lbs. to lift a 42 inch wheel carrying the same gross load of 1,000 lbs. over the same obstruction. The rear wheel, you see, is one-fifth higher than the former, and requires one-fifth less pull to lift it over the obstruction. This has been demonstrated by our students repeatedly.

A common belief is that the larger portion of a load should be carried upon the front wheels of an ordinary wagon. This is a mistake. Upon the ordinary well constructed road bed, a wagon with 35 inch front wheels and 42 inch rear wheels, and carrying a gross load of 3,300 lbs., should have that 3,300 lbs. distributed in such a way that 1,500 lbs. should be borne by the front wheels and 1,800 by the rear wheels. This fact has also been demonstrated by our students, and is therefore a matter of both theory and fact.

On a perfectly smooth, hard road bed the least pull is required to move a loaded wagon when the pull is made in a direction absolutely parallel to the road bed. Under this condition an upward slant of the trace increases the pull required to move a load. If, however, the road bed is somewhat rough, or is rutty, then the proper upward slant of the trace will lessen the pull.

If the draft is greater when a wagon is lengthened out, it must be due chiefly to the fact that in such lengthening a greater proportion of the load is brot upon the front wheels. If, after lengthening the gears of a wagon, the proportion of the load is distributed in the same proportions as before, the draft ought to be slightly less for the same load on an ordinarily good road bed, for the reason that the direction of the reach in the lengthening has been brot more nearly parallel to the road bed.

Agri. College. J. A. JEFFERY.

THE WEED NUISANCE.

I suppose upon every farm there grow some weeds, and upon a great many of them they not only grow, but they are allowed to go to seed besides. In some cases I think because of the numerous acres of the farm that the owner really does not have the time to exterminate the foul stuff, but upon a great many others it is a case of genuine carelessness and I have no sympathy with the man who can sit in the house on pleasant days of the summer and read his paper while his fields are fairly bristling with quack grass, Canada thistles, dock, milk weeds, and other foul and useless pests too numerous to mention.

I do not say that all farmers are built this way. I do not even say that it is the way of a great many, but I do say that a few are given to gross neglect and that others farms are so large they have no time to exterminate the weeds.

The result is weeds are ever on the increase, the careful farmer as well as his more lawless neighbor, for no farm can be kept clean of them when the next farm is growing millions of them every season.

As an illustration, I will tell you of an experience I had last summer growing cucumbers. The ground was new. It was the second time it was ever plowed, yet when I came to give the cucumbers a cultivation I found quite a good many milk weeds springing up. At first I could not account for their getting in the ground, but when I came to put this piece of ground into fall grain I had no trouble

in determining how they got on the land. The wind was blowing quite strongly from the west and the milk weed seeds were sailing thru the air like so many balloons. I afterwards found out where they were allowed to go to seed and it was about three-quarters of a mile away.

What was the matter with this man, you will ask. Well, I will tell you, he was trying to farm 160 acres of land alone, and also trying to keep a lot of stock without very good fences, and he just simply could not more than half do his work, let alone trying to keep down the milk weeds. That is an illustration of a man who has so much to do he can not do it.

He is not the only one, for there are plenty more in this community who are in the same kind of trouble, in having too large farms to look after, as an inspection of their growing crops during the latter part of the summer will plainly show.

I saw one bean field last summer with the weeds growing nearly as high as my head, and several such pieces were put into fall grain with many of such weeds still standing in the field.

Now such men as these cannot work their large farms with the help at their command unless they do neglect the weeds, but what of the man with the small farm, who takes the time to go to all of the picnics, shows, and other doings around him, while at home his farm is growing quack grass, Canada thistles and other foul stuff, more luxuriantly than it does the crops he is raising for maintenance of his stock and family. There is no use in wasting any time upon such a man.

The quicker he sells out to some man who will look after such things, the better it will be for his neighbors, and the sooner the man with the large farm decides to part with half of his holdings the better it will be also. And when the laws are so made and enforced that no foul stuff will be allowed to go to seed, that is just about what will happen, and then we shall see the farms of this country among the best in the world and a beautiful sight to see.

Montcalm Co. J. H. HANKS.

CONCRETE SETTLING BASINS FOR TILE DRAINS.

Too much can scarcely be said in favor of the use of cement or concrete construction on the farm. There is one valuable use for this material I desire to mention and highly recommend.

When tile draining wet or swampy places and a permanent manhole is de-

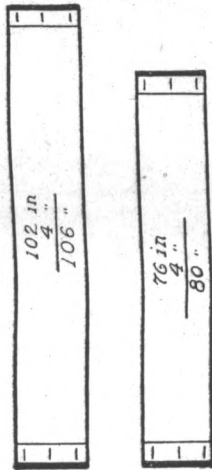


Fig I

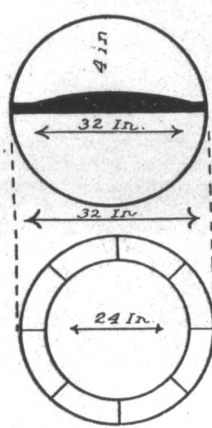


Fig II

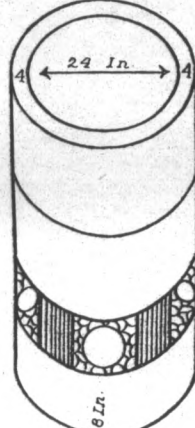


Fig III

sired—as is often the case—at junction points, there is nothing so good and so cheap as concrete.

Several years ago the writer used empty glucose barrels for this purpose and they did good service for a time, but are short lived and are now being replaced with a permanent home-made concrete curb costing for material from 75 cents to \$1.00 each, and they certainly promise a long term of good service.

To provide the necessary form for this curb, first secure two pieces of sheet iron, 18 inches or more wide, and 80 and 106 inches long respectively; across one end of each rivet a piece of flat iron—if handy a piece of old buggy tire will suffice—in which is placed three small or fence staples, as appears in Fig. 1, thus making it possible to form a double sheet iron drum, see Fig. 2, with a diameter of 24 inches inside and 32 outside, leaving four inches between as the thickness of the curbing. This includes a lap of four or five inches.

For each curb make one circle 8 or 10 inches deep for the bottom of the well-hole, which forms a settling basin to

catch the quicksand or silt as it comes thru the intakes. On this lower circle place four supporting blocks, formed by placing into the circular form eight pieces of board four inches wide—or the width of the form—and a length equal to the outside diameter of the tile being used—and then carefully fill the form to the top of the board divisions. If four inch tile are used, cut the division boards six or six and one-half inches long—but all one length—place these supporting blocks so as to carry the load securely and to allow the tile to enter between the blocks and in their proper places.

The remaining unfilled spaces should be filled with stones or bats for draining purposes; a ve this make and place one or more circles with sufficient width to reach to the surface of the ground, and then cover the same with a concrete cover as shown in Fig. 2. This will protect against wash and filling but will admit the surface water in moderate quantities, as well as permit working over it when plowing, cultivating, etc.

For convenience in handling, the top circles should be not to exceed 12 to 18 inches deep and if handy the whole structure can be loaded with small stone or coarse gravel, to reduce the expense of material, and with the same good results. One part cement, well mixed with five or six parts sharp sand, makes a strong mixture, and will carry all the small stone it will cover.

Fig. 3 shows a complete curb all ready for the cover. This, as with all good cement improvements, is along the line of permanent work and commends itself. Kent Co. B. W. PUTNAM.

OX-EYE DAISIES IN PASTURE.

I have a pasture that has not been plowed in the last 15 years. It is getting badly infested with the ox-eye daisy, this plant threatening to take possession of the field. How shall I proceed to get rid of this pest?

Ottawa Co.

A FARMER.

I am of the opinion that the only way to eradicate the ox-eye daisies from the pasture is to plow the pasture and reseed it. It would be better to plow it this fall and plant it to corn next year, giving it thorough cultivation so as to allow none of the daisies to grow, then probably sow it to oats in the spring, fertilize it well either with barnyard manure this fall and winter or with commercial fertilizers next spring before planting the corn, and the following year crop it with oats. Then I would plow again after planting the oat stubble and seed to wheat, seedling it down to permanent pasture. Or if you want to get it back into perma-

nent pasture sooner you can seed after the oats. I would wait until after I had harvested the oats and then go on with a good sharp-disk harrow; sharpen the blades of the disk and work it up carefully. By going over the field about three times with a good disk harrow you can put it in fine condition. Then, when the first fall rains come, the last of August or the first of September, go on and sow a mixture of grasses, something like this: Red clover, alsike clover, moly, orchard grass, meadow fescue, tall meadow oat grass.

If this is sown the latter part of August or the first of September it will become pretty well established by the next spring. While I would not want to put the cattle onto it too early in the spring, not before the ground had become well settled after the spring rains, it will do then for light pasturing. It should not be heavily pastured until the next year, or until the grass becomes well established. If you will plow this pasture up and seed in this manner, I think you will eradicate the ox-eye daisies. The ox-eye daisy coming into the pasture in

this way is an indication that the land is pretty well run and a good liberal fertilizing will not only furnish you better grass but it will prevent the daisies from coming in again soon.

If this pasture field is rough so that it cannot be plowed, I would disk it up this fall, after it becomes softened by the fall rains, and seed to grass. Top dress this with stable manure, or, if you haven't the stable manure, with a complete fertilizer, using a pretty liberal supply. This will cause the grass in the old pasture and the new seeding sown to grow vigorously and will assist in choking out the daisies, at least partially.

If the field is too rough to disk or work in any way, then I think that the only way you can get rid of the daisies is by heavily fertilizing, so that the grass will choke it out. I am of the opinion that it can be done in this way. Your land is getting run by being too long in a continuous pasture—taking everything off and putting nothing back. If you will fertilize the grass thoroughly, either by top dressing with stable manure, or with commercial fertilizer, especially bone meal, you will stimulate the growth of grass so that it will largely crowd out the daisies.

COLON C. LILLIE.

IMPROVING A LAND ROLLER.

The steel land rollers, as made today, are a nice tool, and almost indispensable on the farm, but unless one piles a stone heap on them, they are often too light to do effective work. Stone are not always at hand when we need them, and even when they are, and we place them on the tool, they are at all times liable to roll off and smash our toes that happen to be in the exact spot they take to fall on, or else bump the heels of our horses and frighten them.

I think some of The Farmer readers will be interested in the way we fixed ours last winter, and as it is inexpensive, I think some will want to try it. The materials used were cement, sand and gravel, and some old salt barrels—any kind of barrels could be used, or even old lumber cut in strips. The staves were cut the length of the sections of the roller, and sawed partly thru on the outside, so they could be straightened. Several were put in place, the ends resting on the rim at the end of the roller. Enough were put in so that they were held in place by resting against two "spokes" at each end, then concrete was mixed and worked in behind the staves, filling the space, another section of the staves put in, the space filled, and the proceeding repeated till the circle was complete. The staves were left in place till the cement set, when they were too tight to remove, and as they were of small value, and not in the way, they are there yet. Two of my brothers did the work in the basement of the barn during stormy weather last winter. It adds over six hundred pounds in weight to the roller, and in use last spring it did much better work than ever before. We think it easily doubles the value of the tool, and about the only expense was for the cement.

Eaton Co.

APOLLOS LONG.

NITROGEN CAPTURING PLANTS.

Nitrogen for agricultural fertilization is worth from 15 to 20 cents a pound, wholesale, so that when it is known that at the Michigan Agricultural Experiment Station, on average ground, cowpeas yielded 139 pounds of nitrogen per acre and soy beans 113 pounds, all captured from the air, the money value of the legume to the farmer may be appreciated. Compilations made at the Department of Agriculture from various sources show that cured hay of the various legumes contains from 40 to 50 pounds of nitrogen to the ton. Land which will produce, therefore, two tons to the acre of cured clover or other leguminous hay, yields 80 to 100 pounds of nitrogen, and the best way to realize this \$15 or \$20 of fertilizing wealth is to feed the hay right on the farm, converting it into manure and at the same time securing in addition its full forage value. Barnyard manure contains from 75 to 90 per cent of the total fertilizing substance in the feeds used, depending upon the handling of the manure.

Washington, D. C.

G. E. M.

There is profit in mulching, especially with some varieties of vegetables. As to when is the best time for such work, depends largely, of course, upon circumstances and weather conditions.

LIVE STOCK

RELATIVE TERMS APPLIED TO IMPROVED LIVE STOCK.

The general interest in live stock improvement thruout the state is attested by the number of inquiries which have recently been received from subscribers, asking for a clear definition of the terms commonly used in connection with the different stages of such improvement. One asks for a definition of the terms pure-bred, thorobred, full-blood, etc., and another would have a clearer understanding of the words, grade, cross-bred, and scrub. There is a very general misunderstanding and misuse of these terms among those who have not taken an active part in live stock improvement, and, as the technical terms which are commonly used or applied in any business should be thoroly understood by those who are in the business or contemplate engaging in it, we have deemed it expedient to make a general reply to the above inquiries at this time.

Of the terms above noted the first named is the only one that can be properly applied to individuals of our improved breeds of live stock. Its origin is doubtless due to the fact that to be entitled to registration in any of the herd books an animal must be pure bred within the requirements of the association, with an unbroken chain of ancestors recorded in the herd books and acknowledged as "pure bred" in their certificates of registration. It is not, however, necessary to so designate individuals of any of the improved breeds. The use of the breed name implies that the animal so described is pure bred. The term Thorobred is properly used only in connection with the breed of horses so designated, which is as distinctly a separate breed as the Percheron being, in fact, one of the oldest of the improved breeds of horses. The adaptability of the name which was applied to these horses at a time when it was a distinction shared by none other has led to its somewhat common use in speaking of individuals of other improved breeds of live stock. The term full blood no doubt had its origin in the fact that an animal carrying a fraction of blood alien to the breed in which it is classed is not eligible to registration in any herd book.

The term grade, as applied to the improvement of our common stock means, in the general acceptance of the term, the product of the pure-bred sire when mated with a common or grade dam; while the cross-bred animal is the product of mating two pure bred animals of different breeds and the scrub is of a mixed breeding that is often so varied as to be beyond description. The latter word is also fittingly applied to the unthrifty, poorly kept animal of better breeding and in its broader sense might, unfortunately, be applied to a far too large proportion of our live stock.

CEMENT FLOORS FOR HORSE STABLE.

I have a basement built for a barn. This basement is all above ground, is about 8 ft. high and is built with hollow cement blocks 8x10x20 inches. What I want to know is, if I will need a shallow gutter behind the horses or should the floor be nearly level and depend on the bedding to take up the moisture. Also, how thick should the cement floor be for horse stable? Most of the people that I have talked with seem to think that there will have to be a wooden floor over the cement for the horses to stand on. What do you think about it?

J. F. BARRY.

I would not have a gutter behind the horses the same as you would behind the cows. It is not necessary and it would be very inconvenient. The horses would be slipping into it more than the cows and would be more apt to be injured from it. In my own stable we have a little drop back of the hind feet of the horses, but it would not be in any sense a gutter. It is not over two inches deep and is rounding so that there it does not afford any particular space for storing manure, as in the cow stable. The floor of the stable under the horses ought to slant from their fore feet back. There ought to be an inch fall, or slope, from the fore feet back to this slight drop. This will allow the urine from the geldings to drain back and not make their stalls so dirty. I would not figure on allowing the urine to drain out doors, but I would absorb it all with the bedding. This can easily be done in a horse stable. The horse manure itself is a good absorbent and there is no trouble what-

ever in absorbing all of the liquid manure from the horses. The cement floor in a horse stable ought to be at least four inches thick. Most people recommend that you put down a grout foundation made of coarse gravel and cement and then a finishing coat of richer mortar with screened gravel, but this is really not necessary. We did not do it when we made our horse stable floor. We simply took good clean gravel as it came out of the pit, mixed it up four to one and put it in four inches thick and then troweled it down. The small stones in the gravel will trowel down into the mortar so that they do not come to the surface at all. Our stable floor is hard. You cannot see that it is worn at all, yet it has been in use now something like four years. It is perfectly satisfactory.

It is absolutely unnecessary to have a wooden floor over the cement for the horses. This is a notion that some people have and they cannot get out of this notion simply because they have been brot up on wooden floors, but wooden floors are not necessary for any kind of animals. After we had troweled down the cement under the horses we simply took a piece of 2x4, planed, with sharp corners and made little grooves about one-half inch deep lengthwise and crosswise, making it into squares. Now this prevents the horses from slipping and allows little crevices so that the urine from the geldings can drain back readily to the back part of the stall. We have no trouble in keeping bedding under the horses and have no trouble from injury to the knees or anything else. Wood on top of cement is not only not needed but it makes a very unsanitary and dirty stable.

HOG CHOLERA EXPERIMENTS.

Hog cholera has long been a cause of heavy loss to the farmers and for years scientists of the Department of Agriculture and in various parts of the world have been working on the problem of the cause and prevention of this disease. Recent work of the Bureau of Animal Industry has demonstrated that the contagion consists of a virus which exists in the blood and other fluids of diseased animals, but which can pass thru the finest filter, is invisible under the microscope, and therefore cannot be isolated or discerned by any of the usual methods. The real cause of the disease having been determined, the Bureau of Animal Industry next turned its attention to experiments with a view to producing a vaccine or serum which will prevent or cure the disease. Successful results appear to be indicated from the experiments thus far made. In the experiments hogs that have recovered from the disease or that have been exposed without contracting it are injected with suitable amounts of virulent blood from diseased hogs, and thus their immunity is heightened. The blood serum of these immunes is then used in vaccinating the hogs which it is desired to protect. The method giving the best results is to inject blood from diseased hogs simultaneously with the immune serum. By this method of vaccination hogs are protected for three and a half months or more, while by the use of the serum alone the protection can not be expected to last longer than three weeks.

State experiment stations having been testing this method for a few years and it is hoped by the officials of the Department of Agriculture that the practicability of this method for combating hog cholera may thus be determined within a short time.

In 1905 Professor Walter E. King, of the Kansas station, undertook a number of experiments in an attempt to determine whether hog cholera serum could be modified by passage thru some domesticated animal. The sheep was the first animal upon which extensive work was conducted. This was attended with variable results, some negative, some positive, but with no degree of uniformity. The employment of the sheep was therefore suspended and the next animal used was the donkey. These were more encouraging. After some work with the donkey, the horse was used as a medium, in attempting to produce a satisfactory serum. No attempt was made last year to produce an experimental-hog-cholera antitoxin from the horse, the work being directed more particularly toward the attempted production of a hog-cholera vaccine.

Tests were conducted at the Kansas station with a number of lots of hogs. These animals were immunized by the injection of hog-cholera virus, once highly

virulent, but weakened by age at the time of inoculation and by exposure to the Riley strain of hog cholera.

Hog No. 1 was treated during February, 1908, and afterward confined in pens infected with the acute type of the disease. Others were treated at approximately the same time and the degree of immunity extended from three to eight months. These experiments will be conducted during the present year and the officials hope to produce a virus which will protect the animals from the ravages of the disease. In these experiments as many series of hogs as opportunity will permit will be used under various conditions in testing the vaccines. But the tests made so far appear that the steps taken are in the right direction and all that remains is a perfection of the process.

Washington, D. C.

G. E. M.

TRAINING THE COLT.

I recently saw a colt on which was a sensible "bitting rig," or at least it appeared to me as such.

Most colts are never half broken, which accounts for a lot of lawless horses that never know anything, but they are blameless for the man who broke them had no idea of the proper way of accustoming the colt to its duties. Most men, when they have a colt to break, start in by putting a bridle and a harness on and drive it about a few times, then either hitch it in with another old, steady horse to haul it around, or hitch it single and drive it. Thus the colt is never given time to become accustomed to bit and reins as it should, and, unless very naturally upheaded and stylish, he will develop into a horse that you can drive within the road limits, provided nothing scares him.

This bitting rig consisted of a driving harness with the side straps removed; bridle with overdraw check, and martingales. His head was checked reasonably high, just enough to bring the martingales nearly taut, then reins were run from the bit thru the thill lugs and tied in the breeching rings, just taut enough to give the neck a stylish curve.

This colt was of the road type, rather slim built all round. He was turned loose with this rig on and the way he handled himself was good to see. His head was held in a stylish position and it seemed natural to him. When he trotted off his knee action was fine and if this course is persisted in, there is no doubt that colt will make a stylish roadster, for he will get into proper shape from having his lessons repeated. Later he can be driven with the same rig and taught to be sensitive to the reins and lastly when he handles well with this rig it will be a short job to teach him the buggy hauling trick and I venture to say he will be a pleasant driver.

