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FARM NOTES.

What Caused the Seeding to Fail?

I would like to know why, in your opinion, I did not get a catch of seeding in a ten-acre field of wheat. The soil is good and in good condition as to fertility, it being new ground. This is the third crop there has ever been on it. I sowed wheat, after potatoes, about October 1. I think wheat will yield at least 25 bu. per acre. About April 10 I sowed seven quarts per acre of June clover. Did not harrow seed in. It seemed to germinate and start growing nicely, but in looking the field over about May 10 I failed to find a single clover plant. So I sowed it again, and harrowed it twice. It seemed to start but I kept seeing less all along, and for the last month have not been able to find a single clover plant. The seed is of my own growing and the same as I sowed in another field of wheat and also in oats, and in both fields have a good stand. It would almost seem as if something is lacking in the soil to grow the clover and I would come to this conclusion if it were not for an adjoining field which is new ground and worked under same conditions only one year earlier. I seeded this field last year and got the best stand of clover I ever had. I might state here that the clover seed was sown in both wheat fields on the same day. How shall I try next to get this field seeded? I had thought of sowing to Canadian field peas as soon as we get rains enough to work ground, and leave them on the ground as a mulch during winter, also apply stable manure during winter and plant to beans and then to wheat and clover. Any information you can give will be appreciated.

Montcalm Co.

E. S. C.

This is not an easy question to answer. It is one of those problems which makes the student of agriculture feel that the things which we don't know about the business would make a much larger book than the things which we do know. Ordinarily clover will catch without trouble on new land. New land is generally well stored with available plant food, as this land must have been to produce a 25-bushel crop of wheat. New land is also usually much higher in its content of humus than land which has been farmed for some time, and will thus be more retentive of moisture in a dry time. In most cases new ground is also well supplied with lime, not alone because the lime has not been washed out of the soil as badly, but as well because of the fact that the ashes resulting from the burning of brush in the clearing of the land contain a large percentage of lime. The content of mineral plant food in new ground is also generally higher than in farmed land, unless the latter has been exceptionally well cared for. Bar-

ring a possible poor germinating quality in the seed, a factor which in this case would seem to be practically eliminated, there would appear to be only one other possible reason for the failure, which might be due to the absence of the bacteria peculiar to the clover plant and without which it will not thrive. However, this rarely if ever occurs on new land in Michigan, at least to an extent which would cause a total failure of the seeding. The writer is free to confess that he can advance no plausible reason for the failure from the data given in the inquiry, which is published in the hope that some reader may be able to supply the "missing link" in the case.

So far as the plan of sowing peas on the wheat stubble is concerned, it is the writer's opinion that it would not pay. Unless the season is comparatively wet and cool, the peas would probably not make a large growth if sown in August, and the nodules would not be likely to develop plentifully on these late sown peas, so little nitrogen would be added to the ground by their use. If a cover crop is desired, and there is no doubt that it would prove profitable, the stubble could be disked over and sown to rye or rye and rape as soon as practicable. This would conserve the available plant food in the soil and provide a cover for the field during winter, and would provide some late forage for the stock as well. Beans are themselves nitrogen gatherers, like peas, so there would really be nothing gained by using the late sown peas as a cover crop to be plowed down for beans next spring, since the rye or rye and rape would afford an equally valuable covering for the ground and would furnish nearly or quite as much humus when plowed down, besides the rye plants would hold the available fertility which leached out of the stable manure as applied to the land, much the same as the grass roots will on sod ground.

The plan of applying stable manure to the beans is all right, although the results would probably be more satisfactory so far as the seeding is concerned if manure were applied to the field as a top

are sometimes ruined by close clipping before these buds have started, thus depriving the plants of leaves in which certain food elements necessary to their growth are elaborated. If the weeds are very troublesome and it seems necessary to clip before the new buds start at the crowns of the plants, the cutter bar of the mower should be set high, so as to avoid close clipping and leave some leaves on the plants.

The Tomato Worm on Potatoes.

We have four acres of late potatoes that the green tomato worms are eating at quite badly and we thought that you could give us a remedy that would be beneficial. What will kill them, and will there be danger of the same remedy killing the potato vines?

Kalamazoo Co.

D. M. D.

There is no sure way of destroying the tomato worm except by hand picking or its equivalent. The writer once had a 13-acre field of potatoes practically destroyed by these worms, although an effort was made to keep them off by repeatedly going through the field and killing the worms. Other farmers in the community were also troubled with the same pest, and it was only by diligent work that the crop was saved at all. Poisoning with Paris green seemed to be ineffectual in our case, although good authorities claim that arsenical sprays will kill them. Turkeys, if herded in the potato field will soon develop an appetite for these worms and will prove valu-

others used sheep shears with which they were clipped in two.

Terms of Land Rental.