Few colts would be vicious if their drivers did not make them so in breaking, or later. There are a few things practiced by many drivers on horses after they are broken that are cruel, but the majority of men who are given the care of horses have more feeling and a grain or two of sense. The heartless man will take a bridle in winter and put it on while the bit is full of frost. He ought to receive the same treatment. Another fool practice I have frequently observed is slapping the harness onto a horse that is frightened at the harness. They say if you slap it or hard the horse will soon get used to it. I say it never will, but if the harness is laid on carefully while you reassure the horse you will gain your end. Striking a horse over the head with anything one can get hold of is usually a practice of the quick tempered driver. It keeps the horse always on the yank when you go near his head, only to get more knocks. When a horse needs punishing use a whip and not a club, and do not whip over the head. That should never be done except possibly with an unreasonable, balky horse. Then it seldom starts him. The best teamster I ever saw would handle his horses by speaking so low one would scarcely hear him and they would back or step ahead at his word without touching the reins.

Few horses are deaf and the quiet teamster is where you will find the sleek, fat horses, and they will accomplish just as much work.

Maine.

D. J. RYHER.

Jones National School of Auctioneering, 1215 Washington Boulevard, Chicago, Ill., has just issued a handsome 50-page catalog descriptive of the school and its course, its founders and corps of instructors, and testimonials of the value of the liberal education in the auctioneering business which it offers.



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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.

Exostosis.—I have a colt six weeks old that has a hard bony bunch growing on backbone. This colt seemed to be all right at birth. A. J. R., Ashley, Mich.—Your colt has met with an injury of some kind, setting up an inflammation in spinous process of vertebra of back. Apply tincture iodine once a day.

Cut Parotid Duct.—I have a 5-year-old mare that had distemper two years ago. Our local Vet. lanced her throat at which time he cut an artery and a salivary duct. He tied the artery, but left the other open. A very unsightly bunch appeared which has grown and I would like to know if this duct could not be tied and a cure effected in this way. D. M. R., Stockbridge, Mich.—What should have been done at the time of the mistake was to have connected the duct with a silver tube and allowed this to remain in the flesh. Whenever the mare eats the glands of course secrete saliva and it is poured out thru the duct, it must therefore have an outlet. This is a case that requires expert surgical work to effect a cure.

Tumor.—I have a cow that has had a sore foot for the past four months; this growth is situated on the back part of heel and causes considerable pain. It appears much like a seed wart. For the past six or eight weeks I have washed it with soap suds, then applied carbolic acid diluted with water, but it has failed to cure it. W. H. B., North Star, Mich.—Your cow suffers from a malignant tumor—your treatment has been too mild. Apply equal parts powdered sulfate copper, powdered alum and tannic acid. If this does not reduce the bunch, burn it with a red hot iron occasionally.

Cow Has Sore Teats.—I would like to know what to do with a cow that is troubled with sore teats. Little bunches form on the bag which later on break open and discharge a pus like fluid. Then the wound heals and forms a dry scab which takes some time to peel off, in fact these sores are very slow in healing. J. L. M., Beaverton, Mich.—Give your cow 1 oz. hypo-sulphite soda at a dose, mixed with feed or as a drench night and morning. Also apply one part iodine, one part powdered alum and four parts boracic acid to sores twice a day.

Fistulous Tumor.—I have a 3-year-old filly that has been working every day until a week ago, when I noticed her neck was a little sore. I applied lard to remove scab, when this came off I found there is a hole running down into neck with a sort of scabby substance in the hole, which I have tried to pull, but have not succeeded in doing so. There is quite a little pus coming out. Have been washing it out with peroxide-hydrogen, but this seems to fail to heal it. I am anxious to have her cured in order to work her. My nearest Vet. is ten miles from here. E. B. P., Brooklyn, Mich.—What you have done and are doing is all right. One hour after you have used the peroxide-hydrogen, inject one part bichloride mercury and 250 parts water in the morning; in the evening apply a solution made by dissolving 1 oz. alum, 1 oz. sulfate zinc in three pints water once a day.

Barren Cow—Septic Infection.—My brother has Jersey cow that fails to get with calf. She has had three calves which seem to be in perfect health. On examination I found the mouth of uterus somewhat rigid and closed so tightly that I could not insert my little finger, and I have a small hand. What should be done for her? Also have a 15-year-old mare, sound in every respect, that has lost two colts within 72 hours after their birth. When born they appear to be as strong as any colt, have normal action of bowels and kidneys and nurse all right. Last one at 36 hours was a lively animal and 12 hours later was nearly dead. For about six hours before death, lay on side breathing steadily getting slower and accompanied with a rattling noise. What was the cause of death? Mare is in foal now by a Percheron stallion. A. R. L., Washington, Mich.—It is possible if you try the following yeast treatment that your heifer will breed. Put two heaping teaspoonsful of yeast in a pint of boiled water. Set the solution near the stove or in sun and maintain at a warm room temperature for about five hours; then add three pints 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. The most probable cause of your colt's death was from septic infection following a suppurating umbilical cord. Apply 1 part carbolic acid and 15 parts water, or apply 1 part iodine and 4 or 5 parts boracic acid twice daily.

Acidity of Stomach—Liver Disease.—Why do our cows eat bricks, boards, sticks, clay and such like. They have an excellent pasture this summer, in the winter they were fed corn and stalks with access to salt every day. We also lost several young turkeys this year.

Have opened some and find the liver and intestines covered with what appears to be ulcers. We have fed them cooked ground corn, curd and now oatmeal. Turkeys are not lousy. What can we do to save those remaining? E. C., Dundee, Mich.—Your cows suffer from acidity of stomach. Give each cow 1 oz. bicarbonate soda, 1 oz. powdered charcoal and 1 oz. ground ginger at a dose in feed night and morning. Salt them well. Give your turkeys a teaspoonful of epsom salts dissolved in water every two or three days. Also give 1/4 gr. podophyllin at a dose twice a week. Also give 1/2 gr. salol once a day.

Geese Have Sore Mouth.—Our flock of geese are troubled with sore mouth. At first corners of mouth become some sore and then this trouble seems to spread rapidly to all parts of the mouth. The sores appear to heal and then a dry scab scales off. The geese have a good appetite, but are poor. Have been fed crushed bread and corn meal. E. B. C., Springport, Mich.—Dissolve 1 oz. borax in three pints water and dip mouth in this solution when it is open. Also give 1/2 teaspoonful castor oil to each goose twice a week.

Muco-Enteritis.—My cow was taken sick at 6 o'clock on Tuesday morning, refused to eat, drink and chew her cud, did not appear to be in much pain and had very little fever, but remained lying in a natural position most of the time. A copious watery discharge with mucous and blood—kidney action seemed normal. What ailed her and what remedies would you have advised or do you consider it a fatal disease from the start. She died on Wednesday a. m. Had always been well, was fresh three weeks before and seemed all right. Calf was weaned and both seemed in perfect condition. B. A. S., Kingsley, Mich.—Your heifer died from muco-enteritis with dysentery. In hot weather a disease of this kind very often proves fatal, between 12 and 36 hours, no matter what kind of treatment is followed. Should you meet with another case of this kind give a full dose of raw linseed oil and follow that by giving 2 oz. doses of tincture of opium every two hours until the bowel movements check.

Rickets.—I have a litter of spring pigs which up to this time have been fed on middlings with slop, and only recently have been put upon ear corn. We notice that some of them have begun to lose control of their hind legs and have no further desire to eat, in fact, they will lie down within reach of the trough rather than drag themselves to it for the purpose of eating. Upon killing one of the animals, examination disclosed that the lungs were covered with brown spots and the intestines were not of a healthy color. The food stuff contained in the intestines was slimy and watery and of a greenish color. Will you kindly indicate whether or not these are the symptoms that would show up in cholera? If not, what might the trouble be and what remedy would you advise? Until recently the pigs have shown good gains with no indication whatever of any disease. These pigs are all of one litter; other litters on the place have not, up to this time, shown any indication of trouble. C. C. G., Battle Creek, Mich.—I do not believe that you have cholera on your place, but your hogs may have eaten infected food, or perhaps their ration is out of balance. By feeding them less corn and some oats and oil meal, adding some air slacked lime to their food supply; besides keeping them in the sunlight morning and evenings and in a perfectly dry place, then perhaps those that are living will recover. I suggest that you give each of the sick hogs a dose of either epsom salts or castor oil to move their bowels freely. Also give a few grains of salol. You failed to state the age of your pigs, consequently I am unable to state the dose. From five to ten grains at a dose is enough for a hog that weighs from 125 to 200 pounds.

Scours in Calves.—A year ago I got a heifer calf that was ten days old. I was anxious to raise her and fed plenty of milk fresh from cow; also very careful in feeding, it soon brot on scours. I made no change in the food supply for three weeks, then I gave one quart of fresh milk and three quarts of separator milk warm, and whole oats for grain. Kept her in stable all the time and fed grass and hay; with this feed she did extra well until the 15th of September, 1908, when she again began to scour. I tried cutting down amount of grain and milk, but no results. I took the milk away entirely, and by changing grain every two weeks all winter I kept her in fairly good condition without scouring. Early in May I turned her out on rye pasture; was out some three weeks, when she was then turned into a woods pasture. She has scoured very badly ever since turned out and is growing some, but not like other cattle and does not gain in flesh at all. Will say she has always had plenty of salt, but has never been as bad as she is now. Can you tell me where the fault lies, and is there any medicine that I could give her that would help her and do you believe she will recover? Also, do you believe that a calf from her would inherit this ailment? Any advice you can give me will be thankfully received as she is a pedigreed Shorthorn. R. B., Saranac, Mich.—It is possible that you infected the calf from lack of cleanliness in care of feeding utensils when she was a calf, this no doubt left the bowels a little weak and sensitive; therefore she should not be fed on as laxative food as a heifer that is in a normal condition. Give her 1 oz. powdered sulfate iron, 2 drs. powdered catechu and 1 dr. creosote at a dose dissolved in water and mixed with feed two or three times a day and she should be pastured on land that is exposed to the sun. An animal of this kind eating grass that grows in the shade usually scours. Her produce may perhaps inherit a slight predisposition to looseness of bowels; however, I should not hesitate to use her for breeding purposes, if I were you.

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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

SOUR CREAM FOR BUTTER-MAKING.

I have read, and have heard it said at farmers' meetings, that we should deliver good sweet cream to the creameries. Now there are creameries around here that tell their patrons they prefer to have it sour; that it does not hurt it for butter and that it will test higher. Would like to know what you think of the value of such cream for making butter. I know we get a better price when we have good cream.

Eaton Co.

JAMES MEAD.

Mr. Mead has opened an important question which is the very foundation for the improvement of Michigan creamery butter. When the co-operative creameries were first organized and the patrons sent their whole milk to the factory every day, and it was skimmed at the factory, the milk had to be sweet or it could not be run thru the separators. This enabled the creamery to have a good sweet product for butter and they made a better quality of butter than they do now. Of late years the hand separator has come in fashion. The farmer skims his milk at home and feeds sweet skim-milk to his calves and pigs and delivers the cream only to the factory.

Now, this latter system has a good many advantages for the farmer. He has his sweet skim-milk to feed on the farm and he doesn't have to haul the skim-milk to the factory and back. He goes with a very much lighter load and it is not necessary for him to go quite as often, certainly not in cold weather. But that is just as far as the hand separator is a benefit. It is a benefit to the farmer in this way, but when it comes to making his hand separator cream into butter the farmer loses part of what he has gained by the separation at home, simply because he will not deliver his cream at the factory in such condition that the best quality of butter can be made. When creamery men say that they had just as soon have sour cream as sweet cream they are not telling the truth, or else they do not have a high-class trade for their product and are not getting the highest market price for it. The time has come when a creamery cannot make butter of old sour cream and get the highest market price for it. When patrons patronize that kind of a creamery they can rest assured that they are not getting as much, within 1½c to 2c per lb., for their butter-fat as they should get, because the creamery cannot afford to pay it.

If farmers are willing to take 1½c to 2c, perhaps 2½c, less per lb. for their butter-fat, for the privilege of delivering their cream in a sour condition, of course no one has any objection. That is their business. But, on the other hand, they must not expect a creamery to pay as good a price for sour cream as it does for sweet cream for it cannot do it. It cannot sell its butter for as much money and consequently cannot afford to pay its patrons as much for their butter-fat. If a creamery wants a good market and a good price for its butter, it cannot get and hold such a market if it receives sour cream. The cream must be sweet when it is received by the creamery in order to make gilt-edge butter. Of course, the farmer gets an idea that because some creameries make ripened cream butter, the creamery sours the cream when it gets it, and therefore it makes no particular difference if the cream is sour when it comes to the factory. This is a wrong idea. If the creamery makes ripened cream butter it must certainly have the cream so that it can ripen it themselves and have control of it, and it cannot afford to let the farmer ripen the cream to a different degree of acidity, some of it until it is rank, sour, stale and bitter, and then make good butter. This is absolutely impossible.

Discrimination Against Sour Cream Becomes Necessary.

The Coopersville creamery received a contract to make butter for the U. S. Navy. Now, more than half of the product received by the Coopersville creamery is hand separator cream. The butter-maker found, when he came to comply with the requirements of this contract, that a larger part of this hand separator cream could not be used at all—it was too sour. This product for the government must be made out of sweet cream. That is one of the specifications. No cream is allowed to go into this butter which is so sour that 15 cubic centimeters

of alkaline solution will not neutralize 15 centimeters of cream. Now, the creamery was simply up against a hard proposition. It had taken a contract to fill this order and so it was forced to grade the cream and pay for it according to quality. It simply got another receiving vat, and all the cream that could not go into the government contract was dumped into this second-grade vat. The creamery is now paying its patrons, for good sweet cream, 1½c more than it pays for sour cream. It uses a system of tags, one blue in color, the other red. The blue tag denotes sweet cream. The red tag denotes sour cream. Every can, as it is received at the factory, is examined. If it contains sweet cream, a blue tag is tied to the handle; if sour cream, a red tag is tied to the handle. Every patron understands that when he gets a red tag he gets 1½c per lb. less for that batch of cream than he would if the cream had been sweet. The creamery proposes to continue this system of grading after the government contract is filled. It is the only honest way, the only right way, to buy butter-fat. The man who will take good care of his cream ought to receive more for it, because it is worth more, and the man who is willing to take less for it can deliver sour cream if he wishes. Mr. Mead is right; we must have better cream.

JUNE MEETING OF NORTH OTTAWA COW-TESTING ASSOCIATION.

The June meeting of the Association was held at the Coopersville residence of Colon C. Lillie. It was called to order by Pres. John M. Park, Jr., and after the reading of the minutes of the previous meeting, Mr. N. P. Hull, Master of the State Grange and special inspector of the Dairy and Food Department, talked on the subject, "Cow-Testing Work in other parts of the State." Mr. Hull had just visited all of these organizations with the exception of the North Ottawa Association. At the present time there are five associations in actual operation in the state—the North Ottawa at Coopersville, the South Ottawa at Forest Grove, one at Brown City, one at Salem in Washtenaw county, and the Fremont association. Mr. Hull reported all of the associations in healthy condition. Members of the Salem Association have had some difficulty in getting together on the basis of butter-fat. Many of the members there sell their milk. Some sell it by the hundred, others sell it on the basis of butter-fat, and a number of others make their own butter and sell it to private customers in nearby cities, while still others sell their milk to a co-operative creamery. The association at Brown City, and the one at Forest Grove are in splendid condition. Mr. Hull put great stress on the work of the Fremont Association. He said this association has been in existence long enough so that one can judge the results, and Mr. Hull was familiar with the dairy conditions about Fremont before the cow-testing association was organized. He could not say too much for the improvements that have been made thru the influence of the association. He said one would be surprised, would hardly believe it, the improvement that had been made in barns and dairy stables since this organization was started. The same is true of cows; they have a better class of cows, they have been breeding up their herds. When the cow testing association was first organized there was not a pure-bred sire owned by a member of the association. A year and a half after organization there were 22 pure-bred sires owned by members. The dairymen are better dairymen, consequently better fitted for their work, and so Mr. Hull puts down the great benefit to be derived from the co-operative cow-testing association as the increased interest which the members take in dairying, in their own business. And this interest is not confined to members of the association but extends to farmers outside, and the consequence is that a cow-testing association benefits the whole community.

Mr. Rabild reported that this same condition exists in Denmark where cow-testing associations have been in operation for 12 or 14 years. While all the dairy farmers there do not belong to cow-testing associations, those who are not members are influenced by those who belong.

The subject, "Cow-Testing Work in other States and Countries," was introduced by Helmer Rabild, dairy expert of the Department of Agriculture. In beginning his remarks, Mr. Rabild stated that

he was very glad to see so many farmers' wives present. He took occasion to tell that the idea of co-operative cow-testing associations originated with a woman, the wife of a Danish farmer, who first conceived the idea, and it was due to her fertile brain and her energy and perseverance that the first co-operative association was formed. From this beginning it spread to every community until today Denmark has 521 co-operative cow-testing associations. When we remember that Denmark is a little country, only about one-fourth the size of the state of Michigan, we can realize how this idea has taken root and grown and prospered there. And no wonder, for thru the influence of co-operation in cow testing, thru the influence of putting dairying on a business basis and being able to tell the profits of each cow, the Danish farmer in the last 14 years has been able to double the annual production of his cows.

The Danish farmer now does not confine his effort to keeping records of his cows, but the cow tester also keeps track of the ration that is fed to the growing heifers, to the dry cows, to the pigs and, in fact, the cow tester on the Danish farm now is a book-keeper who keeps a book account with all the live stock, charging them with what they eat and giving them credit for what they produce, in growth or from animal products, tells the farmer just what he is making, suggests rations where the stock is not paying as much as it ought to, and makes himself very useful.

Different Kinds of Testing Associations.

Mr. Rabild explained that there are different kinds of cow-testing associations. The kind we have in Michigan are formed on what is known as the self-supporting plan. Here the farmers pay the entire cost of the association. They pay pro rata according to the number of cows which they have, and they pay sufficient to remunerate the tester for his work. In Denmark the government donates a small amount to each cow-testing association. The dairy authorities of Canada conceived the idea that it was not necessary for a man to go from farm to farm in each vicinity, and so they encouraged the farmers of a community to send in, each month, samples of their milk to be tested, and also an estimate of the cost of keeping the cows. Canada has actually formed some 96 associations of this sort. Wisconsin took up this idea and organized 28 associations of this sort, but these associations, Mr. Rabild said, had not made any very great progress. The farmers neglect to send in the samples. When the busy time of year comes they put this work off because they haven't time, and this sort of an association is no more reliable than individual testing by the farmers themselves. Practically, it is individual testing. All there is to it, they simply send the milk to be tested to the experiment station, and some dairy authority does the work for them. They could just as well do the testing at home. And, too, their estimation of the feed is not so very accurate or reliable. Wisconsin is now changing her associations over to what they call the dollar, or the self-supporting kind, where the farmers hire a man to go from farm to farm and do this work and keep the records. Mr. Rabild, in his work for the government, has succeeded in forming cow-testing associations in a number of states and these are all organized on the self-supporting plan. He believes that the future for these associations is very bright. It takes some little time to awaken farmers to the benefits to be derived from them, but the idea is sure to grow and some day the whole of this great country will be covered with co-operative cow-testing associations.

After lunch quite a number of the members visited Lillie Farmstead, inspected the growing stock and the dairy herd, also the stables. Many of them were very much interested in the operation of the milking machine. Altho these milking machines have been in operation now about three years, some of them had never seen milking machines in practical operation before. The place and time of the next meeting was not fixed and it is possible that the July meeting will be a picnic in some centrally located grove.

To get most out of cows in summer, one should be constantly inspecting the pasture and noting its effect upon the cows. When the cows will eat a feed of hay or grain in the barn and relish it, it will always pay to feed them, because it shows beyond question that the pasture is not supplying a full ration.

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POULTRY AND BEES

RHEUMATISM OR LEG WEAKNESS.

A Gratiot county reader asks for a remedy for hens that lose the use of their legs. Otherwise the fowls appear healthy. This may be due to rheumatism or it may be the result of the system of feeding. If the fowls have rheumatism the joints of the legs will be apt to show soft swellings which later on become hardened. While the inquirer does not say anything about the conditions under which the hens have been kept, if their quarters are damp, or if they have recently been exposed to a cold rain or to strong draughts after becoming wet, it is reasonably certain that they have developed rheumatism. After placing them where they will be free from dampness, rub the swollen joints with carbolated vaseline or camphorated sweet oil. Give each fowl a 20-gr. dose of epsom salts and the following day give bicarbonate of soda in the drinking water, about 15 grs. to each pint of water. Also give 2 grs. salicylic acid twice daily.

Should a knowledge of conditions and a careful examination of the hens lead to the belief that the trouble is not rheumatism, then it is probable that they suffer from leg weakness which has been brot on by improper feeding. A ration of corn or equally starchy food, to the exclusion of foods strong in protein and the mineral elements will have this effect if long continued. Such lack of bone-building material most frequently manifests itself in growing fowls but is sometimes seen in matured ones. It may be corrected by materially reducing the starchy foods and supplying mineral matter in the form of bone meal, ground or cut bone and the various forms of grit. Also give plenty of protein in the form of beef scraps, skim-milk, etc. Cracked beans or peas are also good protein foods. When the hens are once more upon their feet endeavor to feed a fairly well balanced ration.

MID-SEASON WITH THE GROWING CHICKS.