Does it pay better to rent a farm out on shares or rent it for money rent, and how much per acre is a fair rental for a good farm? Does it pay better to furnish seed and get half, or let the man furnish seed and the owner take a third? Could you give a rule regarding rental for pastured fields where the tenant has a lot of stock, also regarding straw and other coarse forage grown on the farm? Also, should the owner keep up fences and pay road and other taxes, or pay threshing bills and furnish hands where he gets one-half the product?

Wayne Co.

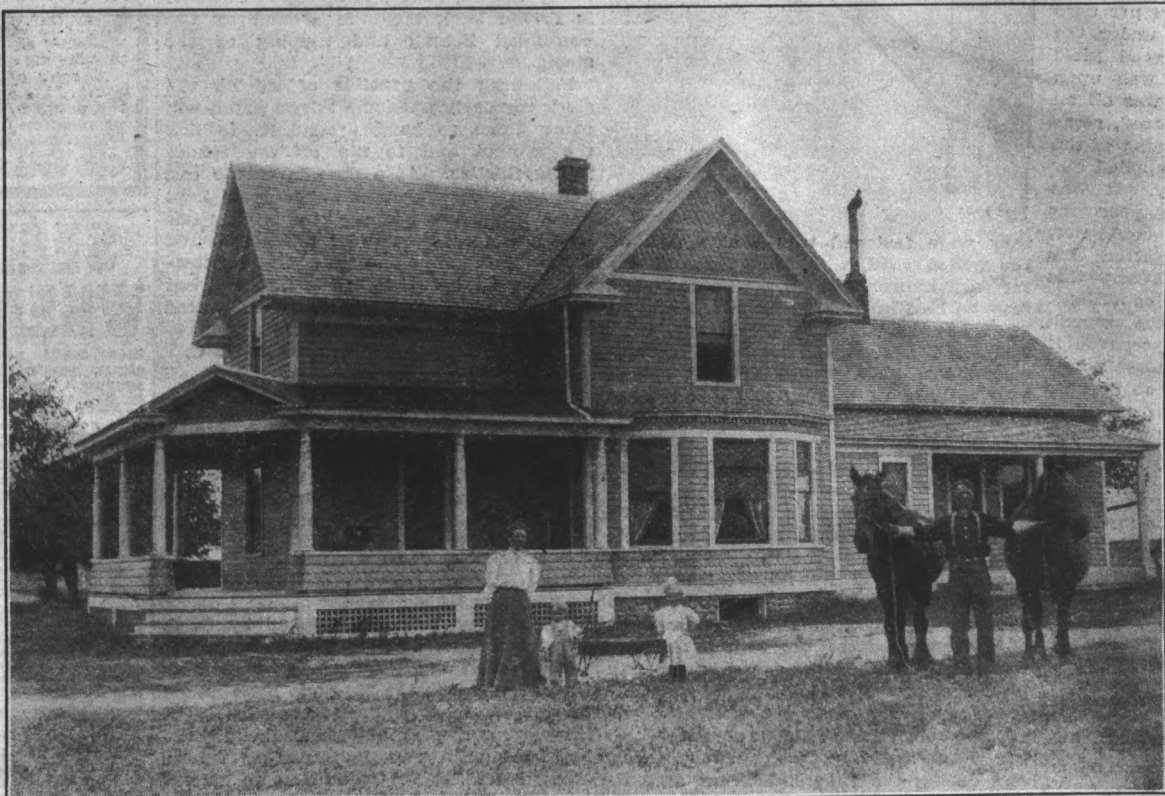
SUBSCRIBER.

It is a rather difficult proposition to make the capital invested in farm land which is rented out on any terms a profitable investment. Perhaps the most satisfactory plan, where the farm and buildings are adapted to dairy production, is to rent it to some good dairy farmer who lacks the necessary capital to own a dairy farm of his own, for this purpose at a cash rental. It is, however, only the owners of good farms, in a good state of fertility, and with modern and well equipped buildings, who will be so fortunate as to get a tenant farmer of this class to rent his land. Under ordinary conditions, the best farmers secure the best farms, and after these farms commence to run down in fertility from vigorous cropping, they move on to other good farms or buy a farm of their own, and the owner has to content himself with a second rate

farmer as a tenant, and so the process goes on until the farm becomes run down and reduced in fertility and selling value. Too often the owner of a rented farm, feeling that his income from the land does not warrant it, is reluctant to invest money in repairs to fences and buildings, and from this cause the farm runs down in appearance and selling value, as well as from the actual depletion of the fertility of the soil. But there is no question that if one rents farm land at all, it pays better to keep the farm up in the best possible condition and get the best available class of tenants. In this case it will be necessary to either rent at a cash rental or for one-third of the product of the farm as the better class of tenant farmers will own their own stock and tools and will prefer this to other methods of renting.

While there is no set rule for the share rental of land, and all sorts of bargains are made be-

tween owners and renters, yet as a general principle it may be said that under ordinary conditions the land is entitled to a third of the product, the labor a third, and the equipment and necessary incidentals to be furnished the other third. This last third is quite often divided between owner and tenant under various agreements as to furnishing, depending upon the nature of the farming to be done. The most profitable course to pursue, for either owner or tenant, however, is an individual problem in each case, but whatever the conditions, two fair minded men who want to consummate a business deal can arrive at an equitable arrangement. This should be stated in writing in detail, so as to avoid



Farm Home of Mr. and Mrs. J. D. Longnecker, Oceana County, Mich.

able as a means of destroying them. Ducks are used for the same purpose in tobacco fields, where these worms are particularly destructive. But the greatest natural enemy of these insects in our case proved to be skunks, which ran through the field at night and dug up the cocoons, of which they seemed to be particularly fond. Whether due to their diligence or to some parasite which checked the propagation of this pest in succeeding years, they soon disappeared. Although they bothered some for several seasons, yet they were not so numerous and in recent years have not damaged the crop at all. In killing the worms, some used sticks with which they were knocked off the vines and killed, while

When to Clip Alfalfa.
Will you kindly advise me through the columns of your paper, when to clip my alfalfa, which was sown June 10. I put 17 lbs. on one acre and have a good stand.
Jackson Co.
L. C. L.

Where the stand of alfalfa is good and the weeds are not too troublesome, it should not be clipped until the new buds start at the crowns of the plants. The best authorities place special emphasis on this point and claim that good stands

dressings for the wheat following the beans. But, however it may be applied, the application of stable manure will assist in getting a stand of clover, especially if it is a lack of proper inoculation which caused the failure of the seeding last spring.

future misunderstandings, and if a tenant of the better class is attracted by the proposition offered and secured by the owner, he will prove far more responsible in the matter of carrying out the agreement which may be made.

In every case it is wise for the owner to make an arrangement by which all the coarse forage produced shall remain on the farm, as otherwise the process of soil depletion will be accelerated. Taxes, of every nature, constitute a lien on the land and must be assumed by the owner unless otherwise provided by a binding agreement which protects the owner. Fences and repairs to buildings are also expenditures which relate to the value of the land and which the tenant cannot be expected to make except through special agreement.

LILLIE FARMSTEAD NOTES.

The wheat threshing is done for this year. This, I think, is about a month earlier than I ever threshed wheat before. We usually wait until the oats are ready to thresh but the wheat harvest was so much ahead of the oat harvest this year, and it was in such fine condition, the weather was so favorable, that I decided to thresh the wheat first. We had a pretty good-sized job and I thought it would be better to divide the threshing, under the circumstances, and not wait until the oats were ready to thresh. Threshing at Lillie Farmstead is rather a slow job, because we put the most of the wheat in the barn; in fact, we usually put it all in the barn, for this year we had a little extra acreage, and then when we thresh we put the straw all in the straw barn. The barns are first filled pretty full with hay and then the wheat is put on the scaffolds and on the hay mows so that when we thresh it is not a very good place to get the bundles down to the machine; no rush work can be done. Usually before we get through the straw mow has to be tramped and we have to stop the machine and all go into the straw mow and assist in tramping in order to get the straw in. We did this this year. Consequently the machine cannot make a record, even though we have a splendid yield of wheat.

As I have before stated, the wheat prospects were good and the threshing test proved that I was correct. We had in all, 53 acres of wheat and threshed out, machine measure, 1,613 bushels, making a trifle over 30 bushels per acre for the entire acreage. This, under the circumstances, I consider a good yield because none of this wheat was upon what I call my best land. It was all on land that I had recently purchased, some of it only two years ago, and none of the land has had stable manure applied for the last quarter of a century. It was really an exceptionally good year for wheat this year, or probably I could not, on this kind of land, have gotten this yield of wheat. Of course, I owe this good yield of wheat to several conditions. In the first place we got the ground plowed early in August; we prepared it thoroughly, having plenty of horse power to do it with, and got it fitted so that we sowed it the first of September and then I gave a good heavy application of commercial fertilizer because I had no stable manure to use on this land. As long as I own the land it never will receive any stable manure because it is too far away from the barn to manure it profitably. I think very much credit for the good crop of wheat rests with the fertilizer in furnishing available plant food to give the plant a good start. Besides this, I have one of the finest catches of clover on the entire 53 acres that I ever had. It is almost a mat over the entire area and it looks thrifty.

One thing I am proud of is my two straw barns being so full of nice, clean straw for bedding this winter. The straw is packed in better than ever before, and is of good quality.

COLON C. LILLIE.

COVER CROPS.

For a number of years we have been experimenting with some sort of a catch crop which would give something back to the soil while growing, and at the same time protect the ground during the winter months from blowing by the usual winds and excessive freezing. We have tried crimson clover, a quick catch and growing crop, but have abandoned it because of its unreliability in making a stand when the weather man happens to order a dry spell after sowing.

The most satisfactory crop all around for us is rye, yet the serious drawback here is that nothing is put back into the

soil while this is growing. Its advantages, however, are its sureness of a catch and hardness in withstanding excessive weather, though it is extremely tough, yet a place in a field where water stands will at times kill it mostly out.