Getting Them to Roost.

Teaching the chicks to roost is often a puzzle, particularly to beginners. Try this method: Take a low box or a wide board resting on a block or brick and put it where the chicks are accustomed to sleep. Have it large enough so that all the chicks can get on it. After they are accustomed to it, gradually raise it until it is a foot from the floor. Most of the chicks will go on it. Any that do not you should place on it night after night until they will go of their own accord. When all have learned to get upon the box or board, take it away and put, at the same height, roosts four or five inches wide.

Here is another that sometimes works well: Put one or two peaceable old fowls of either sex, or a few chickens that have learned to roost, in with the lot you wish to teach, wide roosts being furnished, not too high from the ground. Leghorns generally need no instruction, and mixed lots of chicks containing Leghorns generally follow their example very rapidly. Don't think, tho, that you can teach all chickens to roost. Some breeders of Asiatics never allow their fowls to roost, and when you have stock from such fowls you are apt to find that some of the chicks will never go to roost of their own accord.

Separating the Sexes.

A great deal is said of the necessity for separating the sexes, some insisting that it should be done as soon as sex can be determined. In Asiatics it is not often necessary until the chicks are pretty well grown. In fowls of the Mediterranean varieties separation must be made quite early. In American varieties it depends upon the stock and the stage of development of the individual cockerels. Frequently the removal of a few of the cockerels disposed to annoy the pullets makes it possible to keep males and females peaceably together until well along in the season. In many cases the separation can be made early as well as later, the chicks being divided into small lots anyway, and it being just as easy to separate by sex.

What is of much greater importance than separation according to sex is assortment according to size. Chickens differing in age and size should never be allowed in the same colony. Except in very rare cases, when chicks of different

sizes are kept together the smaller ones have to take a lot of roughing from the others. Whenever any of the chicks in a flock are seen to be suffering from this sort of treatment they should be removed.

No more than 25 should be allowed to roost together. Colony houses, allowing plenty of fresh air without drafts, large enough to accommodate such sized flocks until three-fourths grown, should be provided and placed far enough apart to prevent intermingling of flocks.

There is no trouble in keeping the cockerels in flocks of this size until fully grown if care is taken that no female is ever allowed to come in contact with them. This would start a row at once and battle would be on until every cockerel had fought every other cockerel. The writer once kept 25 S. C. Brown Leghorn cockerels in a flock until fully grown. They were colonized in a distant pasture where no females were ever encountered, and a more peaceable lot of males no one could wish for. One male, by his superior talents, was the recognized leader and none of the others ever questioned his title by trying his bill and spurs upon his chief. A cockerel that has become injured in any way to the extent of shedding blood must be removed promptly as the sight of blood often arouses their lust for battle and a single drop of blood may throw the whole flock into arms.

It is a good plan to keep the pullets that have been colonized together in the same flocks when removing them to their winter quarters. Females are quick to show their aversion and contempt for strangers, and quarrels more or less disastrous may ensue. So keep the families together as much as possible.

N. H.

A. G. SYMONDS.

THE BREEDING STOCK DURING HOT WEATHER.

During the summer months the careful poultryman gives close attention to the fowls that are to be reserved for the next year's breeding. It is very important that they be given good care after the breeding season is passed, that they may have their vitality unimpaired. Success in poultry raising depends to a great extent, upon properly performing all the duties that arise, both large and small, not at one season of the year when enthusiasm is highest, but all the time.

The thing that must be considered at all times is the vitality of the breeders. This is the very foundation of successful poultry raising, for without good healthy breeders it is impossible to have healthy chicks. The chicks must come from strong, healthy parent stock, and by careful selection of vigorous fowls a strain of chickens having strong constitutions can, within a few years, be established.

After the hatching season I give the breeders a thoro rest. As their energy is thus conserved they are in good condition for next season. Separate the male birds from the hens and give both special care. You should not expect eggs from the breeding hens now, but feed them with a view to hastening the moult.

When the breeding pens are broken up all surplus stock and those fowls which have not proven of the first grade should be disposed of. This culling will give the others more room, and consequently they will do better.

When culling the flock do the work in a thoro manner. I have found that one strictly first-class fowl is worth half a dozen of medium grade. This may seem strange to the mongrel breeder. However, it is true and when you once try the best you will agree with me.

When disposing of stock do it in a business-like manner. Separate the best members from the rest of the flock, and if you have some good ones for sale let people know about it. If, however, you are breeding mongrels you can take them to the poultry buyer and get whatever he is willing to pay for such fowls, which is not very much, usually. All fowls that are not suitable for the fancy trade should be fattened and sent to market. In culling the old stock now the poultryman will doubtless find some which were fine specimens last year but would now be disqualified. The two-year-old hen which does not develop any disqualification is a very valuable specimen and should be retained for another year.

Right here is where breeders often make a mistake, and that is in disposing of all the old fowls and relying entirely upon the pullets. I think that there is no more certain way to deteriorate a flock than by this continued practice. The young fowls are of uncertain quality and may fail to reach an early maturity. I

do not wish, however, to be understood as saying that you should not use pullets as breeding stock at all. I think a good plan is to mate the older hens with good well-developed healthy cockerels, and the pullets with the older male birds.

Illinois.

R. B. RUSHING.

REMOVES GAPE WORMS WITH HORSE HAIR.

The best method for treating gapes in chickens, in my experience, is this: Fold once, and twist, a hair taken from mane or tail of a horse. Thrust this into the round opening seen in the throat of the chick when the mouth is opened wide. Turn hair about in windpipe and you will very probably remove the cause of the trouble—a fine blood-red worm an inch or more in length. If you are not successful at the first trial, several attempts may be necessary to bring the right result. The chick will be very much exhausted for some time after, but unless the trouble is too far advanced it will entirely recover within the next hour.

Jackson Co.

D. S.

WHY SWARMS WON'T STAY HIVED.

It is very exasperating, to say the least, to be troubled with swarms refusing to stay hived. Also it is a loss to have swarms leave, as they will do when coming out the second time after having been hived with the queen.

As with other bee difficulties, there is more than one reason for swarms absconding. Those that I know of I will attempt to explain.

A common reason for swarms returning after having been hived is that a queen is not with them. But a swarm without a queen is not natural and it can not be expected to stay hived.

If a swarm is placed in a hive in which bees have died from dysentery during the winter it may come out again. This is because such an ill-smelling home is not congenial. They abscond in the hope of finding sweeter quarters. Such hives must be cleaned thoroly; but that is another story.

I think that more first swarms refuse to stay because of hives being too hot than from any other cause. That they may be handy, empty hives fixed for the reception of swarms are generally stacked up out of doors. The sun shining on them makes them almost like an oven inside. Out comes a swarm and it is hived in one of those heated hives. Now, a swarm is in a hot, feverish, condition, and putting it into a hot hive simply makes conditions unbearable. The bees come out again and, unless the queen's wing is clipped, they generally leave for the woods. One's profits take wings and fly into a hollow tree.

The remedy, of course, is to keep the hives cool. Better keep the hives under cover. If you do want a few outside for handiness, stack them up in the shade, and shove the covers off a little so the air can circulate thru them. Besides, if the swarm is a big one or the weather hot, put a piece of section under the cover so the air can circulate thru after the swarm is hived. Of course, the opening must not be large enough for bees to come thru.

Sometimes swarms will come out after having been hived for several days. I don't always know why, but they will do this if the days following their hiving are non-nectar secreting, or, in other words, if there is no honey to be gathered. You see the bees soon use up the honey they have taken with them, and if none is to be had from the fields they face a famine with no honey in their newly established home. Of course, they can not better their conditions by absconding to a hollow tree if the flowers do not commence to secrete nectar again. I suppose, however, that they entertain the idea that they can, or else in their discouragement they know not what else to do.

One poor season I had many hived swarms leave their hives. After I learned the reason, I fed for the first few days. This helped. After the swarms were well started at home-making they seemed to be able to find enough to make them contented.

Sometimes a swarm will refuse to stay hived and I fail to find any good reason for this ill behavior, unless it is that they simply want to act spunky. Such I set into a dark cellar 24 hours or longer. When taking them out don't put them on their old stand but give a new location and generally everything will be well.

Wisconsin.

F. A. S.



Afraid of Ghosts

Many people are afraid of ghosts. Few people are afraid of germs. Yet the ghost is a fancy and the germ is a fact. If the germ could be magnified to a size equal to its terrors it would appear more terrible than any fire-breathing dragon. Germs can't be avoided. They are in the air we breathe, the water we drink.

The germ can only prosper when the condition of the system gives it free scope to establish itself and develop. When there is a deficiency of vital force, languor, restlessness, a sallow cheek, a hollow eye, when the appetite is poor and the sleep is broken, it is time to guard against the germ. You can fortify the body against all germs by the use of Dr. Pierce's Golden Medical Discovery. It increases the vital power, cleanses the system of clogging impurities, enriches the blood, puts the stomach and organs of digestion and nutrition in working condition, so that the germ finds no weak or tainted spot in which to breed. "Golden Medical Discovery" contains no alcohol, whisky or habit-forming drugs. All its ingredients printed on its outside wrapper. It is not a secret nostrum but a medicine OF KNOWN COMPOSITION and with a record of 40 YEARS OF CURES. Accept no substitute—there is nothing "just as good." Ask your neighbors.

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HORTICULTURE

IT PAYS TO THIN FRUIT.

The years when the trees particularly need thinning are those when all varieties are bearing, as then the prices of ordinary fruit will be low, but there is always a demand for fancy fruit at good prices, and the removal of one-half or two-thirds of the fruit on a tree will not only double the size of the remainder, but, by changing it from No. 2 to No. 1, or fancy, raise the value proportionately.

Many persons are afraid of thin fruit, fearing that after the thinning has been done, more may drop from other causes. It is true that what is known as the "June drop" often removes a large part of the crop, but these as a rule, are fruits that have been attacked by scab, curculio, codling moth, or other fungi or insects, all of which can be controlled by proper spraying. Really this need not be seriously considered as the thinning should not be done until the drop is over. As a rule, the surplus fruits should be removed before the seeds or pits begin to harden. For apples, pears and peaches this would be when they are about the size of a hickory nut.

How Much to Thin.—Just how many fruits should be left upon a tree will depend upon the variety, as well as on the size and condition of the tree. The peach and pear are especially benefited by thinning, and peaches should not be closer than four inches on the branches, while if the variety is a large one and the fruit is well distributed thru a rather thick head, it will be better if they are six or eight inches, or even further apart. In most cases there should be only one pear upon a fruit spur, and it will also pay well to thin the fruit on apple trees when there are several in a cluster. If the large varieties of plums are thinned so that the fruits will not touch, it will lessen the injury from brown rot.

Benefits from Thinning.—In addition to increasing the size and quality of the fruit and thus enhancing its value, the thinning of fruit has other advantages. It often saves the trees from serious injury by preventing the breaking down of the overlaid branches and tends to make them more regular in bearing. There are many varieties which will produce a full crop one year and, as the full vigor of the trees is used in developing the crop, they are not able to form fruit buds for a crop the next season; hence they become known as "odd-year" bearers. This can to a large extent be changed by the removal of a portion of the fruit as, altho the crop may be just as large in bushels, the increase is largely in water, and it is the development of the seeds and pits that saps the vitality of the trees.

Thinning Makes Picking Easier.—Many fail to thin their trees because they consider it a serious task. They should understand that the fruit will have to be picked at some time and it certainly is no more work to pick off one-half when partly grown and drop them on the ground and then pick the other half when ripe, than it is to pick all of the fruit when ripe and carefully place it in baskets. The former method permits of a part of the work being done at a time when work is slack, while the other puts it all in the rush of the harvest season.

Thinning by Pruning.—The labor of thinning fruit trees can be considerably lessened if the trees are pruned with the idea of removing a portion of the fruit buds. This method is particularly helpful in the case of peaches and plums, while with apples and pears, altho heading back can be practiced to advantage with young trees, the pruning for the purpose of thinning the fruit should be in the way of opening up the heads.

Agri. College, Mich. L. R. TAFT.

MIDDLE TO LATE JULY IN THE GARDEN.

From July 18 to 25 is practically the jumping off place in so far as farther seeding or planting out is concerned. Aside from turnips, which will in most places do well up to August 1, the kohlrabi is about the only vegetable that can be sown now with chances of success. This vegetable, in nature midway between the cabbage and turnip, is not half so widely cultivated as its real merits deserve. The edible portion is a turnip-shaped enlargement of the stem and when grown quickly and used before growing

too large is delicious as to flavor, resembling both the cabbage and turnip. It will not grow well in hot weather as it becomes tough and stringy, so its best seasons of growth are early spring and autumn. It is worth a place in every home garden and as its culture is easy, the same as the turnip, it ought to come into far more general use. The Early White and Early Purple Vienna are quick growing sorts and grown in rich soil under good culture they make a valuable addition to the table supply. Sow in drills sixteen inches apart and thin to six inches in the row. They are well worth a trial; but should not be allowed to grow too large before cutting.

The general work just at this time, of course, is chiefly in the care of the already growing crops, and careful watching now will indicate where many of the vegetables may be pulled "out of a hole" and brot thru to profitable maturing. If the plants begin to look sickly and languish for lack of moisture see what a good mulching of litter or a dust blanket made by the fine cultivators will do. A good dressing of nitrate of soda or salt and wood ashes worked into the soil around the plants will often give them a new lease of life. If the bean crop begins to show traces of rust or anthracnose, spray with Bordeaux mixture or nitrate of soda solution an ounce or a little more to the gallon of water.

The insect pests will be out in full force now and lead us a merry chase from this out. The cabbages will stand Paris green all right up to one-fourth or more grown and then it is safer to abandon it and depend upon other remedies for the worms. Salt and ashes in liberal quantities will not only be safe but really beneficial. The squash bugs and cucumber beetles will also be in evidence and the former will require kerosene emulsion or they may be trapped with shingles or boards. Bordeaux mixture well supplemented with the arsenites, will be most effectual for the cucumber beetles; but road dust or wood ashes well tinctured with kerosene oil will perhaps be as effectual, and less objectionable on account of the poison. Cut worms are also becoming a nuisance at this season of the year and do no end of damage. A very convenient way to handle them is to take Paris green one part, brown sugar three parts and coarse middlings five or six parts. Well mixed and placed in small piles near the plants offers them a tid-bit that they relish highly but they do not thrive well upon such diet and are easily gotten rid of. With all the above looming up just ahead we need have little fear of getting out of a job.

Wayne Co. J. E. MORSE.

ANTS ON FRUIT TREES.

Can you give me some remedy for exterminating ant nests? They are destroying my trees. F. WHITMORE.

These trees are in all probability not suffering from the presence of ants. If a closer examination is made plant lice will likely be found on the trees, either on the foliage or on the roots. The ants enjoy the honeydew secreted by the lice. The presence of the ants is a pretty good indication that the lice are about, especially when the ants are industrious among the small branches of the trees. The ants are known to favor the lice, presumably for the purpose of getting more of the honeydew in return for the favors. In this regard the ants often carry the lice from one part of the tree, or from one plant to another in order to give the latter better feeding grounds.

These lice do damage to the foliage and disturb the functions of the roots of the trees when in any considerable numbers. It is because of one species of them that the attempts to grow the European grape in the eastern part of the country has always proved a failure. The Phylloxera was an important element in the early industry of the country, and it was not until men began to use the roots of the native varieties which were self resisting against the attacks of the pest, that success was attained. The lice may be controlled by using a spray of kerosene emulsion, or a decoction of quassia, or tobacco. Strong soap suds, or whale oil soap and hot water are also used for the purpose. If the roots are attacked then tobacco can be applied to the soil about the base of the trees.

The ants may be destroyed by pouring boiling water upon the nests. Saturating with kerosene will also kill them. Should the nest be out in the field, thoro cultivation will generally destroy the insects or cause them to move their home.

LATE GARDENING SUGGESTIONS.

Early July is a busy time in the garden and every day's work counts. The extra early vegetables are out of the way and the ground must be prepared for some late crop. The second earlies are just coming on, and the main crops require constant cultivation to keep them going.

Tomato plants respond quickly to hoe and cultivator, and a few days gained in time of ripening means dollars in the pocket of the gardener. Run the cultivator thru both ways then hoe the plants. Keep it up until they are too large to cultivate. My plan of plowing the garden is to start at one side and keep going until everything has been plowed. Then the crops needing hoeing are commenced on at once. It is a waste of time to plow one crop, then go about some other work, and later in the day plow something else. I am speaking, of course, of those whose acreage is not large. Make it a point to plow everything once a week or as nearly so as the weather will permit.

If the cucumber and melon vines haven't begun to run too much give them another stirring. My early cukes are bearing now. The striped beetle played havoc with a few cucumber vines and bush squash before I got busy with the sprayer. No remedy we have ever tried has been entirely successful. Arsenate of lead comes as near as any and has pretty effectually driven them out. I use one pound of the paste in fifteen gallons of water.

The squash is quite a profitable garden crop if one is near a large town. I find the Mammoth White Bush the most profitable summer variety. Golden Summer Crookneck also sells well. To secure the largest returns from Hubbard squash one must have a dry storage room, cool, but not cold. If you can keep them until along toward the last of winter the prices are highest and overbalance any shrinkage in weight. This shrinkage will be considerable and some decay may also be counted on, but with proper storage room the loss is small.

I used to have considerable trouble with my late cabbage. The heads having matured would stop growing, then a wet spell of weather would start them to growing again and the heads would burst open. Now I wait until the tenth of July before setting out the plants and have no bursted heads. Late cabbage will stand close planting on heavily manured ground.

Just as soon as the second early crops are off the ground plow it up, harrow well and be ready to take advantage of the first shower to sow turnip seed. Cover with a light drag, then roll lightly. If your turnips have been troubled with club root try a light application of lime to the soil.

A crop that I always depend upon for handsome returns is lima beans. This year I have only six hundred hills but they are good for sixty to a hundred dollars, depending upon the weather. The ground was heavily manured, then plowed deeply, harrowed three times and dragged. With plenty of rain I should have a yield of a quart of shelled beans per hill. The retail price is twenty to thirty cents. Even at the wholesale price and with a yield of a pint per hill, limas are a paying crop.

Ohio. N. S. GREEN.

PATRONIZE RELIABLE NURSERIES.

I have received numerous reports that irresponsible parties are imposing upon the public by selling nursery stock that is either untrue to name, or worthless for other reasons.

I understand that one or more agents claiming to represent the "New York Nurseries, Rochester, N. Y.", and at other points posing as agents for "J. B. Stockwell, proprietor of the New York Nurseries, Rochester, N. Y.", have been taking orders for nursery stock. Not only is there no such firm at Rochester, N. Y., but the New York inspector of nurseries has no knowledge of a firm of that name in the state. Furthermore, the Michigan law requires a license of all nurseries selling stock in this state and no firm of that name has applied for a license.

It is also reported that the stock furnished is utterly worthless. Any person having knowledge of agents soliciting orders for the "New York Nurseries," or "J. B. Stockwell & Co., Rochester, N. Y.", is urged to report the fact at once to the undersigned, giving the name of the agent and any other facts regarding the matter.

L. R. TAFT,
State Inspector of Nurseries
and Orchards.

BLADDER TROUBLES NEED PROMPT ATTENTION

Perhaps you don't know how much work is required of your kidneys and bladder or of how much importance they are. Do you know that on these important organs hinges good health? Many an apparently strong, healthy man or woman has been stricken without notice by serious kidney and bladder disease only to realize too late what might have been prevented with proper care and attention.

Some of the early symptoms of weak kidneys and bladder are lumbago, rheumatism, catarrh of the bladder, pain or dull ache in the back, joints or muscles, at times have headache or indigestion, dizziness, you may have a sallow complexion, puffy or dark circles under the eyes, sometimes feel as tho you had heart trouble, may have plenty of ambition but no strength, get weak and waste away.

If you find you have some of the symptoms mentioned, you need then a remedy that will reach the seat of the disease and at the same time build up the system generally.

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The Lawrence Pub. Co.,
Detroit, Mich.

DETROIT, JULY 10, 1909.

CURRENT COMMENT.

While the Celebration of the National Holiday was attended this year with numbers of casualties and fatalities, yet this toll of patriotism is probably on the decrease, as the method of celebrating the fourth is undoubtedly undergoing a change. The old public celebrations, with patriotic speeches and booming cannon, has gradually given place to a saner and safer method of celebrating, in which the family party, the neighborhood picnic or the quiet trip play a common part. Where the community celebration is made a feature of the day, the great national game of base ball has succeeded in a large measure the more crude sports which were formerly indulged in so generally on that day. Fireworks are enjoyed now as ever, but they are often made a feature of the family party on a small scale and are enjoyed at home more generally than ever before, where the town celebrations are not patronized by the farmer and his family. There is no doubt that a greater and more general enjoyment is derived from the holiday under the new order of things, and the lesson of patriotism which it holds for the young is probably as great as under the old and time-honored plan of celebrating the "Glorious Fourth." There is, perhaps, no room to doubt that the influence of the modern method of celebrating the anniversary of our independence is just as productive of the true patriotic spirit in our youth, and far better for them in every way than would be the case if they were subjected to tiresome preachments or loosed from all restraint in their demonstrations.