As to the amount of humus given to a soil when this is turned under, it will depend upon the length of stalk and thickness to which the ground was sown. We sow in between corn rows just before the final cultivator trip and it is thus easily sown and as easily covered.

There is a one-horse seeder made which will fit in between the rows and do the job in first-class shape but we have not thought it worth while to invest when the other way is so easy and the ground ground has to be cultivated anyhow.

Other "tries" for a cover crop are Canadian field peas. They die, of course, yet cover the ground well if they are to be left for the winter. Another is red clover. When it is possible to get a catch in wheat or oats, then red clover is a mighty good cover crop. But it can not be sown after another crop and be depended upon with any degree of certainty.

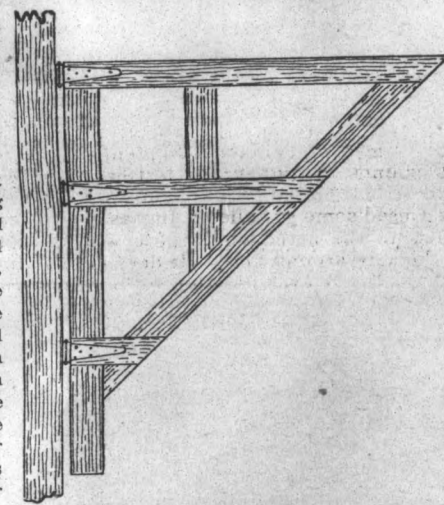
On some places and crops we have, and are, trying oats the same way. If sown heavily enough we believe that they have their place and that as a mulch for over winter they are mighty good helpers.

Ohio.

R. E. ROGERS.

A WAGON BOX HANGER.

The accompanying illustration, and this short description, will explain how the writer made a wagon box hanger, or support. The particular advantage of this hanger over others, is that it folds back out of the way when not in use. Two-inch by six-inch timbers were used to make the hangers, two of them being used as shown, placed eight feet apart,



they were fastened to the side wall of the wagon shed, with three large hinges for each hanger. When not in use, they may be held in position by means of two large hooks, and when not in use, they fold back against the wall and occupy only about three inches of wall space. The manner of making same is plainly illustrated in the cut.

J. E. B.

AGRICULTURAL EDUCATION.

It is gratifying to note the rapid growth of public sentiment in favor of agricultural education. The sentiment is a worthy one, and its full realization is necessary to increased prosperity of the country. We can draw a large amount of sustenance from the soil, even with very crude methods of farming; we can be seemingly prosperous during a speculative epidemic when the activities engendered by the myriads of Peters' to pay Pauls', which are called business, and during the time indifferent agricultural methods may serve our purpose. But in the final analysis it will be found that more and more dependence must be placed upon agriculture; and to be able to carry the burden, agriculture must in all cases be intelligently conducted. The rule must be that the administration of the farm be as economically correct and exact as that of the best appointed factory.

Wastes must be prevented, fertility conserved, the needs and abilities of soils understood, the purity and soundness of seed secured, the knowledge of correct animal breeding become as common as that of the multiplication table; in short, farmers must become as intelligent a class in their line as the professional classes are in their respective lines. Farming must be recognized as one of the professions. A thorough

knowledge of farming involves a wider range of studies than any other profession, therefore the education of the boy who is to be a farmer should begin when he is young; he should begin to imbibe some knowledge of the arts he is to practice, and with them he should get a taste of the enticements of agricultural education that will create a desire for more advanced work in a higher grade. In other words, the primary schools should be profitable feeders of schools of agriculture, thereby increasing the number of farmers who will be equipped to maintain themselves against any competition that the world may subject them to.

Canada.

W. R. GILBERT.

ERADICATION OF CANADA THISTLES.

In looking over an old issue of the Michigan Farmer my glance rested upon an article upon the eradication of Canada thistles. The advice given by the writer of the article was thorough cultivation. While this is an excellent way of eradicating the pest, yet it frequently happens upon the average farm that there are small patches scattered here and there, where it is not alone inconvenient to cultivate but often impossible. The thistle not only grows and develops in cultivated fields but also flourishes in the fence corners, along the road sides, in the wood lots, and the permanent pastures. In these places a different method will, of necessity, have to be employed.

A number of years ago we had a patch in a clearing. At that time cultivation was impossible. Another method consequently was followed. Today you can not find a thistle there. In fact, for several years the patch has been completely eradicated. Two years ago several large patches became thoroughly seated in the pasture field. This summer only a few slender plants appeared, and these have since disappeared.

Such was the result: now to the method of procedure. Just this simple practice: Salting the stock on these thistle patches. Care being taken to press into the ground with the heel a thistle before applying a small handful of salt. Of course, the whole patch would not be covered the first, nor the second or third salting, but finally the hardest plants would be treated. With each application the patch will grow smaller and the hardy thistles fewer, until the last thistle is driven back into the ground by the continued licking and nipping of the stock.

Following the practice of salting the stock regularly upon the thistle patch will cause them to hang around it, to lick the ground and to nip off the tender young thistles. As a Canada thistle can not live under ground but dies if kept down for a few weeks, there is only one result—the eradication of the patch. Of course, this method would not be applicable where the entire field is infected, but for scattering patches in uncultivated places it has proven successful.

Oakland Co.

E. S. C.

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The seed we import is high grade. Samples and prices, together with government test, mailed upon request. Will also mail pamphlet giving information of real value. Alfred J. Brown Seed Co., Grand Rapids, Mich.

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A CORRECTION.

In the advertisement of the Papee Machine Company, in which they advertised the Papee Pneumatic Ensilage Cutter, there was an error in printing one of the distributing points. It was spelled Columbia, Ohio, instead of Columbus, Ohio. From the fact that in this advertisement they offer to give free a booklet on how to prepare ensilage, some of our readers may have written for one without getting it. The booklet being of considerable value to any who are building, or thinking of building a silo, if they will address the Papee Machine Company, Box 50, Shortsville, New York, mentioning the Michigan Farmer, they will receive one free, postage paid.

Please mention the Michigan Farmer when writing to advertisers.

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Farmers' Favorite One-Horse Five Disc and Five Hoe Grain Drills embody all the good points found in large size Farmers' Favorite Grain Drills—force feeds for both grain and fertilizers, detachable grass seed attachments, etc. Sow your shock rows with the Farmers' Favorite. Plant your grain between the rows of standing corn with this time-tried machine. No one runs any risks in purchasing a Farmers' Favorite Drill, because it is so strongly and fairly guaranteed by its makers, The American Seeding-Machine Co., Incorporated, Springfield, Ohio. Send for a Farmers' Favorite catalogue. If you are thinking of buying a one-horse grain drill, go to your implement dealer and insist on seeing the Farmers' Favorite.

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A copy of statistics from writings of some of the best Agri. Experts of U.S. on the value of cultivation, also free trial proposition for asking. The reports of trials bring more orders.

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Goen and Mealy varieties. Goen wheat is a wonderfully hardy, productive red wheat; stiff straw, bearded, and one of the best all around wheats I ever grew. Mealy wheat is also a red wheat but it is the bald variety. It is a most excellent wheat for very rich ground. OOLON C. LILLIE, Coopersville, Mich.

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Yield 274 bu. from 53 acres, 357 bu. from 8 acres. Bald wheat, very stiff straw. Price \$1 per bu.; add 25¢ each for new Stark A bags. J. W. Robinson, Holt, Mich.

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Northern grown and of strongest vitality. We handle export grades only and can furnish grass mixtures suitable for any soils. Write for catalog. WING SEED CO., Box 242, Mechanicsburg, O.

EXPERIENCE WITH NIGHT FLOWERING CATCHFLY

I was much interested in the inquiry of W. J. R., of Washtenaw county, and the answer thereto, in the Michigan Farmer of July 15, in regard to "Night Flowering Catchfly" (*Silene Noctiflora*). I have been battling with this weed for many years and confess I have not eradicated it, though I have tried different ways. But I have gained much experience and have become acquainted with its habits so that now I think I can eradicate it if I have a mind to carry out my idea. It is spread all over this neighborhood and my own farm is pretty thoroughly seeded with it, so that it would perhaps be harder to eradicate it on my farm than it would be for W. J. R.

First, as to its habits: The editor says it is an annual. So says Wood's botany, which I have at hand. But it is certainly not an annual in this neighborhood. The plants live over winter (whether more than one winter or not, I do not know), and start a vigorous growth early in the spring and commence to blossom when the apple blossoms are out, or about corn planting time. Then they very quickly mature seed if they are allowed to. A plant will grow from seed and blossom and mature seeds in a short time, too.

My plan to eradicate the weed is this: Give all cultivated crops thorough cultivation, allowing no weeds to go to seed, using the hoe if necessary. This I do. But I have not prevented it from going to seed in the clover crop. This is where I have failed in the past. After the cultivated crop, seed to clover, using a spring grain crop as a nurse crop. Not many catchfly plants will blossom the summer the grain crop is harvested. What few do, will have to be looked after and cut or pulled by hand. Many catchfly plants will have started however, will live over winter and will grow "to beat the band," the next spring. Then, in order to prevent them from going to seed, the clover crop will have to be cut early—very early—too early, in fact, for the benefit of the hay crop. Then, after the clover is cut the ground should either be pastured or plowed to prevent an after crop of catchfly seed. Cattle are not averse to eating it if they have access to it.

It will not do to depend upon mowing the field after harvest to prevent the catchfly from seeding. If you do, you will miss your mark. The catchfly has a habit of sprawling around over the ground so that the mower will not do clean work with it and will leave many seed pods to mature seed, and every seed pod will have hundreds of seeds. Neither can you successfully gather the ripe catchfly plants and burn them, because when a ripe seed pod is inverted the seeds pour out like so many small shot and are lost on the ground.

You will not have an easy snap to exterminate the catchfly, I assure you. Ogemaw Co. A. L. DUNLAP.