In an address delivered before the Michigan Manufacturers' Association last week, State Commissioner of Insurance, James V. Barry, took as his subject, "The Fire Waste," and presented some figures and comparisons that were startling in their bearing upon this problem in Michigan. In answering the question, "What is the extent of our fire waste?" Mr. Barry gave the following figures for 1908:

Fire losses in the United States, other than forest fires, amounted to \$215,000,000; cost of maintenance of fire departments, \$49,000,000; for water for fire protection, aside from domestic purposes,

\$29,000,000; for private fire protection equipment, \$18,000,000; insurance premiums, in excess of the losses by fire, \$146,000,000; total fire cost for the year 1908, 457,000,000.

"The American Bankers' Association recently quoted figures showing that the combined assets of all the state and national banks, building and loan associations and accumulations of life insurance companies, amounts to the enormous sum of \$9,500,000,000." Mr. Barry continued. But on the face of the figures of the National Board of Fire Underwriters, I point out to you that it needs the equivalent of that gigantic sum of capital to provide annual funds sufficient at 5 per cent interest to pay the fire loss of this nation.

"The excess of the fire waste in the United States over the six most important countries of continental Europe combined is more than the cost of maintaining the entire German army for a year.

"Practically nothing is being done to prevent our great waste by fire. We have fire departments, it is true. But they only control after the fire is once started. They do not prevent.

"The average annual per capita fire loss of the six most important countries of Europe was 33 cents, the average in the United States for the year 1907 being \$3.02."

Apparently Mr. Barry believes that the state should assume a large part of the responsibility for this condition of affairs, and that it should discharge its obligation in the matter by adopting both preventive and curative measures. He says:

"One of the greatest obligations of the state is to exercise its authority thru its legislature and its municipalities to set in motion every agency that will contribute in any appreciable degree to the prevention of fire.

"The state can do much to control the situation by creating and maintaining an efficient department for the investigation of all fires, and having discovered the cause thereof, to prevent thru publicity, punishment and correction of conditions, other fires from like causes.

"The fire insurance companies have paid in Michigan in the last five years \$14,809,000 to sufferers by fire. Inasmuch as statistics show that only 57 per cent of all losses are covered by insurance, it would appear that actual loss sustained by citizens of this state during the brief period mentioned, was \$26,000,000."

These figures will afford a profitable comparison to the reader, since in their relation to fire losses the farmers of Michigan are in a class by themselves, since for the most part their property is insured in mutual companies under their own management and in which the loss is assessed pro rata with a minimum of expense for administration. Many of these companies, however, found that the per capita loss was creeping up from year to year after they had been doing business for a number of years, and it was found necessary to have a readjustment of risks in some of them as a means of keeping the losses within bounds. This plan is now quite general among this class of companies, most of them providing for an inspection of the risks every five years and a readjustment of values where the same is considered necessary.

That there are some serious fire wastes in this class of risks, however, cannot be denied by any observing person. The loss from lightning is very large with this class of property, largely because of its wide distribution, the lack of the natural protection which is found in urban construction and environments, and the inflammable nature of the contents which greatly increase the aggregate of total losses from this source. That this is a fire waste that can be largely avoided is proven by the statistics of insurance companies which show a very small proportion of losses from lightning where buildings are properly rodded as a protection from this danger. With a general awakening on this subject there will be an increasing demand for the segregation of the risks which are so protected, into a class by themselves, when the contrast in the proportionate loss will be so striking as to cause a far more general protection of farm buildings from the danger of fire and damage by lightning. That such action will go far to eliminate one of the greatest fire wastes which now exists in rural communities seems to be clearly demonstrated by modern science and emphasized by reliable statistics.

Probably next in rank as a cause of fire losses in rural communities would come defective chimneys and improper protection where stove pipes pass thru floors and partitions. Most of the companies provide for an inspection of these details at the time the property is insured, but in many instances this inspection is inadequate and often needed repairs or changes in construction are not made when ordered. But with the general control over the size of the risk which is assumed by most of these companies the property owner becomes the

greater loser from fires which occur from any cause, and must suffer more than his fellow policy holders from fires originating from this as well as other sources, which tends to reduce the average number of losses from this source. A factor which will still further reduce the proportion of rural fire losses from this source is the installation of modern heating plants in the farm homes of the state, which is largely on the increase as the increasing prosperity of the farm home owners will permit.

Other contributory causes of fires in rural communities are too numerous for individual comment. Many of them are due to a preventible carelessness or negligence, and some, of course, are due to unavoidable accident, augmented, perhaps, by a total lack of equipment with which an incipient blaze might have been extinguished. Some of both will continue to occur, but generally speaking this is one economic movement in which the farmers as a class are ahead of the times, in comparison with their city contemporaries, and unlike them they do not need state supervision or investigation. From present indications the natural progress which may be expected in a successful co-operative undertaking of this nature will within a few years further reduce the extent of the rural fire losses to a degree which should prove a valuable object lesson to the communities who have costly systems of fire protection and buildings of more fire resistant construction.

The Immigration Problem.

The view taken of the immigration problem generally depends upon the angle from which it is studied. The latest view of this great question which has come to our notice is contained in a folder apparently circulated by some branch of allied labor interests, in which John Temple Graves comments on what he terms "grasshopper immigrants," or the class who come to our country because of its superior opportunities and return again to their native countries, "carrying our privileges as spoils to enrich some land that knows neither reciprocity nor exchange." In this article the claim is made that within the past ten years passing immigrants to this country have carried back to the countries from which they came nearly one thousand million dollars. It is also stated that the records show that during the last year of panic and depression there left the country 764,000 aliens, taking with them an enormous sum of money estimated at from 200 to 500 million dollars. Many other figures are quoted for the purpose of creating a sentiment for the taxation of immigrants which are being dumped on our shores by the millions from the countries of southern Europe, at least a sufficient amount to defray the expenses of the immigration service, which run into the millions annually.

This argument is presented in these columns, merely because it is another angle from which this question may be viewed. Whether the question is a serious one or not depends upon the viewpoint, and the man who would arrive at a correct conclusion with regard to this vexed problem should be able to view it from every angle. There is one point to be considered in this annual migration of aliens from our shores, and that is the fact that while here they have imbibed more or less of American ideas, and cultivated some tastes for American goods which will be reflected in some degree in the demand for those goods from the countries to which they have returned. Also the fact that in returning to their native countries on the eve of financial depressions they have made less pressing the problem of providing for the unemployed. Whether these facts counterbalance the undoubted disadvantage of having them carry home the money derived from our industries is an open question, which we leave to the reader to settle in his own mind.

Growth of the Sugar Beet Industry.

During the discussion of the tariff schedules in the Senate, Secretary Wilson was asked for a report on the beet sugar industry. His report on this subject contained a summary of facts and figures relating to this subject which should be of interest to the many growers of sugar beets in Michigan.

This report states that in 1896 there were six beet sugar factories in operation and one building, having altogether a capacity for slicing 4,000 tons of beets daily. In 1908 there were 64 factories, with a total capacity of 50,000 tons of beets daily—more than a twelve-fold in-

crease. From 1898 to 1906 our production of beet sugar grew from 36,000 tons to 484,000, an increase of more than thirteen fold in eight years. In 1896 41,000 acres of beets were harvested; in 1906 376,000 acres, or more than nine times as great an area. The price of beets, like prices of other farm crops, has risen steadily. In 1896 the factories paid \$4.10 per ton; now they have to pay \$5.35. In 1898 the farmers had 364,000 tons of beets to sell to the factories, for which they received \$1,564,000. In 1906, just eight years later, they had 4,326,000 tons of beets to sell, and received for them \$21,604,000—a twelve-fold increase in beets and a fourteen-fold increase in money returns. The total amount paid out by factories for beets during the past twelve years amounts to \$121,000,000. The total capital invested in beet-sugar plants in this country is about \$70,000,000, and this does not include investments made by factory owners in farm lands, irrigation works, etc.

In commenting upon the possibilities of this industry in the United States the Secretary of Agriculture says, "That if the sugar beet were grown throughout those portions of the United States adapted by nature and with the aid of irrigation to its culture, with a system of rotation including the cultivation of the beet every fourth year, 15 million tons of beet sugar could be produced in the United States annually, or more than the world's total production of sugar at the present time."

This, of course, is merely an estimate of possibilities as the secretary sees them, but the growth of the industry which has already been attained is a substantial fact. There are factories now in successful operation in sixteen states. Colorado leads all other states in output from sixteen factories. Michigan has the same number of factories as Colorado and is about on a par with California in production of sugar, altho the latter named state has but nine factories. Utah has five factories and Idaho and Wisconsin follow with four each, while ten other states have one factory each.

HAPPENINGS OF THE WEEK.

Foreign.

Because they were refused an audience with Premier Asquith, representatives of the woman's suffrage league of England are now determined to have a conference with King Edward. They maintain the Premier is in the wrong in refusing to receive them according to a statute of Charles II.

Differences between the laborers and their employers at the coal mines in Nova Scotia, resulted in the miners going on strike Monday. At one colliery 700 men quit work.

A desperate battle took place on the island of Jolo in the Philippines, between regulars, a detachment of the constabulary, and Moro outlaws in which their chief, Jikiri, was killed. The outlaws have been giving the authorities much trouble and the troops were sent out to capture them. The outlaws refused to surrender and fought to the end.

Lemoine, the French scientist who some months ago claimed that he had discovered a process whereby diamonds could be manufactured and succeeded in engaging a considerable amount of capital to launch his scheme, has been found guilty of obtaining money under false pretenses by the courts of France and was sent to prison.

The strike situation in the Hawaiian islands continues to give the inhabitants great concern. Japanese strike-breakers are being treated rather harshly by the union men.

The French government, thru her minister, declares that she is favorable to making reciprocal arrangements with the United States on tariffs.

Twenty-seven men perished Friday by the sudden falling of a wall of one of the locks at the entrance of the dock at Newport Eng.

Cobalt, Ont., was visited by a fire last week which caused a loss of \$350,000. One man was killed by an explosion of dynamite which started the blaze.

Small engagements are occurring between the forces of the sultan of Morocco and those of the pretender. The situation is very discouraging to business of every kind.

Movement is growing in East Bengal for the independence of that country. Meetings are being held and agitators are preaching to the natives the advantages they would have if the foreign yoke which they feel is oppressing them were removed.

Filipino laborers are sailing for the Hawaiian Islands where they hope to take the place of strikers on the sugar plantations. The planters are anxious to try out the new-comers and hope that relief from their present dilemma will come thru them.

If the arrangements under consideration between a developing company and Venezuela, are agreed to by the company large mineral deposits will soon be opened up and a controversy of 26 years standing will be ended.

The law passed to prohibit foreigners doing coastwise trade in Canada is now in operation and already old boats as well as many new ones have been put into commission along the coast of Halifax. A pitched battle between the prison

authorities and prisoners at Vilna, Russia, resulted in the killing of 11 men.

Don Carlos, the pretender to the Spanish throne, recently underwent an operation that was believed to be fatal, but now there is hope for his recovery.

National.

Fifteen thousand men employed in the plant of the American Sheet and Tin Plate Company, at Sharon, Pa., went out on strike last week.

Judge Landis in the federal court, at Chicago, sentenced Max Goodman, found guilty of selling oleomargarine for butter, to serve two years in the federal prison at Fort Leavenworth, Kan.

The wages of 7,000 employees of the Pennsylvania Steel company, at Steelton, Pa., have been restored to the scale existing before the 10 per cent reduction last April. Other manufacturing concerns have announced similar action. In some instances an increase in wages has been made, while a number of plants which have been idle are reported to be making preparations to start up during the early part of the present month.

Absolute divorce on the grounds of desertion has been granted Mrs. Elizabeth Tucker, formerly Dolly Logan, daughter of Gen. John A. Logan, from William F. Tucker, U. S. A., resigned.

It is intimated that the interior department is about to discharge a number of Indian agents. Irregularities in their work is the cause.

The grand army of the republic unveiled a statue of Dr. Benjamin Franklin Stephenson in Washington, July 2. President Taft was one of the speakers.

The ruling party of Cuba has decided to pass a lottery bill to provide funds for the government. The budget, as reported out by the committee, will be rushed thru without amendment.

Experiments were recently completed at Amherst college which showed that a person could comfortably live a full month on one dollar's worth of food, and work. The experiment was tried upon a number of students. The cost averaged 4½ cents per day per student.

State.

The anti-tuberculosis legislation enacted by the recent legislature went into effect with the beginning of this month. The law provides for the reporting of all cases of tuberculosis in the state of Michigan within 24 hours after the knowledge of such case comes to the attending physician, with penalties imposed for the failure to make such reports. It declares tuberculosis to be an infectious and communicable disease and requires the disinfection of premises where persons having open tuberculosis have lived and the prevention of the occupancy of such premises until duly disinfected by the local board of health in accordance with methods indorsed and recommended by the State Board of Health. The local health officer is to direct the disinfection of such premises. It also provides for the placarding of infected apartments or premises with the following: "Tuberculosis is a communicable disease. These apartments have been occupied by a consumptive and may be infected. They must not be occupied until the order of the health officer directing their disinfection or renovation has been complied with. This notice must not be removed under the penalty of the law except by the health officer or other duly authorized official." It also provides for a fine for the failure to carry out the regulations of the health officer. It also provides for the protection of the patient's family by means of proper instruction concerning the prevention of the disease given either by the attending physician or by the local health officer. Circulars of information are to be provided by the State Board of Health. The law also aims to prohibit the carelessness of persons having tuberculosis.

According to the report of Adjutant General Wyckoff, of Lansing, there are in Michigan 10,222 members of the G. A. R., belonging to 213 posts. The net loss during the year by death has been 437 members, and five posts with 468 members have been mustered out.

Under the Flowers act passed by the legislature the governor was directed to name a commission on uniform laws among the states with reference to the subjects of marriage and divorce, insolvency and the inheritance laws. As such commission the governor has named George W. Bates, of Detroit, L. C. Fyfe, of St. Joseph, and Cyrenius P. Black, of Lansing. The act directs the commissioners to confer with representatives of other states and then submit a report and recommendation to the next legislature. No salary is allowed the members but they may draw not to exceed \$200 a year for traveling expenses.

The public domain commission provided for at the recent session of the legislature has been completed. It consists of Secretary of State Martindale, Auditor General Fuller, Land Commissioner Russell, Regent Junius E. Beal, of the University of Michigan, Hon. A. J. Doherty, member of the state board of agriculture, and Hon. William Kelley, member of the board of control of the Michigan College of Mines.

CROP AND MARKET NOTES.

Osceola Co., June 26.—Fine growing weather the last few weeks, very warm the last ten days, which has helped everything along, especially the corn, which is looking healthy but a little backward; cutworms are working a good deal in some fields. Potatoes are appearing above ground and the bugs are right on time. Oats, hay and pastures are looking good, but need rain very soon. Wheat and rye have improved considerably the last month. About the same acreage of cucumbers grown for the pickle factory as last year. Cattle are looking good but good beef cattle are picked up pretty close; good beefs bring about \$4 per 100. Good hogs are scarce and pigs are not very plentiful.

Butter 16c per lb.; butter-fat, 24½c per lb.; eggs, 18c per doz.

Eaton Co., July 1.—The finest kind of growing weather—hot days and nights—and corn is just booming. Cultivators are busy in the corn, potato and beet fields. Bean planting was late, and few are large enough to cultivate. With much of this sort of weather it will require quick work to get the hay taken care of before harvest begins. Wheat and rye are looking well, tho there is not much of the former grown here. The present high price of wheat, if it holds out until fall, will probably result in more being grown. Sugar beets are small, owing to the lateness of planting. Appearances would indicate that there will be a bumper crop of timothy hay, and clover has also made a good growth. Haying will be at least two weeks late this year. There is an extra fine crop of strawberries, and they are selling at 6@7c. There is a good crop of cherries, and the prospect for apples looks good, tho the fruit is dropping badly from unsprayed trees. Wheat lower, \$1.40@1.42; potatoes down to 65@75c; oats, 55c; corn, 70c; rye, 80c; butter, 16@18c; eggs, 19@22c; other prices unchanged.

Emmet Co., June 30.—But little rain has fallen during the month, not enough to promote a good growth of grass. The hay crop will be light and, unless rains come soon, the growth of straw will be short. The warm weather is very advantageous to corn and potatoes and both crops are making a good growth where properly tended. Owing to the dry weather the strawberry crop promises to be a short one.

Mecosta Co.—Extraordinarily good growing weather marked close of June—warm weather with occasional showers which are rushing the crops. Indications point to a good fruit crop with the exception of winter apples. Strawberries are a good crop. A good hay crop will be harvested here. Old hay practically all fed out. Eggs, 18c per doz; butter, 20c per pound.

Saginaw Co.—The beginning of July found conditions wonderfully improved, considering the spring outlook. Almost perfect weather facilitated the fitting of ground and getting in of the delayed crops. Corn, beets and beans that went in early in June, were up and ready to cultivate a very few days after planting. Oats coming on well; seed beans selling above the two-dollar mark encouraged liberal planting. A generous acreage of cucumbers were planted in spite of some firms, because of over-supply, contracting for only larger sizes. Horses scarce and high in price. Milch cows bringing highest prices known, but few for sale.

AT MICHIGAN FAIRS.

We want a representative at each fair held in Michigan and adjoining states. We pay a liberal commission to solicitors. Experienced solicitors desired but experience is not necessary. Write at once for terms, etc. Address the Michigan Farmer, Detroit, Mich.

Michigan Fairs.

Michigan State, Detroit, Sept. 2-10.
West Michigan, Grand Rapids, Sept. 13-17.
Allegan County, Allegan, Sept. 21-24.
Alpena County, Alpena, Sept. 30-31.
Armada Fair, Armada, Oct. 6-8.
Grand Traverse Region Fair, Traverse City, Sept. 7-10.
Barry County, Hastings, Sept. 23 to Oct. 1.
Bay County, Bay City, Sept. 14-17.
Calhoun County, Marshall, Sept. 14-17.
Caro Fair, Caro, Sept. 14-18.
Charlevoix County, East Jordan, Sept. 28-30.
Clinton County, St. Johns, Sept. 28 to Oct. 1.
Croswell Fair, Croswell, Sept. 22-24.
Cass City Fair, Cass City, Sept. 29 to Oct. 1.
Deckerville, Deckerville, Sept. 14-16.
Eaton County, Charlotte, Sept. 21-24.
Flint River Valley, Burt, Sept. 21-23.
Fowlerville Fair, Fowlerville, Oct. 5-8.
Gratiot County, Ithaca, Aug. 31 to Sept. 3.
Hillsdale County, Hillsdale, Sept. 27 to Oct. 1.
Howard City Fair, Howard City, Aug. 31 to Sept. 3.
Huron County Fair, Bad Axe, Oct. 5-8.
Imlay City Fair, Imlay City, Oct. 5-7.
Kalamazoo and So. Mich., Kalamazoo, Aug. 30 to Sept. 3.
Lenawee County, Adrian, Sept. 20-24.
Marquette County, Marquette, Sept. 6-10.
Midland County, Midland, Sept. 14-17.
Milford Fair, Milford, Sept. 28 to Oct. 1.
North Branch Fair, North Branch, Sept. 22-24.
Northeastern Industrial, Flint, Sept. 21-24.
Otsego County, Gaylord, Sept. 14-17.
Osceola County, Ewart, Sept. 14-17.
Ottawa-West Kent, Berlin, Sept. 21-24.
Tri-County, Lake Odessa, Sept. 7-10.
Tri-County, Reed City, Sept. 21-24.
Tuscola County, Vassar, Sept. 29 to Oct. 1.
Arenac County, Standish, Sept. 23-25.
Oceana County, Hart, Sept. 21-24.
West Allegan-South Ottawa, Holland, Sept. 21-24.

State Fairs and Expositions.

Michigan—Detroit, Sept. 2-10.
Indiana—Indianapolis, Sept. 6-10.
Ohio—Columbus, Aug. 30 to Sept. 3.
Illinois—Springfield, Oct. 1-9.
Kentucky—Louisville, Sept. 13-18.
Pennsylvania—Bethlehem, Sept. 7-10.
New York—Syracuse, Sept. 13-18.
Canadian National Exposition—Toronto, Aug. 28 to Sept. 13.
Iowa—Des Moines, Aug. 27 to Sept. 3.
Wisconsin—Madison, Sept. 13-17.
Minnesota—Hamline, Sept. 6-11.
International Live Stock Exposition—Chicago, Nov. 28 to Dec. 5.
American Royal Live Stock Show—Kansas City, Oct. 11-16.
National Corn Exposition—Omaha, Dec. 6-18.