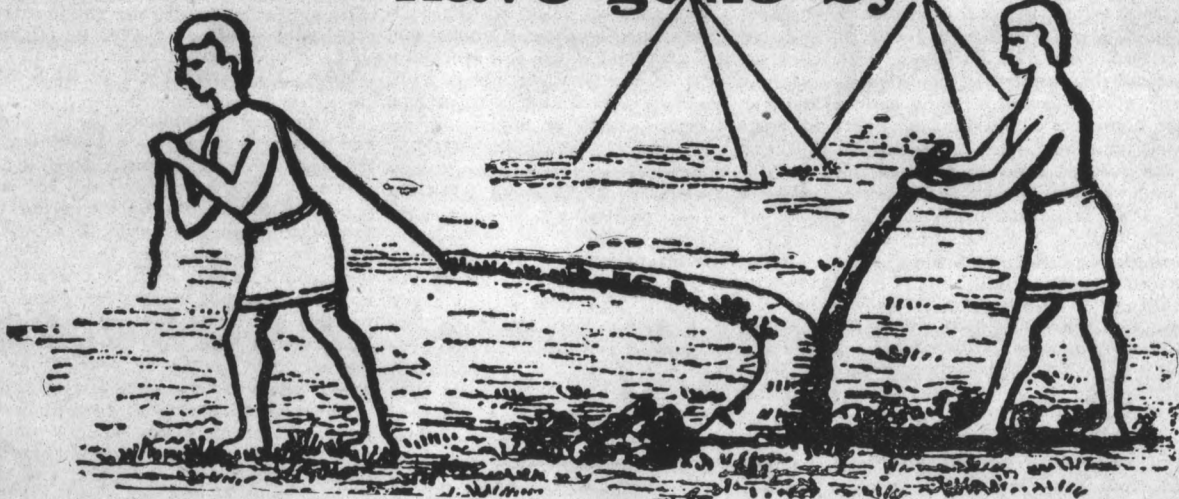
A SILO LINED WITH BRICK.

Can you tell me what to do with my silo? When I built it I was told that I could go into the ground and build up with brick. I went down to the depth of my barn basement—about 10 feet—and bricked up, using cement mortar. However, the silage spoils about a foot in from the wall. Could I remedy it by putting on a coat of cement a couple of inches thick, or will I have to fill in and make a new bottom? H. H.

H. H. has the correct idea. All that is necessary now is to plaster that brick wall on the inside with good rich cement mortar just as you would a cistern. It will keep out the air and moisture and prevent the silage from spoiling. A brick wall is too porous and too uneven to make a good silo. It must be plastered on the inside with cement, and the same is true of the grout wall. A grout silo would be absolutely unsatisfactory unless plastered on the inside with good rich cement mortar. COLON C. LILLIE.

EARTHWORMS AND SOIL PRODUCTIVENESS.

Foreign experiments indicate that "earthworms do not appear to have any marked direct effect on the production of plant food. Organic matter seems to decompose with formation of nitrates equally quickly whether they are present or not. They are rich in nitrogen, containing about 1.5 to 2 per cent, and they decompose rapidly and completely; thus they furnish a certain amount of plant food to the soil when they die. Their chief work is to act as cultivators, loosening and mulching the soil, facilitating aeration and drainage by their burrows."

Old methods
have gone by

PRIMITIVE EGYPTIAN PLOW

Get Good Wheat

and plenty of it, by using modern
methods and A. A. C. FERTILIZERS

How W. A. Wortley, Lenawee County, Michigan, does it:

"I plow the ground about 3 or 4 inches deep as soon as the oat crop is off, follow with harrow the next day, and, should it rain, I again harrow all that I have plowed. Then when I get through plowing, I harrow and roll it several times. Then about September 12th to 15th, drill 8 pecks of clean seed per acre and use about 250 pounds of high grade fertilizer to the acre, either 2-8-5 or 3-8-6 analysis. These fertilizers seem to be best suited for our sandy soil. I never got less than 25 bushels to the acre, except one year when I used some so called "Just as good" fertilizer and got less than 20 bushels. Last year I got 32 bushels to the acre, while those who do not use fertilizer, usually get from 10 to 20 bushels of wheat to the acre around here. It does not pay to use an incomplete fertilizer or ground bone deficient in Potash, as the straw will lodge without maturing. I have never failed to get a catch of clover by this method. The extra wheat gained by the use of high grade soluble complete fertilizer, will more than twice pay for the fertilizer used, to say nothing of a sure catch of clover and a heavy growth after wheat is cut."

Our soils in the Middle States will produce a good crop of wheat if the farmer goes at it in the right way and uses A. A. C. Fertilizers. This is a well known, established fact.

While the farmer is obliged to take some chances on things beyond his control, he should not take any chances as to the Fertilizer he applies for that is something he can control. There is nothing so expensive to the farmer as a poor crop.

THE A. A. C. FERTILIZERS

for wheat, as well as for other crops are made not only to contain the full percentages of plant food according to guaranteed analysis but—we go further than that. The agricultural value of our Fertilizers is given the first consideration because we look to the future. We want every farmer who uses our Fertilizer to get good results and increase his orders each season. That is why we are doing a tremendous business.

OUR FACTORIES NEVER SHUT DOWN

Our policy is best materials, good bags, mechanical condition perfect—the best goods that skill, experience and capital can put together and sell at the lowest prices.

While the supply lasts, we will furnish this season A Banner Dissolved Bone, fine ground and perfectly dry, guaranteed to analyze not less than 34% Available Phosphoric Acid. The actual analysis is about 36% Available. This Fertilizer is produced entirely from high grade animal bone, and is considered to be the best form of Phosphoric Acid for fertilizing wheat.

If there should be no agent in your town selling our Fertilizer, write us. It might mean business for you.

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POULTRY AND BEES

COST OF RAISING BROILERS.

That there is profit in the poultry business goes without argument. Just how much depends, of course, on circumstances. On a farm where there is plenty of range and green forage the cost of keeping is less than where space is less ample and all food must be purchased. Experiment station reports have shown how, under favorable conditions, eggs can be produced for seven cents a dozen. In fact, on the average farm in summer the cost is undoubtedly below that figure, since fowls at large secure practically their entire living without any cash expense whatever. Still the hens have to be kept the year around.

Last autumn a certain woman of my acquaintance decided to raise some broilers. The weeks slipped away before she got started and it was past the best season for them when she finally got them at an age to sell, but she got 20 cents a pound for them alive and they averaged a little over two pounds. All their food from the very first was purchased in small lots at market prices, except clover chaff which a neighbor donated. They were fed five times each day until they were eight weeks old, at which age they were disposed of. Leaving out the clover chaff, the total cost of food for the eight weeks amounted to exactly ten cents for each broiler. These chicks were hatched in an incubator, hovered in brooders and fed according to a certain system. They were pure-bred Barred Rocks.

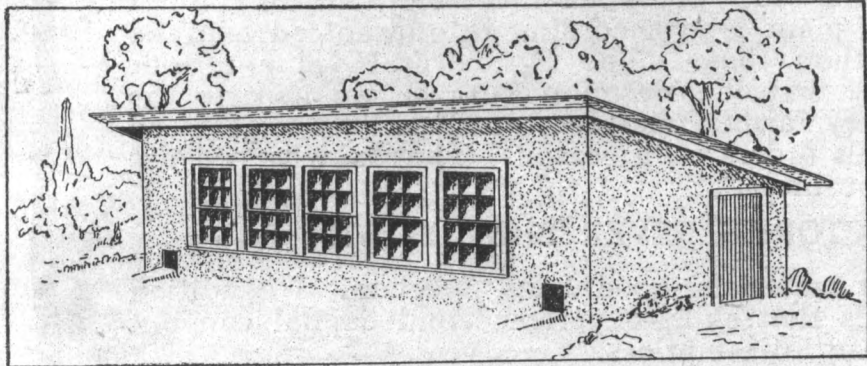
This spring in March the same thing was repeated except that the chicks were given their liberty through the day, the weather being such that confinement was unnecessary. In this way a portion of their food was gleaned from the lawn and garden so that the feed bill was considerably less than ten cents per chick for the eight weeks. These broilers sold the first of July at 18 cents a pound live weight at a local market, weighing two pounds each.

The figures quoted show that there is not only a profit in broilers but a very attractive one. Had the first lot been ready for market a month earlier the price would have been considerably higher than that received.

Genesee Co. E. E. ROCKWOOD.

A MODERN CEMENT POULTRY HOUSE.

The poultry house herewith illustrated has several features that should appeal to the poultryman, and while the interior arrangement may not differ very materially from your own house, the construction of the walls, I think, will. The walls are solid cement, about three and one-half inches thick, built as follows: Frames are built of wood for the openings, using 1½x3½-in. studding. These frames are set up and held in place by temporary timbers and braces, and truss



Elevation of Concrete Poultry House, Showing Doors and Window Space.

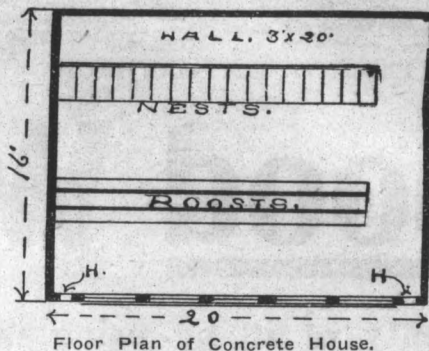
metal lath are fastened in the center of the frames, also set up and wired against false timbers for the entire outside walls. The metal lath is wired to the temporary pieces on either the interior or the exterior, and the opposite side is then plastered with a heavy coat of cement and sand, using a mixture of about one part cement to three or four parts sand; when dry, remove the temporary timbers and give the other side a coat of plaster, and you will have a solid cement wall about three or more inches thick. Paint the exterior with a thin mixture of pure cement and water. Cover the roof with any material that suits your fancy, but the writer recommends some good brand of composition roofing. Bolts may be placed in the cement, while wet, for

fastening the roof plates, also for any other purpose where you desire to fasten wood to the walls. The floor plan and cross section of house explain the interior arrangement, H being the entrance doors, R the roosts, D B the drop boards, P a wire partition, H a hall, N the nests, and W T the water trough. The windows should be arranged to open out at the top, on hinges, and, if desired, the entrance doors may be closed with a cord and pulley arrangement by running the cord up the wall and down the roof into the hall. Fill in the floor six inches with sand or earth of some kind; do not put in cement, wood, brick or stone.