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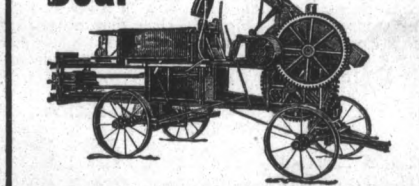
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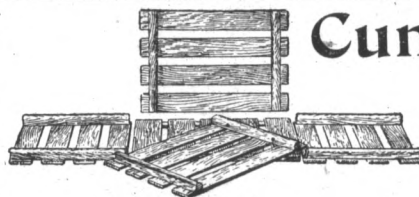
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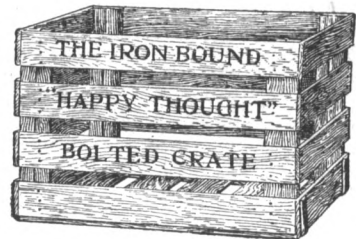
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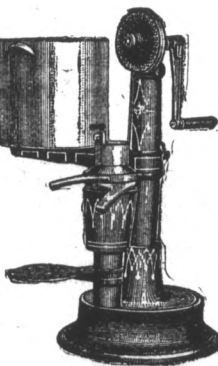
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MARKETS

DETROIT WHOLESALE MARKETS.

July 7, 1909.

Grain and Seeds.

Wheat.—The receipts of new wheat have not affected cash sales of the grain but the prices for futures were given a dip downward by the heavy offerings of the new crop at southwestern points. The harvesting is beginning in northern states, some reapers being already at work in Michigan, and everywhere, with perhaps the single exception of Ohio, where the state report is favorable to the bulls, the result is encouraging to those who desire lower values. Farmers in sections where threshing is in progress are getting the crop to the markets as fast as possible that they might share the advantages of the present situation. Foreign markets are lower, being influenced by reports from the country and from Russia where the crop is also showing up well. Michigan fields are ripening fast and the cool weather the past few days is aiding the plants in producing good plump kernels. One year ago the price paid for No. 2 red wheat was 92c per bu. Quotations for the week are:

	No. 2	No. 1	No. 3	Red.	White.	Red.	July.	Sept.
Thurs.	1.40	1.40	1.37	1.16 1/2	1.12			
Fri.	1.40	1.40	1.37	1.15 1/2	1.11 1/2			
Sat.								
Mon.								
Tues.	1.40	1.40	1.37	1.14	1.08 1/2			
Wed.	1.35	1.35	1.32	1.15 1/2	1.10 1/2			

Corn.—The downward trend of prices in this department is due to the slump in wheat values and to the good weather conditions over a large part of the corn belt. These conditions caused a break of from 1 1/2 to 3 1/2 c in the Chicago market on Tuesday and on the same day a decline of 1 1/2 cents per bushel on the local market. Farmers are getting the fields in good condition before the late hay crop is ready to go in and if the fall should be favorable there is no reason why a good crop will not be harvested. The acreage in Michigan has been reduced by the late rains, many fields being planted to beans instead. One year ago the price paid for No. 3 corn was 74 1/2 c. Quotations for the week are:

	No. 3	No. 3	Yellow.
Thursday	75 1/2	76 1/2	
Friday	75	76	
Saturday			
Monday			
Tuesday	73 1/2	74 1/2	
Wednesday	73	74	

Oats.—Oats did not feel the bearish effect of the weather conditions to the extent that corn and wheat did since the prospects are less favorable for a normal crop. Damage by storm in southern Illinois was reported Tuesday. The local market received rather heavy offerings the past week but buyers are inclined to consider the market firm. Demand is fair. One year ago the price paid for No. 3 oats was 56c per bu. Quotations for the past week are:

	No. 3	White.	Sept.
Thursday	56 1/2	44 1/2	
Friday	56	44	
Saturday			
Monday			
Tuesday	54	42 1/2	
Wednesday	53	43 1/2	

Beans.—Cash beans suffered a decline of 5c last week while October options advanced 2c. The interest is practically all centered in the future deal. The acreage has been somewhat increased by planting to beans many fields that were intended for corn, owing to the lateness of the season. The following are the quotations for the week:

	Cash.	Oct.
Thursday	\$2.50	\$2.02
Friday	2.50	2.02
Saturday		
Monday		
Tuesday	2.45	2.04
Wednesday	2.45	2.04

Cloverseed.—There was little dealing in October seed the past week but traders were active with the March option. Prices are on about last week's level. The conditions do not look promising for the coming crop. Quotations are as follows:

	Oct.	March.
Thursday	\$6.95	\$7.10
Friday	6.95	7.10
Saturday		
Monday		
Tuesday	6.95	7.10
Wednesday	6.95	7.10

Rye.—This market is easy with quotations 3c lower than a week ago. The selling quotation for cash No. 2 this week is 86c per bu.

Visible Supply of Grain.

	This week.	Last week.
Wheat	9,756,000	11,280,000
Corn	3,210,000	3,374,000
Oats	6,281,000	6,287,000
Rye	157,000	170,000
Barley	649,000	697,000

Flour, Feed, Provisions, Etc.

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

Clear	\$6.75
Straight	3.85
Patent Michigan	7.10
Ordinary Patent	6.95

Hay and Straw.—Market for hay is lower. Straw steady. Carlot prices on track are: No. 1 timothy, new, \$13.50 @14; No. 2 timothy, \$12.50 @13; clover, mixed, \$12 @12.50; rye straw, \$11; wheat and oat straw, \$9 per ton.

Feed.—Lower. Bran, \$28 per ton; coarse middlings, \$29; fine middlings, \$31; cracked corn and coarse corn meal, \$31 @32; corn and oat chop, \$29.

Potatoes.—The old potato deal is practically of the past. Attention is now given to the southern stock which is

being offered on the market here liberally. New potatoes from the south are quoted at \$2.75 @3 per bbl.
Provisions.—Family pork, \$22 @23; mess pork, \$21; light short clear, \$21; heavy short clear, \$23.50; pure lard, 12 1/2 c; bacon, 15 1/2 c; shoulders, 11c; smoked hams, 14c; picnic hams, 10 1/2 c.

Dairy and Poultry Products.

Butter.—The week saw a general improvement in the butter market. Creamery goods advanced here in harmony with the better prices prevailing at Elgin. Dairy goods are steady. Quotations are: Extra creamery butter, 25 1/2 c; dairy, 19 1/2 c; packing, 18c per lb.

Eggs.—Price for regular receipts is a fraction of a cent higher than last week. The offerings have been small and the demand steady. Firsts, case count, cases included, are quoted at 20 1/2 c per doz.

Poultry.—This deal is very quiet and steady with offerings limited. The following quotations rule: Hens, 12 @13c; roosters, 9 @10c; ducks, 14 @15c; geese, \$ @9c; turkeys, 16 @17c; broilers, 21 @22c.

Cheese.—Michigan flats, new, 13c; York state, 16 1/2 c; limburger, fancy old, 17c; new, 14c; schwitzer, fancy old, 20 @21c; brick cream, 15c per lb.

Fruits and Vegetables.

Onions.—Bermudas, \$1.25 per crate.
Strawberries.—There has been a large falling off in receipts the past week. The demand has been active and prices are double those of seven days ago. Home-grown stock now being quoted at \$3 @4.50 per bu.

Gooseberries.—Per bu., \$1.50 @2.
Cherries.—Good demand and firm. Sour now quoted at \$2 @2.25 per bu.

Raspberries.—Market continues firm with a good demand. They are held firmly at \$3.50 per 24-qt. case for both red and black.

Blackberries.—Firm at \$3.50 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.

Wheat is off 5c and stands at \$1.40 this week. Other grains unchanged. Dairy butter is up 1c, creamery 1/2 c. The egg market is unchanged. Dressed hogs are steady at 9 1/2 c. The poultry market is easier, broilers of 1 1/2 to 2 lbs. bringing 19 @21c. The strawberry season is nearly over, prices Tuesday morning for good stock ranging from \$1.75 @2. Red currants are now on, bringing \$1.25 @1.50 per 16-qt. crate; gooseberries, 90c @1. Sour cherries are in liberal supply, bringing 75 @85c per half bushel, sweet cherries \$1.50. New peas are worth 80 @85c; string beans, \$1 @1.75; new cabbage, 3 @3 1/2 c per lb.; summer squash, 4 @5c per lb. Homegrown new potatoes are due but have not yet arrived.

Quotations follow:
 Grains.—Wheat, \$1.40; corn, 75c; oats, 57c; buckwheat, 60c per bu; rye, 80c.

Beans.—Machine screened, \$2.25.

Butter.—Buying prices, Dairy, No. 1, 19 @20c; creamery in tubs, 25c; prints, 25 1/2 c per lb.

Cheese.—Michigan full cream is selling at 16 @16 1/2 c per lb; brick, 17c; Swiss, 17c; limburger, 17c.

Eggs.—Case count, 18 1/2 @19c.

Cherries.—Sweet, \$1.50 @1.75 per bu; sour, 75 @85c per case.

Michigan Strawberries.—\$1.50 @2 per 16-qt. case.

Cattle.—Cows, \$2.50 @4 per cwt; steers and heifers, best quality, 3 @5 1/2 c; dressed mutton, 9 @10c; dressed veal, 6 @9c; dressed beef, cows, 5 @6 1/2 c; steers and heifers, 7 1/2 @9 1/2 c.

Hogs.—Dressed, 9 1/2 c.

Live Poultry.—Fowls, 10 @12c; roosters, 7 @8c; turkeys, 17 @18c; broilers, 1 1/2 to 2 lbs., 19 @21c; spring ducks, 15 @17c.

New York.

Butter.—Western factory firsts, 18 @21c; creamery specials, 26 @26 1/2 c.

Eggs.—Firm. Western firsts to extras, 23 @23 1/2 c; seconds, 20 @21c per doz.

Poultry.—Alive, steady. Western chickens, broilers, 21 @22c; fowls, 15 1/2 c. Dressed, steady. Western broilers, 18 @23c; fowls, 14 @15c per lb.

Grain.—Wheat, No. 2 red, \$1.45 per bu; corn, No. 2, 78 1/2 c; oats, mixed, 58c.

Chicago.

Wheat.—No. 2 red, \$1.35; July, \$1.13 1/2; Sept., \$1.07 1/2.

Corn.—No. 3, 69 1/2 @70 1/2 c; July, 67c; Sept., 64c.

Oats.—No. 3 white, 45 1/2 @48 1/2 c; July, 47 1/2 c; Sept., 41 1/2 c.

Butter.—Steady. Creameries, 22 @25c; dairies, 20 @23 1/2 c.

Eggs.—Steady to a cent higher. Firsts, 20 1/2 c; prime firsts, 21c per doz.

Boston.

Wool.—The market is not as active as it was a few weeks back but more trading is being done than is customary at this season of the year. The demand has improved over last week and sales are being made at unusually high prices—some 3/4 blood from Ohio sold for 37c the past week while medium grades were running at high figures. Fine pulled California wools were changing hands at 65 @70c. In foreign wools and other domestic kinds the dealing has been quite active. Mills are eagerly looking for stock to put in store, and the cloth market is showing such improvement as to urge the manufacturers to invest more liberally than they did a year ago.

Elgin.

Butter.—Market firm at 25 1/2 c per lb., which is an advance of 1/2 c over the previous period.

THE LIVE STOCK MARKETS.

Buffalo.

July 5, 1909.

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

Receipts of sale stock here today as follows: Cattle, 190 loads; hogs, 9,000; sheep and lambs, 3,500; calves, 1,600.

There was an over supply of cattle here today and with a limited number of buyers the trade was very slow and strong quarter lower than a week ago. The medium and half fat cattle were very hard to sell as they just come in competition with the Texas, which are running pretty freely at present. We think there will be fully 40 loads of common and medium cattle left unsold tonight. Shippers must use caution in buying the medium and half fat kind from now on as we don't look for any improvement on this kind. Stock cattle also suffered a heavy decline. Fresh cows and springers sold about the same as last week.

We quote: Best export steers, \$6.50 @6.85; best 1,200 to 1,300 lb. shipping steers, \$6 @6.50; best 1,000 to 1,100 do., \$5.75 @6; light butcher steers, \$4.75 @5; best fat cows, \$4.25 @4.50; fair to good cows, \$3.50 @4; trimmers, \$2.25 @2.75; best fat heifers, \$5.50 @5.75; fair to good, \$4 @4.50; common heifers, \$3.50 @3.75; best feeding steers, 800 to 900 lb. dehorned, \$4 @4.25; 700 to 750 lb. dehorned stockers, \$3.25 @3.50; common stockers, \$3; best bulls, \$4.25 @4.50; bologna bulls, \$3.25 @3.75; best fresh cows and springers, \$4 @5; medium cows, \$3 @4; common cows, \$2 @3.

One choice heavy deck of hogs sold today at \$8.70 and another choice deck at \$8.65. Packers bot the bulk of their kind at \$8.50. The market is closing strong and we think the prospects fair for the near future.

We quote: Medium and heavy, \$8.50 @8.60; mixed, \$8.45 @8.50; best yorkers, \$8.25 @8.45; light yorkers, \$7.75 @8; pigs, \$7.75 @7.75; roughs, \$7.25 @7.30; stags, \$5.50 @6.25.

The sheep and lamb market today was fairly active at the prices and everything is sold.

We quote: Spring lambs, \$8.25 @8.50; fair to good, 7 @8; culls, \$5 @6.50; skin culls, \$4 @4.50; yearlings, \$6 @6.50; wethers, \$5 @5.15; ewes, \$4 @4.25; cull sheep, \$2 @3.50; best calves, \$8 @8.25; fair to good calves, \$6 @7.50; heavy calves, \$4 @5.

Chicago.

July 5, 1909.

Cattle. Hogs. Sheep.
 Received today 15,000 18,000 12,000
 Same day last year 11,240 29,734 13,087
 Received last week 43,391 96,735 72,321
 Same week last year 48,233 121,935 67,729

Cattle sold satisfactorily or otherwise last week, according to whether they were of the popular class, and while fat little yearling steers and heifers made new high records by bringing \$7.75 for 700 to 900-lb. consignments, heavy cattle, as well as coarse and medium grassy lots, had to go considerably lower. The extreme range of prices for beef steers was \$5 @7.50, with the best heavy beefs going at \$7.25, and steers sold chiefly at \$6.10 @7.10. The market is in a peculiar condition, and owners of fat little yearlings are making big profits. With cows and heifers it was the same as with steers, grassy kinds reaching a still lower level, while the best heifers went around \$6 @7. Canners and cutters were in limited request at \$2 @3.50, while bulls were salable at \$3 @5.25. Packers received a great many Texas cattle from other western markets, and these made a poor outlet for grassy natives. Distillery-fed steers sold freely at \$6.70 @7.15, but the season for these is nearing a close. Exporters bot a limited number of good cattle around \$6.50 @6.80, and there was a moderate eastern shipping demand for cattle, the general requirements of the trade being only fair, and such firmness as was shown was due to the unusually small receipts as compared with recent years at corresponding periods. Calves had a fair demand at \$3 @7.25 per 100 lbs., and milkers and springers sold fairly at \$25 @55 per head. Little was done in stockers and feeders, prices 15 @25c lower, with sales at \$3 @5.25. d buyers mostly refusing to pay over \$5 for feeders or more than \$4.50 for the better grade of stockers, altho a few sold close to \$5.

Independence Day sees light receipts of all kinds of live stock, and yet today's cattle market is not active, and while fat little yearlings are going at steady prices, other kinds of cattle are slow and largely 10c lower. Nebraska cattle were numerous.

Hogs were marketed very sparingly most of the past week, owners holding on for full prices, and good buying by local butchers and eastern shippers caused several upward turns, followed by the customary reactions. Shippers and local speculators took most of the best heavy hogs, paying the highest prices, and heavy laid hogs went at a big premium over prices paid for comparatively light weights, as there were not enough of the former class offered. Still there has been a good gain in the average weight of the receipts, the recent average standing at 222 lbs., as against 216 lbs. a year ago, and 236 lbs. two years ago. The recent average was the heaviest seen since September, 1908, when it was 224 lbs. The surroundings of the market have not changed, and high prices are practically assured owing to the serious eastern and western shortage. Grassy hogs are bad sellers, altho even these look high. As fast as the hogs are ready they should be shipped to market. The meager Monday supply today caused a quick rise of 10 @15c, with new high records, hogs selling at \$7.25 @8.30. Stags sold at \$8.30, boars at \$5.25 @6 and throw-outs at \$3 @5.25.

Sheep are now being marketed much more freely from the western ranges, the greater part coming from Idaho, Utah, Washington, Oregon and Men-

tana. Quality has been lacking frequently, altho it was pretty good at times, and the big declines in prices caused general disappointment to owners. Offerings adapted for feeders had a good outlet at ruling prices, and there was a lively call for breeding ewes at \$5 @6 per 100 lbs. for shipment to Kentucky and West Virginia. Spring lambs arrived fairly and did not decline as much as sheep, being in much better request. As usual, the packers received large supplies of spring lambs from the south. Clipped lambs are now yearlings. There is a steady market today, and three double-decks of Idaho range lambs brot \$8.65, the record high price. Native lambs sold at \$4.50 @8.50, native ewes at \$2 @4.25, breeding ewes at \$4.75 @6, native wethers at \$4.15 @4.75, native yearlings at \$5 @6 and rams at \$2 @3.25. Range feeder lambs were salable at \$4.23 @6.50, feeder wethers at \$3.50 @4, feeder yearlings at \$4 @5 and feeder ewes at \$2.50 @3.15.

Horses are being marketed in moderate numbers, and there is the usual fair summer trade, with prices ruling on an average \$10 @20 per head under the spring figures. Sales worthy of especial mention include those made the other day by an Iowa shipper, who topped the market with a load of draft horses, a black Percheron mare weighing 1,860 lbs. going at \$325 to a buyer from Pennsylvania and three fancy 1,700-lb. gray Percheron geldings being sold to Armour & Co. for a total of \$825. Ice and express companies are placing fair orders in the market for 1,400 to 1,500-lb. chunks and have paid \$190 @250, with a very good grade selling at \$160 @185. Drivers are having a moderate sale at \$150 @300, and there is an occasional sale at \$350 or higher.

LIVE STOCK NOTES.

The summer hog "run" will be greatly deficient, both in quantity and quality, as a result of the persistent marketing of pigs and light-weight hogs earlier in the season. At that time the packers refused to pay the usual premium for matured hogs, but now they are confronted with a real shortage of lard and dwindling stocks of meats in their cellars, and lard has been selling on the Chicago Board of Trade at the highest prices seen since 1893. The consumption of lard has been increased by the pure-food law, while its production has been much lowered thru the high price of corn. The hogs now being marketed are not the kind that yield well of either lard or mess pork, and this puts a big premium on heavy hogs. Stocks of provisions in Chicago warehouses on July 1 were down to 123,182,956 pounds, compared with 134,812,956 pounds a month earlier and 150,018,684 pounds a year ago.

Live stock dealers who have returned from recent trips over Illinois and Iowa report meager supplies of choice, heavy cattle left in feed lots, stock feeders having shipped most of such holdings to market to avoid the hot weather discrimination shown by buyers against such beefs. Warm weather is unfavorable for the sale of long-fed heavy cattle, and they are even slower than usual this season, the popular taste being more strongly than ever for light cuts of beef. The southwestern feeding sections have been furnishing the Chicago market with the greater share of the heavy dry-fed steers, Nebraska, Kansas and Missouri being the states where these cattle are chiefly fed. Of late prime little yearlings have sold at a substantial premium, and while choice heavy cattle went at \$7 @7.25 per 100 lbs., prime yearlings found quick sales at \$7.10 @7.50, a recent sale being made of four car loads of 701-lb. steers from Nebraska at \$7.40. Holding down supplies has put prices much higher for good cattle, and the best distillery-fed steers have sold up to \$7.15.

Peter McGregor, senior member of the McGregor Land and Live Stock Company, of Washington, reports sales of \$40,000 worth of wool and sheep from 11,000 head. Wethers were sold at \$4.25 per head and wool at 17 cents a pound. R. G. Lyle, a farmer of eastern Washington, owns 120 sheep, of which 115 are ewes, and these have lambs, making the remarkable increase of 130 per cent. No wonder he is sure that sheep pay better than any other kind of live stock, subsisting largely on what would be wasted in the spring, summer and autumn, while he feeds them on alfalfa hay during the winter. He has found the industry a good paying one during the five years he has been engaged in it.

United States Rubber Co.

42 Broadway, New York, July 1, 1909.

The Board of Directors of the United States Rubber Company has this day declared from its net profits a quarterly dividend of Two Per Cent. on the First Preferred Stock (including all outstanding old "Preferred" Stock), and a quarterly dividend of One and One-half Per Cent. on the Second Preferred Stock of this Company, to Stockholders of record at 3 p. m. on Thursday, July 15th, 1909, payable, without closing of the Transfer Books, July 31st, 1909.

JOHN J. WATSON, Jr., Treasurer.

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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 8, 1909.

Cattle.

Receipts, 1,095. Market steady at last week's prices; trade active on good stuff. We quote: Extra dry-fed steers and heifers, \$5.50@6; steers and heifers, 1,000 to 1,200, \$5@5.25; 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@3.90; 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, \$2.50@3.

Roe Com. Co. sold Mich. B. Co. 6 heifers av 721 at \$3.25; to Rattkowsky 5 butchers av 486 at \$3; to Jonghin 6 cow and bulls av 905 at \$3.25, 4 bulls av 810 at \$3.20; to Newton B. Co. 3 cows av 1,100 at \$4.40; to Cook 13 steers av 861 at \$5.25, 3 do av 890 at \$5.50; to Caplis 3 cows av 1,026 at \$3.50, 4 do av 1,100 at \$4, 2 butchers av 390 at \$3, 5 do av 700 at \$3.90; to Gerish 17 do av 780 at \$4.75.

Bishop, B. & H. sold Mich. B. Co. 4 steers av 915 at \$5.50, 3 heifers av 793 at \$3.80, 2 bulls av 1,060 at \$3.80, 2 steers av 1,060 at \$5.50, 6 butchers av \$3.3 at \$5, 1 cow weighing 980 at \$3.25, 2 bulls av 1,210 at \$3.75; to Goose 1 cow weighing 1,090 at \$3.50; to Kamman B. Co. 3 heifers av 670 at \$4.10; to Sullivan P. Co. 7 butchers av 480 at \$3.30, 4 cows av 920 at \$3.35, 3 bulls av 773 at \$3.35; to Goose 12 butchers av 340 at \$3, 14 do av 370 at \$2.75; to Bresnahan 1 cow weighing 950 at \$2.25; to Austin 30 stockers av 471 at \$3.40, 18 do av 450 at \$3.35; to Mich. B. Co. 16 steers av 930 at \$5; to Greene 10 heifers av 784 at \$4.30; to Regan 8 butchers av 637 at \$3.65; to Kamman B. Co. 1 steer weighing 890 at \$3.65; to Jonghin 2 bulls av 770 at \$3.50, 1 cow weighing 1,000 at \$3.10, 2 heifers av 850 at \$3.25; to Newton B. Co. 2 steers av 1,160 at \$6; to Thorborn 16 stockers av 446 at \$3.40.

Spicer, M. & B. sold Mich. B. Co. 6 butchers av 896 at \$3.75, 19 steers av 801 at \$5, 3 cows av 933 at \$3.75, 3 bulls av 733 at \$3, 16 butchers av 630 at \$3.75; to Brown 1 stocker weighing 420 at \$3; to Kamman 3 cows av 840 at \$3, 1 do weighing 920 at \$3, 2 bulls av 700 at \$3.50; to Goose 7 heifers av 411 at \$3.25; to Sullivan P. Co. 1 bull weighing 830 at \$3.75, 2 cows av 900 at \$4; to Goose 5 heifers av 392 at \$3.25; to Rattkowsky 12 butchers av 648 at \$4; to Bresnahan 2 cows av 760 at \$2.25; to Mich. B. Co. 8 steers av 887 at \$5, 14 do av 815 at \$5, 2 do av 875 at \$4, 2 heifers av 790 at \$3, 2 bulls av 1,100 at \$3.75; to Fry 12 butchers av 775 at \$4.60, 8 do av 725 at \$4.40; to Hammond, S. & Co. 1 cow weighing 1,480 at \$4, 3 do av 940 at \$3.85.

Haley sold Schlischer 2 butchers av 475 at \$3.35, 3 do av 590 at \$3.75.

Same sold Greene 3 stockers av 626 at \$3.80, 1 bull weighing 540 at \$3.30.

Groff sold Thompson 2 cows av 915 at \$2, 2 heifers av 665 at \$3.50.

Haley sold same 11 butchers av 673 at \$4.25.

Allen sold Thorborn 20 stockers av 475 at \$4.25.

Wagner sold Bresnahan 9 butchers av 748 at \$4.25.

Johnson sold Marx 6 steers av 890 at \$4.75, 7 cows av 923 at \$3.65.

Haley sold Kamman 4 butchers av 600 at \$3.55, 11 do av 780 at \$4.50, 3 do av 866 at \$4.90, 1 cow weighing 920 at \$3, 1 do weighing 1,130 at \$3.75, 1 do weighing 1,180 at \$3.75.

Haley sold Sullivan P. Co. 1 bull weighing 650 at \$3, 2 do av 875 at \$3.25, 10 butchers av 640 at \$3.75.

Lovewell sold same 17 cows av 812 at \$4, 2 do av 1,010 at \$3.

Jedele & Kendal sold same 6 cows av 1,028 at \$3.60, 3 heifers av 780 at \$4.60, 2 cows av 820 at \$3.60.

Haley sold same 3 steers av 913 at \$5.25, 1 bull weighing 1,330 at \$4.

Groff sold same 2 do av 940 at \$3.50.

Veal Calves.

Receipts, 769. Market 25@50c higher; best, \$7.50@8; others, \$4@7; milch cows and springers steady.

Lovewell sold Sullivan P. Co. 11 av 150 at \$7.50.

Miller Bros. sold same 12 av 160 at \$7.75.

Kendall sold same 18 av 150 at \$7.75.

Morris sold same 6 av 125 at \$5, 27 av 160 at \$7.50.

Wagner sold Newton B. Co. 3 av 160 at \$5, 26 av 150 at \$7.50.

Groff sold Fitzpatrick 21 av 130 at \$7.25.

Spicer, M. & B. sold Mich. B. Co. 5 av 160 at \$7.60, 8 av 150 at \$7.50, 1 weighing 190 at \$5, 3 av 170 at \$7.35, 1 weighing 140 at \$4, 1 weighing 110 at \$7.25; to Caplis 5 av 205 at \$5, 10 av 157 at \$7.25; to Burnstine 1 weighing 170 at \$5, 9 av 110 at \$7.25, 3 av 205 at \$5, 12 av 160 at \$7.50, 11 av 150 at \$7.40.

Roe Com. Co. sold Parker, W. & Co. 3 av 200 at \$5, 10 av 165 at \$7.25; to Sullivan P. Co. 12 av 155 at \$7.75, 1 weighing

ing 160 at \$6; to Mich. B. Co. 27 av 150 at \$7.75, 1 weighing 140 at \$6; to Goose 5 do av 68 at \$6.50.

Sandall & T. sold Friedman 3 av 155 at \$7.

Haley sold Mich. B. Co. 3 av 140 at \$5, 22 av 155 at \$7.50, 13 av 140 at \$7.40.

Haley sold Caplis 19 av 135 at \$7.15.

Bishop, B. & H. sold Parker, W. & Co. 24 av 155 at \$7.50, 5 av 150 at \$4, 23 av 150 at \$7, 2 av 100 at \$7, 11 av 140 at \$7.25; to Fitzpatrick Bros. 1 weighing 100 at \$5, 11 av 140 at \$7.75, 9 av 170 at \$7.50, 2 av 300 at \$5, 9 av 300 at \$7.50, 2 av 300 at \$5; to Hammond, S. & Co. 3 av 150 at \$5, 22 av 160 at \$7.75, 5 av 150 at \$7.75, 4 av 150 at \$6, 11 av 140 at \$7.75; to Mich. B. Co. 18 av 145 at \$7.35.

Sheep and Lambs.

Receipts, 1,179. Good lambs 25c higher; yearlings, common sheep 50c lower.

Best lambs, \$8@8.50; fair to good lambs, \$7@7.50; light to common lambs, \$5@7; yearlings, \$4@6; fair to good sheep, \$3.50@4.50; culls and common, \$2.50@3.

Bishop, B. & H. sold Sullivan P. Co. 5 sheep av 83 at \$4, 35 lambs av 63 at \$8.25, 19 do av 75 at \$7; to Newton B. Co. 16 do av 65 at \$7.50, 3 sheep av 120 at \$3; to Fitzpatrick Bros. 16 do av 120 at \$3.50, 5 lambs av 68 at \$8.50; to Newton B. Co. 1 buck weighing 130 at \$4, 14 lambs av 80 at \$6.50; to Barlage 11 do av 58 at \$7.50; to Fitzpatrick Bros. 23 do av 70 at \$8.25, 3 sheep av 100 at \$4, 1 buck weighing 160 at \$2, 5 sheep av 120 at \$4, 50 lambs av 65 at \$8.25.

Spicer, M. & R. sold Mich. B. Co. 38 yearlings av 90 at \$6, 3 lambs av 65 at \$7, 7 sheep av 108 at \$3.75, 3 do av 88 at \$2.50, 6 do av 105 at \$3.25; to Sullivan P. Co. 8 lambs av 68 at \$7.50.

Roe Com. Co. sold Mich. B. Co. 40 lambs av 63 at \$8; to Sullivan P. Co. 11 mixed av 88 at \$5; to Thompson 21 sheep av 105 at \$3.50, to Harland 23 lambs av 67 at \$7.75; to Thompson 4 sheep av 100 at \$3, 20 lambs av 65 at \$5; to Mich. B. Co. 7 sheep av 110 at \$4.

Sandall & T. sold Mich. B. Co. 4 sheep av 78 at \$4.50.

Gonong sold same 19 lambs av 60 at \$6.

Haley sold same 2 sheep av 180 at \$3, 9 do av 110 at \$3.50, 96 lambs av 60 at \$7.50, 19 do av 65 at \$6, 39 mixed av 70 at \$5, 25 sheep av 100 at \$4.25.

Johnson sold Newton B. Co. 1 buck weighing 150 at \$3, 14 sheep av 90 at \$4, 30 lambs av 68 at \$7.50.

Waterman sold Thompson 1 buck weighing 100 at \$2.50, 3 lambs av 65 at \$7.25, 4 sheep av 130 at \$3.50.

Wagner sold Sullivan P. Co. 5 lambs av 70 at \$8.

Morse sold Young 4 sheep av 90 at \$3.50, 11 lambs av 80 at \$7.

Hogs.

Receipts, 1,720. Market 10@15c lower than last week; grass hogs very dull, quality common.

Range of prices: Light to good butchers, \$7.50@7.75; pigs, \$6.75@7; light yorkers, \$7@7.50; stags, 1/4 off.

Bishop, B. & H. sold Hammond, S. & Co. 166 av 170 at \$7.65, 150 av 155 at \$7.60, 90 av 145 at \$7.50, 40 av 180 at \$7.70, 69 av 150 at \$7.35, 44 av 200 at \$7.75.

Same sold Newton B. Co. 10 pigs av 124 at \$7.25, 23 hogs av 160 at \$7.70.

Spicer, M. & R. sold Parker, W. & Co. 15 av 150 at \$7, 94 av 183 at \$7.50, 24 av 204 at \$7.60, 34 av 190 at \$7.80.

Roe Com. Co. sold same 77 av 191 at \$7.70, 90 av 182 at \$7.60, 78 av 183 at \$7.50, 10 av 212 at \$7.80.

Bishop, B. & H. sold Sullivan P. Co. 110 av 195 at \$7.85.

Friday's Market.

July 2, 1909.

Cattle.

The run of cattle at the Michigan Central yards Friday was very light and the few arrivals brought steady Thursday's prices. A few good steers were bot by the Sullivan Packing Co. for \$6 a hundred, which was top of the market for the week. Milch cows and springers are steady.

We quote: Extra dry-fed steers and heifers, \$5.75@6; steers and heifers, 1,000 to 1,200, \$5@5.25; 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.

Bishop, B. & H. sold Bresnahan 1 bull weighing 1,620 at \$4; to Sullivan P. Co. 5 do av 1,080 at \$3.60, 1 cow weighing 850 at \$2.75, 3 steers av 1,110 at \$5.85, 3 do av 926 at \$5.25, 1 do weighing 780 at \$4.50, 1 bull weighing 1,410 at \$4, 2 steers av 1,315 at \$6, 3 cows av 1,010 at \$3.75, 2 do av 825 at \$3.25, 1 do weighing 750 at \$2.50, 1 do weighing 920 at \$4, 2 steers av 865 at \$5.

Veal Calves.

The veal calf trade, quality considered, was steady with Thursday.

Best grades, \$7@7.20; others, \$3.75@6.75.

Bishop, B. & H. sold Markowitz 11 av 168 at \$7.20, 1 weighing 210 at \$5.

Lucke sold Parker, W. & Co. 16 av 140 at \$7.

Bishop, B. & H. sold same 6 av 150 at \$7.

Sheep and Lambs.

The sheep and lamb trade was steady with Thursday. Drovers are cautioned against buying common old sheep and grassy stuff, as no one wants them here and they are watched closely by the inspectors and quite a number are condemned by them.

Best lambs, \$8; fair to good lambs, \$6.50@7.25; light to common lambs, \$4.50@5; yearlings, \$6.75@7; fair to good sheep, \$4@4.25; culls and common, \$2.50@3.

Lucke sold Parker, W. & Co. 2 sheep

av 135 at \$3.50, 10 lambs av 60 at \$7.50, 5 do av 68 at \$6.50.

Hogs.

The hog trade was steady to strong at Thursday's prices. Grove Spencer, of Ypsilanti, had a double deck load of good ones on hand that Bishop, Bullen & Holmes sold to Parker, W. & Co. for \$7.80, which was top of market this week.

Light to good butchers, \$7.60@7.80; pigs, \$6.75@7; light yorkers, \$7.25@7.50, stags, 1/4 off.

Bishop, B. & H. sold Hammond, S. & Co. 25 av 180 at \$7.75, 150 at 195 at \$7.80, 56 av 170 at \$7.70.

Same sold Sullivan P. Co. 8 av 135 at \$7.25, 50 av 120 at \$7.

LIVE STOCK NOTES.

Live-stock arrivals at seven leading primary markets during the month of May totaled 2,896,767 head, compared with 3,292,809 and 3,232,066 head received at the same markets during May, 1907 and 1908. Of the total receipts 591,368 head were cattle; 75,575 calves; 1,698,919 hogs; 509,199 sheep, and 21,706 head horses and mules. The total number of cars used in handling this inbound movement was 51,927, compared with 60,356 and 52,990 cars reported for May, 1907 and 1908, respectively. The total inbound live-stock movement for the first five months of the year, 16,128,901 head, was below the corresponding 1907 and 1908 totals of 16,850,209 and 17,561,832 head, the largest reduction being shown in the receipts of hogs. With the exception of St. Louis all the large markets show losses in receipts for the first five months, as compared with corresponding figures for the preceding year.

Live-stock receipts at four principal Atlantic seaboard cities for the month, 677,828 head, were also below the like total for May, 1908, 707,601 head, the loss being due, however, exclusively to the smaller number of hogs received. The total receipts for the five months of the current year, 3,685,859 head, were likewise below the 1908 total of 3,981,126 head, both cattle and hog figures being lower for the five-month period than a year ago.

The shipments of packing-house products from Chicago, 176,875,044 pounds, show but a slight change from the May, 1908, record, but were 11 per cent below the May, 1907, total. As compared with the May, 1908, figures, large decreases are shown in the shipments of fresh beef, canned meats and lard, while the quantities of cured meats, pickled beef and pork shipped were larger than a year ago. The total shipments for the cumulative period ending May, 833,120,860 pounds, were about 200 million and 150 million pounds short of the corresponding 1907 and 1908 figures, mainly because of the smaller shipments of fresh beef and lard. The shipments of canned meats, 16,893,675 pounds, owing partly to the smaller export demand, show a decrease of almost 50 per cent as compared with the corresponding 1908 figures.

These hot summer days render shipments of big, heavy hogs ticklish business at the best, and where extra precautions are not adopted by country shippers heavy losses are the rule rather than the exception. Overloading cars at such a period is disastrous, and recent arrivals in Chicago and other western markets have included many dead hogs. It is a good idea to defer such shipments when it is extremely hot, and it is well to clean out cars carefully and to put in clean straw, besides hanging a lump of ice from the top of the car. The hogs should be watered often and sprinkled with a hose. When hogs climb up to \$8 per 100 lbs. they are valuable property.

Firms at the Chicago stockyards that have taken great pride in being early sellers of stock, thereby getting the full benefit of a good "fill" and avoiding a big shrink, were a good deal disappointed during recent hot days when cattle buyers held back, evidently purposely, in order to prevent sellers from getting such benefits. And this was done on days when the cattle receipts were what in recent years would have been looked upon as small, but at this time an approach to ordinarily good supplies would result in a quick slump in values. It is simply a case of beef retailing in the meat markets of the country at unusually high prices and the inability of large numbers of people to pay the figures asked.

"Bucky" lambs result in enormous losses every year to careless sheep breeders who neglect the important thing of castrating their ram lambs. More and more each year buyers discriminate against what are now to the trade as "bucky" lambs, and it seems a great pity that owners should stand in their own light, for it is no more difficult to castrate a lamb than a calf or a pig. When the lamb is trimmed it becomes much more desirable for the dressed meat trade, for the buck lambs begin to develop coarseness when two and a half months of age, and thereafter they become large and coarse in frame and very thin in flesh, causing them to be placed in the cull grade when offered in the market. The most successful breeders never fail to castrate their native lambs, knowing that in the late summer bucky lambs have to be sold at least \$1 per 100 lbs. under prices readily obtained for choice trimmed lambs.

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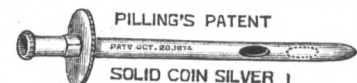
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comes from the soil; the richer the soil the more money made. No better land anywhere than Tidewater Virginia and Carolina. Fine climate with long growing seasons; three crops a year from same field. Yet lands are cheap and can be bought on easy terms—a gold mine for an industrious man. Write for booklet.

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A COW'S VALUE



DEPENS UPON HER MILK FLOW. That's a self-evident proposition; but how about it when the flow of milk ceases on account of sore or otherwise obstructed teats? Then again, how about the hard milkers? Do you not waste valuable time with them? And time is money. Remedy all this by sending for our solid coin silver milking tubes, which we will send with complete instructions to any part of the United States or Canada on receipt of price. By mail.

Prices.		Price.
length.		
1 3/4 inch, each.....		41c
2 1/4 inch, each.....		55c
2 3/4 inch, each.....		67c
3 1/4 inch, each.....		78c
3 3/4 inch, each.....		92c
4 1/4 inch, each.....		\$1.05
THE MICHIGAN FARMER, Detroit.		

GRANGE

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

THE OUTDOOR MEETINGS.

The Grange, in many country neighborhoods, has become to the social, educational and business life of the community what social clubs, fraternal societies and business men's organizations are to the towns and cities. Every Grange should be capable of assuming such leadership, and there is no season at which this function can be performed with better advantage to the Grange and to all who should be interested in its efforts to promote better agricultural conditions than during what was formerly considered the dull or inactive part of the Grange year. Outdoor meetings, variously designated as Grange rallies, field days and picnics have rapidly become popular the past few years, and such is the pleasure and benefit derived from these meetings that it is hoped no Grange in Michigan will allow the present season to pass without participating in at least one such event. State Master Hull announces that the August rallies will be conducted along the same general lines that have proven so successful in years past. A large number of able workers and speakers are at the disposal of the Granges, and while the Pomona should take the lead in the promotion of rallies and field day meetings, delay or failure on their part should not deter individual Granges from promoting and assisting in the holding of outdoor gatherings in their respective communities. Such meetings should be public in character and well advertised. The Farmer will be pleased to receive early notice of dates of all such meetings; also of Grange fairs and crop contest meetings.

OUR NEW GRANGES.

III.—The Master's Part.

The master of a new Grange usually has much to learn. This is saying nothing to his discredit, but rather increases the honor of his selection for the office, for it emphasizes the dignity and the possibilities of the new organization in which he has been made leader.

He will find emergencies where he must decide and act with promptness and firmness, yet being mindful of many persons and conditions. He will early see the need of studying how to dispatch business with due discrimination between essential and non-essential details. He will find great help in this matter by establishing the precedent of calling the Grange to order on time and by assigning much minor work to committees. By using committees, two desirable ends are attained; in the first place, specific duties are thus given certain persons to attend to, and in the second place, the Grange will usually need to give only a fraction of time to the committee's report that would be required to spend upon the whole matter.

The master's position is executive. His duty is to see that details are attended to by the proper officers or appointed persons, rather than to do them himself. The master is host of the Grange, as it were. If he cordially greets each arrival when the members are gathering and otherwise looks out for their social enjoyment and comfort, he is fulfilling the social duties of his office in spirit as well as in truth.

The wise new master will consult often with the lecturer, make helpful suggestions, lend counsel in planning work of the lecture hour and stand ready to assist in carrying it out. An attentive, sympathetic master is a lecturer's most valuable assistant in times when discussions lag and failures occur. Even in so small a matter as the calling of the roll, if the lecturer can depend upon the prompt and hearty response of the master to lead off the program, there is strength given the lecture hour by this seemingly trifling part. He will endeavor always to arrange business transactions of the Grange so as not to encroach upon a definite space of time for lecture work at each meeting. When there is initiation he will try to have a little time left for a brief program.

The new master will do well to carefully guard the Grange against encouraging foolish enterprises or endorsing impracticable schemes. Conservatism and

deliberate consideration of all projects has marked the course of this Order in which he now holds responsible office. This course no doubt accounts in large part for its perpetuity and progress. The master will desire and earnestly seek to foster trade relations in the Grange, since these advantages attract many who are not yet drawn by other features. He should be ambitious along these lines to bring benefits of financial co-operation to all the members.

Thus the master finds that his honors bring many new responsibilities.

JENNIE BUELL.

THE GRANGE IN OTHER STATES.

Oregon State Grange.

Oregon Patrons hold their state meeting during the early summer and the one recently held at McMinnville showed the organization in good condition and its members alive to the interests of the class they represent. Questions of great moment to the farmers of the state were handled in a vigorous but intelligent way which indicated that the organization is in shape to make its influence felt on matters of legislation. The Oklahoma bank guarantee law was the subject of a warm debate which ended in the executive committee being instructed to endeavor to have the matter submitted to the initiative at the next general election. The Grange went on record as vigorously opposed to the bill providing for a constitutional convention, one of the provisions of which is that the new constitution shall go into effect without being submitted to the people, which would probably mean the abatement of the present initiative, referendum and recall statute. On educational matters the Grange took advanced ground, endorsing a plan for the establishment of district training schools in connection with high schools as preparatory to entering a central normal school, and recommending ample appropriations from the state for its agricultural college. The fifth and sixth degrees were conferred upon large classes and Oregon City was selected as the next meeting place.

A New State Grange.

South Dakota organized a State Grange in April when representatives from the 16 subordinate Granges recently organized in that state met at Brookings, the seat of the state's agricultural college. Chas. B. Hoyt, of Dempster, was elected master, Mr. Hoyt having been instrumental in developing Grange interest and in getting the order planted in South Dakota. At this first meeting the sixth degree was conferred upon 45 candidates. Three Grange field meetings have since been held in the state which have been responsible for awakening the interest of the farmers to a remarkable degree. The first one was held June 4 at Brookings in connection with the annual farmers' excursion. National Master Bachelder, President Slagle of S. D. Agricultural College and Prof. Holden, the corn expert, of Iowa Agricultural College, were the speakers. The second meeting was at Wellsburg, Stanley Co., 150 miles west of Brookings, and 30 miles from a railroad station. The third was at Draper, Lyman county, 100 miles south of Wellsburg. National Master Bachelder spoke at all these meetings.

A PLEASANT GRANGE RALLY.

"And what is so rare as a day in June?
Then, if ever, come perfect days,
Then heaven tries the earth, if it be in tune
And over it softly her warm ear lays,
And whether we look, or whether we listen,
We hear life murmur, or see it glisten."

June 25th was the day chosen by Pleasant View Grange, Mecosta Co., for their rally, and the writer had been invited to address the meeting. It was, indeed, a "perfect day," and before noon a goodly number had gathered to partake of a typical Grange dinner in the woods.

Three months ago the young people of Fern Grange organized a band. They were present and contributed their full share to the success of the meeting. This band, organized for so short a time and playing so well, illustrates what might be done in many another rural community if the effort were made.

After a brief local program, Worthy Master Eugene Ladner introduced the speaker. His subject was "The Farm, the Grange, the State."

Mecosta has been a strong Grange Co. for years and we trust this rally may have contributed a little to the success of the order in that section. Three Granges were represented and good things were learned of others whose members were not present.—W. F. Taylor.

AMONG THE LIVE GRANGES.

Will Hold Fair.—Boardman Valley Grange, Kalkaska county, is arranging for a Grange fair to be held early in the fall. It has been suggested that the best of the exhibits be saved at the close of the fair and be made a part of the exhibit at the State Grange in December.

Alton Grange.—State Deputy Wilde organized a Grange at the Alton schoolhouse southwest of Ensign, Delta Co., Saturday evening, June 12, with the following officers: Master, Oscar Magnusson; overseer, Nels Johnson; lecturer, Blanche Teinert; steward, Waldemar Anderson; asst. steward, Erik Hagglad; lady asst. steward, Wilhelmina Magnusson; chaplain, Frank Burczikowski; treasurer, Joseph Teinert; secretary, Axel Magnusson; gatekeeper, Henry Hovorp; Ceres, Louisa Hagglad; Pomona, Teresa Teinert; Flora, Emma Erickson. **Emmet Co. Pomona** held a successful

meeting with Island View Grange on June 11. Its next meeting will be held with Pickerel Lake Grange, Sept. 24.

COMING EVENTS.

Pomona Meetings.

Bay Co., at Pinconning, Tuesday, July 13.
Rosford Pomona (Roscommon Co.), at Roscommon, Saturday, July 31.
Charlevoix Co., with Maple Grove Grange, Thursday, Aug. 12.

Picnics and Rallies.

Ingham Co. Pomona will hold its annual picnic at the Agricultural College, Friday, August 6.

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.

THE FARMERS' CLUB—ITS PAST, PRESENT AND FUTURE.

The Farmers' Club movement is no longer in its infancy in Michigan. Some of the pioneer organizations of the kind have been in existence in our state for nearly forty years. Our state Association of Farmers' Clubs has held its sixteenth annual meeting, and the number of local clubs in the state has gradually, though slowly increased from year to year without the impetus of paid organizers or considerable outside influence of any kind. The fact that the growth of the Farmers' Club movement in Michigan has been spontaneous, and that the organizations, both local and state, have survived a season of the greatest prosperity which the agricultural industry of the country has ever experienced is sufficient evidence of their permanence. The good which has been accomplished thru the medium of this organization cannot well be estimated. Its influence in state affairs has been potent, and its beneficial effects upon the community life where these local organizations exist has been plain, but perhaps the greatest good has been wrought in the individual members of the organization, who have benefited both economically, socially and intellectually from their membership in the Farmers' Club and the part which they have taken in its activities.

Those who are familiar with the early history of the Farmers' Club movement in Michigan will remember that the Farmers' Club which is credited with being the pioneer in this field in Michigan met for some years in the directors' room of a bank located at the county seat of one of our most prosperous agricultural counties, where prominent farmers and business men discussed affairs of mutual interest to them. Later the scope of this organization was extended, and a few others sprung up in different parts of the state, until finally these few scattering organizations were banded together into a state organization, and the movement kept growing until it reached its present proportions and became a permanent institution of recognized and undoubted value to its membership and the state at large thru the wholesome influence which the local clubs exerted in the several communities where these organizations exist and in the state at large thru the prestige given the movement by its state organization.

While Michigan is undoubtedly the pioneer state in Farmers' Club work, yet from time to time news has come to us from other states of similar organizations which are working along practically the same lines in a local way as are our local Farmers' Clubs. Some of these, we believe, have been the direct result of the work done here, which has been given publicity in other states thru the medium of the Farmers' Club Department of the

Michigan Farmer. Such reports have come to us from as far east as Maine and as far south as Virginia, while several inquiries touching the work in Michigan have come to hand from the states of the central west. If the movement proves as popular in these sections as it has in Michigan, the Farmers' Club will become one of the institutions of the country, and progressive farmers everywhere will be generally identified with an organization of this kind. One of the greatest features of the Farmers' Club is its adaptability to local conditions and needs, which a more closely bonded organization lacks. The organization may be varied and conducted to meet the varied economic, social and educational needs of the local community. There is no one to dictate with regard to its plan of organization and conduct. This fact, together with the free and open character of the meetings makes the Farmers' Club an ideal organization for the promotion of the best interests of any local community without detracting from the efficiency of the associated work, as has been clearly demonstrated in Michigan. For these reasons the future of the Farmers' Club movement is bright, not alone in Michigan, but as well in other states where the plan of organization has been introduced. It is a noteworthy fact that where the work is once established there it remains and grows. The farm communities in Michigan that are not now enjoying the benefits and pleasures to be derived from an active Farmers' Club are missing an opportunity which should not be allowed to pass. There is no better way of getting the people in any neighborhood interested in the Farmers' Club proposition, than by the holding of a picnic meeting for the organization of one, and the after harvest season is the most fitting time of all the year for such an enterprise. Try it, kind readers, if you are not already enrolled on the membership of a prosperous and progressive Farmers' Club.

CLUB DISCUSSIONS.

Organize Breeders' Association.—Primarily thru the efforts of the Grosse Ile Farmers' Club an organization of great economic import to the members of the Club, and to every resident of the island who is interested in agriculture, has been launched. This organization is to be known as the Grosse Ile Guernsey-Breeders' Association, a co-operative organization, whose aim and object will be the improvement of the cattle of the island along specific lines, and the promotion of the breed selected by common consent until all of the cattle on the island shall be of this one breed, making it, if possible, a second Guernsey Island, which shall become a recognized headquarters for this great Dairy Breed in Michigan. With the assistance of Mr. W. F. Raven, field agent of the Michigan Agricultural College in the promotion of organizations of this kind, the preliminary arrangements had already been completed by the interested members of the Farmers' Club, and after a tour of the Island in the afternoon the breeders' association was formally organized and after it was incorporated under the laws of the state, one or more pure-bred Guernsey sires of known merit will be purchased for the improvement of the cattle of the island. In the evening a public meeting was held under the auspices of the Farmers' Club, at which the possibilities of this new association were discussed by Prof. Shaw, Director of the Michigan Experiment Station and Dean of the Agricultural Department at M. A. C., Mr. Raven, field agent of the college, and I. R. Waterbury, a member of the State Board of Agriculture and Editor of the Michigan Farmer, who had been invited to attend the meeting for the purpose. These gentlemen spoke on different phases of the extension work of the college along the line of organizing co-operative breeders' associations, etc. Prof. Shaw going into different phases of experimental work at the college, Mr. Raven talking on the practical phases of the field work which he has done in organizing more than a score of similar organizations thruout Michigan, and Mr. Waterbury speaking of the attitude of the State Board in regard to this kind of extension work and from his experience as a breeder of live stock. Unfortunately, an inopportune storm limited the attendance at this meeting, but this was more than counterbalanced by the interest and enthusiasm exhibited by those who were present. The island already has a fine herd of Guernseys founded by Mr. Scott, whose superb plant was visited in the afternoon by a party including the invited guests of the Club above mentioned, as well as a number of other fine farms and points of interest on Grosse Ile, and the government work on the new channel at the Lime Kiln Crossing, just off the island. Further details of this latest work of the Grosse Ile Farmers' Club, and the benefits which will be derived from it by the residents of the Island will be given in future issues, but it is a safe prediction that the new undertaking will be successfully consummated, and that the outcome will prove a valuable object lesson to other club communities of the state, as have some of the other special features of club work undertaken by this progressive organization.

HOME AND YOUTH

THE WOMAN WHO DARED.

BY HILDA RICHMOND.

"Mrs. Rome! You don't dare to do such a thing!" cried Mrs. Gerhold with uplifted hands. "I can't believe it!"

"Yes, I do dare!" said the little woman in front of a big trunk, on her knees. "You'll see! Why shouldn't I take a vacation as well as Cousin Laura?"

"Well, there is no reason why you shouldn't, but I wouldn't dare go to visit my stylish relatives. Of course, they ask me every time they come out here for the summer, but I know they don't mean it. You'll back out, see if you don't."

"Indeed I won't," said Mrs. Rome positively. "Cousin Laura has visited us every summer for five years, and now I'm going to return some of them. John can board with Mrs. Lake and I'll take the children along. I may stay a week and I may stay three. It all depends. I'm going sight seeing and shopping and do exactly as I please."

"I wish I had your courage," sighed Mrs. Gerhold. "Dear me! I've been bothered to death with company these many years, but I don't know how to escape. Are—are you going in the hope of—"

"Yes, I am," laughed Mrs. Rome. "I'm tired of being imposed upon, and I'm going to show Laura what it is to have three people plumped down upon her in the busy season. She is doing her spring sewing now, and I hope it will duly impress her if she has to cook for company a while."

"I'll see you home before the week is out," said Mrs. Gerhold confidently. "You'll get tired of a city flat and want to come back to your nice comfortable home."

"Maybe I will," said Mrs. Rome, "but you won't see me back in a week. I'm going to have a good vacation before harvest time."

The next day Mrs. Rome and her two children alighted before the apartment building her friend lived in, and speedily made herself known. "How do you do, Cousin Mary!" said Mrs. Manton in surprise. "Why didn't you let us know you were coming! How glad I am to have you and the children with us for a little visit." To herself Mrs. Manton was saying that they would only stay a day or two, of course, so she must do everything in her power to make them comfortable. The memory of the happy days spent at the fine farm house inspired her to do her best, as well as the thought that summer would soon be here again. The last of March is very close to summer, so the Romes received a cordial welcome.

"Why didn't Cousin John come, too?" inquired Mrs. Manton, taking off their wraps. "Fred will be so disappointed." "We couldn't both leave home very well," explained Mrs. Rome. "John will take a fishing trip later in the spring and we will look after things at home."

"I'll hurry and get lunch," said Mrs. Manton, "so we can go out this afternoon. We must not lose a minute."

The afternoon proved to be rather damp so they went shopping. The Manton children stayed with the maid, but the Rome children were eager to see the sights. Fred and Fanny Manton knew what it was to trail wearily past piles and piles of goods waiting for their mother to make her purchases, but the Rome children were unused to such things and eager to go everywhere. Mrs. Rome enjoyed the stores very much, and bot a great many necessary things, together with patterns to make them up by.

"Just think, Fred," said Mrs. Manton when her husband came home that night, "Cousin Mary and the children are here to spend a few days with us! After all the times we've asked them, to think they would tear themselves from their delightful country home at last!"

Mr. Manton shook hands cordially. Having company cramped them considerably, and just now everything in the way of food supplies was high, but he also had pleasant recollections of the farm house and tried to be as friendly as possible.

The next morning Mrs. Manton had her plans carefully laid, but they did not work out as she anticipated. "I am going to be busy this morning, Cousin Mary, with the girl in the kitchen, but you won't mind going to the museum alone, will you? It is only a short distance from here."

"Now don't you worry a bit about me,

Cousin Laura," said Mrs. Rome heartily. "I intend to spend the morning sewing and some other day we can go sight seeing. It will be such an opportunity for me, because at home I have my housework and everything to hinder me. I expect to get a great deal done while I am here."

Before they started out that afternoon a caller came, and Mrs. Rome was duly introduced. "Bring your friend with you to our thimble party for the Orphans' Home," said the caller cordially. "Mrs. Rome, a number of ladies meet each month to sew for the children, and we will be glad to have you with us. The meeting is next Thursday afternoon at my house, and I hope you can attend with Mrs. Manton."

"Thank you! I shall be glad to be with you, if Cousin Laura goes," said Mrs. Rome, politely.

Mrs. Manton managed to be sufficiently cordial about the invitation, but that night she said despairingly to her husband, "Fred, if you'll believe it, Mary and the children intend to stay all next week. Mrs. Oaks asked her to come to her thimble party for the Orphans' Home next Thursday, and she accepted. She sews every morning and seems to make herself right at home."

"Well, you were out there several weeks last summer," said Mr. Manton, "so I suppose we'll have to endure it. I tell you, Laura, expenses are mounting up rapidly since there are three more to provide for. I won't be sorry when they go home."

"Neither will I," said Mrs. Manton with energy. "In the country it's different for things don't cost anything there, but where we have to buy every mouthful it is very hard. Cousin Mary can have company and never miss the things they eat, but we can't. It seems strange, she is so inconsiderate."

"I'm getting tired sleeping on a lounge," said Mr. Manton, forgetting that when he visited his country relatives they had been inconvenienced also. But make the best of it, Laura, for they surely won't stay away from home more than ten days."

Mrs. Manton made ready for the thimble party in no pleasant mood. She was not ashamed of Mrs. Rome, for that lady had bot a pretty jacket suit for herself since coming to the city, and all her garments were trim and well fitting, but she had heard nothing about when they would go home and was more than worried. The maid in the kitchen had given notice and the bills were piling up, so she felt that troubles were not coming singly to her. She forgot all about the picnics and socials to which her country relatives had taken her, as well as the little thimble party given in her honor on her cousin's lawn the summer before, and Mrs. Rome could plainly see that it was not a "headache" that made her silent that afternoon.

"How do you do, Mrs. Rome?" said Mrs. Oaks, greeting her guests at the door. "I am very glad to see you."

The ladies fell to work and Mrs. Rome found herself established in a corner with her cousin on one side and a pretty, talkative lady on the other, who chattered more than she sewed. "So you are from the country?" she said, rather patronizingly. "I just adore the country in summer, but in the winter it must be very lonely. Is this your first visit to town? What do you think of the shops and sights?"

When Mrs. Rome found an opportunity to reply, she said quietly, "Yes, this is my first visit to town for a number of years, but I am having such a good time that it will not be the last. Cousin Laura usually spends the summer with me, and for the past five years has been coaxing me to visit her, but this is the first time I felt that I could get away. It gives me so many opportunities to shop and sew since I have no housework on my hands."

"Isn't that an ideal arrangement?" said the talkative lady. "It gives Mrs. Manton a glimpse of country life and now you are taking a taste of town pleasures. I think I have found out one of Mrs. Manton's secrets this afternoon. I had lunch with her one day and she had such delicious cherry preserves. I told her she was extravagant to buy cherries when they were such ruinous prices as they were last year, and now I guess that she put them up at your home."

Mrs. Manton felt provoked, but she had to answer with a smile, "How clever you are, Mrs. Alton. Yes, I did put up some fruit when I was with Cousin Mary, because it is so cheap down there. Everything in the country is as free as air, while we poor town residents have to pay

highest prices. I quite envy Cousin Mary because she never has to count the cost of anything. Fruit and vegetables and cream are as abundant with her as water, and she never has to worry over grocers' bills or the meat account, as we do."

"Well, I don't know about that," said Mrs. Rome. "The cherries we sold last summer brot us twelve cents a quart, and all our surplus cream and vegetables we can dispose of at good prices. Really, we do have to count the cost to a great extent, for we have less ready money than town folks. We have our groceries to buy, just as you do, and our meat in summer when we do not care to use ham and poultry. Our meat bill last summer was rather high, we thot, for when city prices go up, the prices go up in the country, too."

"That is just what I was saying," said Mrs. Manton. "Everything you sell brings a good price and you still have plenty for yourself. Just think, Mrs. Alton, of having unlimited quantities of strawberries and other fruits from spring to fall! I often think that Cousin Mary doesn't appreciate her many blessings."

"How long are you going to stay in town, Mrs. Rome?" asked Mrs. Alton, and Mrs. Manton fairly held her breath.

"I don't know," said Mrs. Rome carelessly. "John writes that I must stay till I have my visit out, as he is getting along very well, so there is nothing to hurry me home. The busy work for farmers' wives comes in hot weather, so I have time enough yet to make up for my vacation. Every summer we have harvest hands and canning and little chickens and all sorts of extra things on our hands, and it is simply impossible to get hired help. I often wish I could put off harvest time and having till cold weather when I have more leisure time, but everything comes during the hot days."

"That is what I have always heard about farm life," said Mrs. Alton. "People have told me that the women on the farms are overworked in summer and that they are broken down and old before they are forty. I think, after all, Mrs. Manton, that we are well off in town, even if we do have to put up with inconveniences in the way of heavy expenses and poor fruits."

"Cousin Mary never seemed overworked to me," said Mrs. Manton, coldly. "Conditions are different in the country. The farmer's wife never has the trouble of going to market and she isn't bothered with calls to the door as we are. Of course, I couldn't be happy to live in the country, but people who have been brot up there think it is all right."

"Do you find it lonely there in summer?" inquired Mrs. Alton. "The reason I ask is because Mr. Alton and I are talking of boarding in the country this summer for the sake of the children, and I want to find out everything I can about it before I go."

"No, I can't say that I do," said Mrs. Manton. "I am always busy with canning and sewing and looking after the children, so I have not much time to be lonely."

Perhaps you know of some one in your neighborhood who takes summer boarders, Mrs. Rome," said Mrs. Alton. "It certainly would be pleasant to be near Mrs. Manton and you all summer. What time did you go out last year, Mrs. Manton?"

"I don't think of anyone who takes boarders just now," said Mrs. Rome. "Cousin Laura came in June last year and stayed till school opened in September."

"O, I couldn't afford to stay that long," said Mrs. Alton. "All the people we have heard from charge five or five and a half dollars per week for grown people and two-thirds for children as old as ours. Just think what that would mount up to in three months! Mrs. Manton, you are exceedingly fortunate to have Mrs. Rome for a cousin. Why, if you had to pay board for yourself and children it would cost an awful lot."

Before the afternoon wore away Mrs. Manton felt she must burst out crying so thoroly provoked and discouraged was she. Mrs. Alton chattered on and on about the country and high prices, until it seemed she must scream out that she wanted rest and quiet. Mrs. Rome blandly told one and all the ladies she met that she was having a delightful time, and did not know when she would go home. It seemed to Mrs. Manton that she would gladly stay all summer in her narrow apartments if she would be forced to entertain her country relatives many times.

"Yes, indeed, I am having a good time," Mrs. Rome said pleasantly to her new

AN OLD TIMER

Has Had Experiences.

A woman who has used Postum since it came upon the market knows from experience the wisdom of using Postum in place of coffee if one values health and a clear brain. She says:

"At the time Postum was first put on the market I was suffering from nervous dyspepsia, and my physician had repeatedly told me not to use tea or coffee. Finally I decided to take his advice and try Postum. I got a package and had it carefully prepared, finding it delicious to the taste. So I continued its use and very soon its beneficial effects convinced me of its value, for I got well of my nervousness and dyspepsia."

"My husband had been drinking coffee all his life until it had affected his nerves terribly, and I persuaded him to shift to Postum. It was easy to get him to make the change for the Postum is so delicious. It certainly worked wonders for him."

"We soon learned that Postum does not exhilarate or depress and does not stimulate, but steadily and honestly strengthens the nerves and the stomach."

"To make a long story short, our entire family continued to use Postum with satisfying results as shown in our fine condition of health and we have noticed a rather unexpected improvement in brain and nerve power."

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acquaintances. "If I had known how delightful it is to have a good long rest, I should have come long ago. Cousin Laura often told me how she rested up all summer when she was with me, but I was foolish enough to think I should stay with my housekeeping always. Now that I am emancipated from that idea, I shall take a vacation every year. I have been hoping my husband could get up here for a week or two before I go home, for Cousin Fred was so disappointed that he was not with me, but I don't know whether he can manage it or not."

Just three weeks from the day she arrived at the home of her cousin, Mrs. Rome went home, and there was general rejoicing in the tiny home. "I don't know whether or not we can get out this summer, Cousin Mary," said Mrs. Manton at parting. "Fred's mother is not very well and we may have to stay near her. She is old and feeble and can not last much longer."

"Well, drop in if you can," said Mrs. Rome. "I came without warning you this time, for I don't want you ever to go to extra work for me. That is what you always tell me, and I want you to feel just as free when I visit you. I am so sorry I never knew before how much good a vacation does, but it is never too late to learn. Good-bye!"

Late in June Mrs. Rome sat with a pan of cherries in her lap, on the back porch, when Mrs. Gerhold came over to borrow some yeast. "I'm all beat out looking after those bad children of Cousin Kate's," she said, dropping on the porch to fan herself. "They are perfect little nuisances! By the way, how does it happen that your Cousin Laura is not with you this summer? She usually comes before this."

"I guess it must be because I spent my vacation with her," said Mrs. Rome, demurely. "I had a card from her yesterday that they would not be here this summer."

"Well, of all things!" said Mrs. Gerhold, admiringly. "I wish I dared do that with Kate. Maybe I'll pick up courage enough to go to see her next winter, but I won't promise."

"I hope you'll have the same success I did," laughed Mrs. Rome. "I am heartily tired of having people visit me simply to save paying board all summer, and I have declared my independence. I am glad I dared, for it paid."

THE EARLY AMERICAN AUTHORS.

BY CARL S. LOWDEN.

James Fennimore Cooper.

The author of the famous Leather Stocking series of novels was born Sept. 15th, 1789, at Burlington, New Jersey.

Having completed his education under a private tutor, Cooper entered Yale College in his fourteenth year. Here he remained three years, graduated, and became a full-fledged midshipman in the U. S. Navy. His life on the broad sea extended over a period of six years; at the end of this time he married. Then ensued ten years of comparative inactivity. In reality Cooper had observed very widely, had read much, and was now thoroughly prepared to take up his pen and to wield it with mighty force.

Thus in 1821 he published "Precaution," a novel of ordinary merit. The next year there appeared "The Spy," which took the public by storm. For a time he was ranked with Scott, and altho he did not in truth deserve this distinction, this novel was his first substantial success. It having secured him recognition as a foremost man of letters, Cooper immediately published "The Pioneers," "The Pilot," "The Last of the Mohicans," "The Red Rover," and "The Prairie." These books are widely known; they represent his best work. In 1827 he went to Europe, remaining there several years during which time he wrote much. After a three years' consulship abroad, he returned to America, where he died September 14, 1851. The place of his death was Cooperstown in the state of New York.

James Fennimore Cooper was our first American novelist. He had various faults, but they were not sufficient to hide his brilliant genius. In all his works there may be found graphic description, thorough knowledge, and scenes which appeal because of their remarkable freshness. "The Spy" and other novels which he wrote have been translated into the modern languages; in view of this fact it is safe to say that the volumes he contributed to the world's library will be read and appreciated for many years yet to come.

Cooper's best single book is "The Last

of the Mohicans." The following extract from it describes the murder of Cora, the death of Uncas (the hero of the tale), and Hawkeye's revenge.

"But Cora neither heard nor heeded his command. The form of the Huron trembled in every fibre, and he raised his arm on high, but dropped it again with a bewildered air, like one who doubted. Once more he struggled with himself, and lifted the keen weapon again—but just then a piercing cry was heard above them, and Uncas appeared, leaping frantically, from a fearful height upon the ledge. Magua recoiled a step; and one of his assistants, profiting by the chance, sheathed his own knife in the bosom of Cora.

"The Huron sprang like a tiger on his offending and already retreating countryman, but the falling form of Uncas separated the unnatural combatants. Diverted from his object by this interruption, and maddened by the murder he had just witnessed, Magua buried his weapon in the back of the prostrate Delaware, uttering an unearthly shout

verge of the light. The form of Hawkeye had crouched like a beast about to take its spring, and his face trembled so violently with eagerness that the muzzle of the half-raised rifle played like a leaf fluttering in the wind. Without exhausting himself with fruitless efforts, the cunning Magua suffered his body to drop to the length of his arms, and found a fragment for his feet to rest on. Then summoning all his powers, he renewed the attempt, and so far succeeded as to draw his knees on the edge of the mountain. It was now, when the body of his enemy was most collected together, that the agitated weapon of the scout was drawn to his shoulder. The surrounding rocks themselves were not steadier than the piece became, for the single instant that it poured out its contents. The arms of the Huron relaxed, and his body fell back a little, while his knees still kept their position. Turning a relentless look on his enemy, he shook a hand in grim defiance. But his hold loosened, and his dark person was seen cutting the air with his head downward, for a fleeting

LEGEND OF THE WATER LILY.

BY IRMA B. MATTHEWS.



In the mountains called the Catskill Once there lived a lovely maiden, Who in language of the Saranacs The redmen called the Bird. And her lips were tinged with scarlet, Like the wild flowers by the marshes; Bright here eyes were, bright and sparkling.

Lithe her form was like the willow, And her skin was dark and dusky.

Very happy was the maiden Was sweet Osetah, the bird, For she loved a stately warrior, Chief was he of all the redmen. Loved a young and noble warrior Called by Saranacs, the Sun.

Yet there came a time of sadness, For the warrior went to battle, And the maiden wept in secret Fearing death might there await him. Then she vowed to the Great Spirit If he came again victorious She would give her life unto him, She would come and be a spirit.

It was in the Early Springtime When again she saw the warrior, Saw the Sun in all his glory Coming to them and victorious. Then her heart was filled with sadness For she knew that she must leave him, Leave him for the land of spirits And complete the vow she uttered. Hushed the voice of the sweet singer, Slowly crept she from among them.

To the Clustered Stars, the loveliest Lake in all the Catskill mountains, Hastened then the lovely maiden. But the warrior missed the singer, Saw her creep out from among them, Saw and followed quickly after. Thus he would persuade the maiden To return unto the village, To forget the vow she uttered And to follow him forever.

as he committed the dastardly deed. But Uncas arose from the blow as the wounded panther turns upon his foe, and struck the murderer of Cora to his feet by an effort in which the last of his falling strength was expended. Then, with a stern and steady look, he turned to Le Subtil and indicated, by the expression of his eye, all that he would do, had not the power deserted him. The latter seized the unresisting arm of the Delaware, and passed his knife into his bosom three several times, before his victim, still keeping his gaze riveted on his enemy with a look of inextinguishable scorn, fell dead at his feet.

"Laughing hoarsely, he made a desperate leap, and fell short of his mark, tho his hands grasped a shrub on the

But the maiden saw his meaning, Saw and bade him not to follow. High she stood upon the shore, Deep the waters were below her. Lifting up her face to heaven Sprang she like an arrow forward; Softly closed the waters o'er her. And the chieftain sought to find her, Vainly sought but could not find her, Then returned in sorrow slowly To the people of his village.

But next morning came a stranger Holding in his hands a flower, None were there in all the village That had ever seen one like it. On the Clustered Stars he told them He had plucked the lovely blossom, That the lake was covered over With the sweet and fragrant blossoms. In amazement all the people Went to gaze upon the wonder, Saw the sweet white lilies floating On the lake's clear silvery bosom.

Then they brot an old, old chieftain. Wise was he in years and learning. Told to him the wondrous story, Showed to him the pretty flowers. "Children," said he, "'tis an omen Coming from the land of spirits, That Osetah, the sweet singer, Lives again as we behold her In the golden-hearted flowers. White the petals for her goodness, Golden-hearted she and faithful, And her smiles will bless the hunter. When the sun's rays shine upon her; But her eyes will close in sadness When his rays depart at night-time." 'Twas thus spoke the old, old chieftain. Wiser he than all the redmen.

Thus it is to all the redmen That the lily is an emblem Of the faithfulness and goodness Of Osetah, the sweet singer, Of the tribe of Saranac Indians.

instant, until it glided past the fringe of a shrubbery which clung to the mountain, in his rapid flight to destruction."

THE POINT OF VIEW.

BY RHODA BYARLAY HOPE.

Does your life seem hard to you? Change your point of view. Climb the little hill of hope— Look from off the gentle slope— For the future there will rise Visions as of Paradise. Things that filled your soul with care Will take their flight all unaware Dark clouds change to roscate hue Upon a ground of lovely blue. So, if the world seems hard to you All you need is—change your view.

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GRANDPA AND I A-FISHING.

BY DORA H. STOCKMAN.

In the middle of the afternoon, of a warm summer day,
When I feel just as if I'd like to skip away,
Along comes Grandpa. "Say, Tad, my boy," says he,
"Spose you'd like to go a-fishin' trout with me?"

And when Ma nods and smiles I jump so quick;
(The way I leave those books would make my teacher sick).
Grandpa's digging worms out by the barnyard gate,
And I run for an old tin can and pick up the bait.

We don't have any of those tin-box city things to pack,
Nor heavy poles, nor creels—just a little snack—
Some bread, with cheese and butter and maple sugar spread,
Two great big taupehawkins, and a chunk of lead.

Down across the pasture lot to where the willow tree,
Hangs more than half way 'cross the pool, and I can see
From the big limb, the trout snap up my hook,
While Grandpa sits just out of sight upon a root.

Grandpa cuts a pole aplece, that'll bend and swing,
And whistles "Yankee Doodle," as he's tying on the string.
He shows me how to pull the worm around the crook,
Then we slip up ea-sy, and drop in the ugly hook.

We sat still most an hour, I believe; didn't dast to wink,
Before I got a bite. Then you ought to've seen my bobber sink.
My! That was a big fellow. Thot I should fall, sure pop.
And lose the biggest fish—There, now he's safe, ker-flop.

"A dandy," Grandpa says, and strings him on a stick.
Bime-by it gets so hot, and kind of dark and thick,
"It looks a mite like rain," he says, ("don't they bite fast"),
We won't mind a little shower, I guess it won't last."

The lamp was lighted when we got home that night.
"Guess how many," says I. And Pa guessed, "Not a bite."
Then I hold up the string. Pa makes a chuckling noise,
And mother laughs and says, "Did you ever see such boys?"

FILLING THE PICNIC BASKET.

BY E. J. LYNCH.

The duty of filling the picnic basket falls to most farmers' wives or grown-up daughters at some time every summer. Quite a big part of the pleasure of the picnic is stored in the basket, for both little and big folks.

A modern novelist, in writing of a certain woman, described her as "a woman of one gravy," which was simply a means of insinuating that she was given to monotony in her meals. There are housewives who seem to be "women of one sandwich." They never think of any other kind of sandwich than meat sandwiches and usually ham. Ham sandwiches are all right, if made right, but—"there are others."

The day before the picnic it is well to make up a supply of mayonnaise or French salad dressing to help add variety to the sandwich list. To make this, put a half teacupful of vinegar and the same of water, a teaspoonful of butter and two tablespoonfuls of sugar into a double cooker or thick saucepan and let it come to boiling point. Take a tablespoonful of cornstarch, a half teaspoonful of salt, a teaspoonful of mustard and rub to a smooth paste with a little water. Stir this in slowly and let it boil for five minutes. Remove from the fire and stir in slowly a well-beaten egg. When cold it is ready for use. The addition of a little sweet cream, when ready to use, is a decided improvement.

This dressing, spread over the buttered bread, will help to add zest to some of the sandwiches which usually form the substantial part of the picnic lunch. A leaf of lettuce, or thin slices of ripe tomatoe, can be used for filling. By those who are especially fond of the flavor of onions a layer of chopped onion over the lettuce will be relished. Cottage cheese makes a nice sandwich filling. If the regular American cheese is used it will be improved by passing thru the food chopper and softening with a little butter.

Everyone knows the delights of cold roast chicken for the picnic meal but everyone does not know how a delightful beef loaf can be made for such occasions from an inexpensive piece of beef. Any

kind of beef can be used but if gotten especially for this purpose a piece off the shoulder answers very well. Put it thru the food chopper. Add a little over half as much bread crumbs (by measure) as there is chopped meat, salt, pepper, sage, chopped onion or whatever seasoning may be desired. Moisten as you would for fowl dressing and add one well-beaten egg for every three cups of the material. Mould into loaves. It should be stiff enough to retain its shape. Bake about half an hour in a moderate oven. Lay a slice of bacon on top of each loaf before putting into the oven and baste while cooking, as you would a roast chicken. For picnic lunches this is far superior to plain cold meat, as one trial will prove.

Pies do not carry well and are best not included in the picnic lunch. Almost any kind of sponge cake that has icing on it will suit the taste of the ordinary picnickers. If a layer cake is used a banana filling is easily made and always good. If the sliced bananas are moistened with sweetened lemon juice the taste will be improved. Little brown spice cakes made in patty pans or muffin rings and iced with white icing are far better than cookies for picnics and much more easily carried than layer cakes.

Always put in a bottle of pickles of some kind that can be eaten with the fingers. Pickled beets, fresh green beans, small cucumbers or mixed pickles all help to add a relish to the meal. If two meals are to be provided for, a salad of some substantial kind can be used for one. This can be packed in glass sealers and eaten from cups made of stiff brown paper.

Lemon juice can be prepared, sweetened and bottled all ready to add to the water. If one has a little alcohol or coal oil stove, hot water can easily be procured for tea or coffee.

Chopped pineapple, whole oranges, bananas, peaches or strawberries make a refreshing addition to the lunch.

If cookies are taken at all, the soft, substantial kind, containing chopped raisins and currants, made fresh for the occasion, are better than the crisp sweet ones. Plenty of good bread and butter cut thinly is the main thing, after all, when a lot of hungry people are to be fed.

Paper napkins can be procured so inexpensively that everyone can afford to provide a plentiful supply.

MOTHERS' PROBLEMS.

BY E. E. R.

That mothers have problems, and serious ones at that, cannot be denied. Sometimes these call for careful thought and deliberate consideration. Each period of child life has its own requirements and the fact that no two individuals can be treated exactly the same complicates the matter.

Of all persons, the mother most needs tact. It is a saving quality in many instances when will opposes will. Firmness is an attribute also essential in child training, one sadly lacking in a great many otherwise well-governed homes. Indulgence is commendable to a certain degree but no should mean no. Teasing to gain a point should never be permitted. This habit, once begun, means endless trouble for the parent. Nearly everyone has at some time or other seen the effects of over-indulgence with small children, and while it may appear to a third party that certain mothers are pretty strict, we all admit that in the end such a course is better than the opposite. As for the spoiled child, its approach is dreaded and it is a source of constant annoyance to visitors and visited alike.

But the real problems of the mother come a few years later when the boys and girls are growing up. Then she must needs possess the patience of a Job, combined with the wisdom of a Solomon. Her watchful eye must keep close tab on all that goes on. She must guide by suggestion, must avoid open friction by all possible means and glove in velvet the hand that would control. Much may be accomplished by tact without arousing suspicion that any attempt at management is going on.

We hear a great deal about the desirability of keeping the confidence of our boys and girls. Where there is lack of (Continued on page 36).

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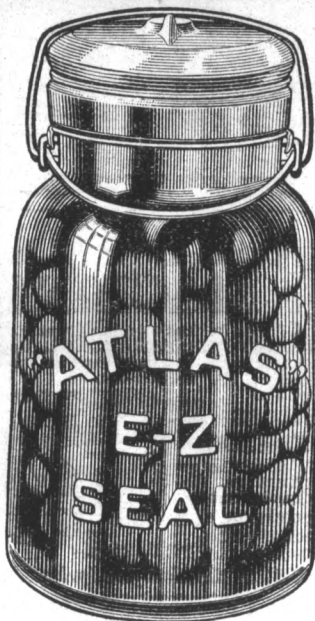
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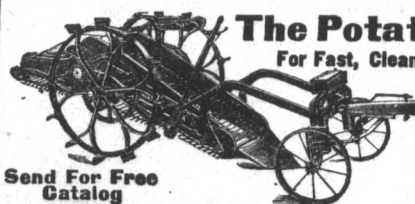
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this I believe it is owing to a mistake on the part of the parent. When a confiding child comes home from school or from play and runs to mamma with something it has heard, further confidences may be encouraged by listening respectfully. If it should prove to be something imparted by an older playmate and which the mother would have preferred her little one not to have heard, she will do well to let no suggestion of this escape her lips. Certainly she is glad to have the child come to her and a single repulse might suffice as a discouragement on other similar occasions. To say angrily that Mildred Jones is a bad child for telling anything of the kind and that you do not wish such talk repeated to you will give your confiding little daughter to understand that she had best keep what she hears from mother in future. On the other hand, even tho you consider it highly undesirable that your child should have heard such a tale it will be better by all means to maintain a composed countenance and not allow the fact to become manifest. Listen attentively and seriously to all that the child has to relate. She will see that mamma invites her confidence and some way of dealing with the matter will undoubtedly suggest itself. A few words wisely chosen will help to correct erroneous impressions and better the matter rather than make it worse.

Mothers of growing daughters will have anxieties at times. There is a period in every girl's life when she is neither a child not yet a woman, that period so aptly described by the poet,

"Standing with reluctant feet,
Where the brook and river meet,
Womanhood and childhood fleet."

Then it is that most of all the girl needs wise counsel. When she is afraid to talk freely upon any subject with her mother something is wrong.

Boys meet with more varied temptations than their sisters. Their time of greatest danger lies between the ages of 15 and 21, when they chafe against restraint and are most liable to fall into bad habits. Few boys can be coerced or driven into doing right, but nearly all can be led. It is useless to expect mature judgment at this period in the young of either sex and much must be overlooked or credited to the love of fun inevitably connected with youth. Then it is that restraint which is not outspoken or emphatic, yet nevertheless influential, is most essential.

There is no reason why mothers may not have the entire confidence of their sons, as well as their daughters, if a right beginning is made. Never to betray such confidence is the foundation of success. Keeping inviolate whatever information is imparted to her marks the mother whose sons tell her everything.

It means a great deal to bring up children, but it is ample compensation to possess noble sons and daughters who make for the highest type of citizenship, and that is the ultimate end sought by every true parent.

IN CANNING SEASON.

BY MARY FOSTER SNIDER.

Raspberries Canned Without Cooking.—Pick the fruit over carefully and pack it into thoroughly sterilized self-sealers. Place each jar on a folded towel wrung from water, fill to the top with boiling water and let it stand ten minutes. Pour off the water, fill the jar with fresh boiling water and let stand another ten minutes. Then drain off the water again and add to it one cupful of sugar for each quart of fruit it was drained from. Boil the sugar and water to a syrup and pour it boiling hot over the fruit in the jars. Fill to overflowing and seal immediately, making them perfectly air-tight. This is the easiest way of all ways to can this delicious fruit. When opened, the raspberries, either black or red, will be found equal to the fresh fruit. It is better to do only two or three jars at a time, but working systematically one may do a large number in half a day, and without the fatigue or over-heated condition that cooking the fruit on the stove necessitates. Grapes may be canned by the same method. Pick them from the stems, wash them to remove the dust, and let them drain a few minutes. Allow the first boiling water to stand on them fifteen minutes, then ten minutes the second time.

Preserved Peaches.—Plunge the peaches into boiling water to make the skins come off easily, then throw them into cold water. Cut them in halves, remove the stones and weigh the fruit. To each pound of the prepared fruit allow one cupful of water and $\frac{1}{2}$ lb. sugar. Make a syrup with the sugar and water, skimming it thoroughly when it boils. Put in the peaches, a few at a time, also a few of the kernels from the peach stones, and cook until the fruit is tender but not broken. About ten minutes is usually long enough. Fill the jars with the fruit, pour in the boiling syrup until it overflows and seal tightly.



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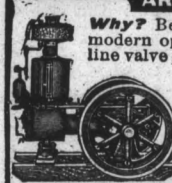
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