Texas. J. E. BRIDGMAN.

MARK TURKEY BREEDING STOCK EARLY.

It may seem early to begin to select breeding stock a year in advance of the breeding season. The idea is this: every successful turkey raiser wants to improve his stock every year. If he produces turkeys for market he wants to get fast growing poults, so vigorous that they will make the best use of all food fed them and so healthy that the loss



Floor Plan of Concrete House.

will be reduced to a minimum. A turkey may appear to be especially strong and hardy after it has matured, when in fact it may have a weak point in it somewhere which would have been discovered if its growth had been watched from the time it was hatched.

If the poultryman keeps a watchful eye on the growing broods he will note that certain members of each flock grow faster than the others, always look healthier than the others and never show any signs of ill health. These are the ones that he should mark to keep over for stock purposes.

RELIEVING EGG-BOUND HENS.

Sometimes cases of egg-binding occur. These are most frequently met with among young pullets or very old hens. When pullets become egg-bound it is owing to the egg passage not having become sufficiently developed to allow the egg to easily pass along. In the case of old hens the fowls may be too weak to deliver the eggs. Fowls show signs of egg-binding by squatting down, or frequently going to and from the nest, or by remaining on the nest a considerable time.

When signs of egg-binding are seen, the first thing to do is to take up the

piece of the egg shell. When found, it should assist the operator by gentle effort to draw out the whole of the broken egg. The fowl should then have a dose of warm castor oil, and be placed in a roomy pen by herself and kept quiet. Cases of egg-binding are not difficult to cure, if the symptoms are quickly noted and the sufferer treated before her strength has become exhausted in her vain endeavor to deliver the egg.

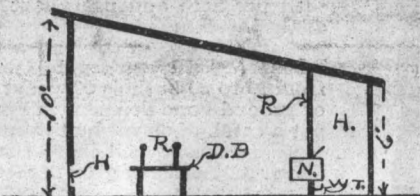
Canada. W. R. GILBERT.

HOW TO FIND THE QUEEN BEE.

Very often, beginners in bee-keeping and others who are not beginners, have trouble in finding queens. During a honey-flow, with a colony not excessively populous and gentle bees clinging to the combs, the simplest way is to take the combs out and examine them. Put them in a comb basket and, if the queen has not been found, look over them again, putting them in another comb basket. Look in the hive also. It is necessary to use as little smoke as possible so as to avoid causing the queen to run and hide.

There is no short-cut toward finding a queen. You have got to look until you find her. Do not use much smoke or you will set the bees to running, and then it is very hard to find the queen. A frightened queen will run from the light and hide in the first crack or dark place she can find. You will be very likely to find her on one of the combs that contain brood. If you do not find her after looking the combs over several times, the likelihood is that you will not find her if you keep on for half an hour. But if you close the hive and come back in half an hour you may find her the first thing.

One of the plans is to put the combs in pairs, having the pairs a little distance apart, using an additional hive for the needed room. After a time the bees without the queen will show signs of uneasiness, and the operator may look for the queen in the brace of combs where the bees are quiet. If a queen is removed from a hive very quietly the colony may not discover its loss for some hours, while the loss may be discovered in a less number of minutes if the bees be



Cross-sectional View of House.

forcibly thrown from the combs, or be otherwise roughly handled.

In favorable circumstances, such as are described in the beginning of this article, and if the operator has been careful to not frighten the queen, she will be found on the combs, and often she has not even interrupted her work and can be seen laying eggs. Generally she has retreated from the light and taken refuge between the bottom of the comb and the bottom bar, if there is space there, as there generally is. Then when the operator looks over the comb there begins a game of hide and seek.

When the operator looks for the queen he always turns the comb and himself so that the sun will be at his back and strike on the comb. As soon as the comb is in that position the queen skips to the opposite side, remaining near the bottom and among the bees that are there, for the bees, as well as the queen, have retreated to the lower part of the comb, except those that are filling themselves with honey. Then when the operator turns the comb over the queen skips again to the other side, not that she cares for the operator, but to get away from the sun and light.

Some bee-keepers, when in search of black queens, remove all combs and take the hive and dump it in front of the entrance. Then they set it back and clap an entrance guard over the now empty hive. The bees are all shaken off the combs and the entrance guard is eagerly scrutinized to see when her majesty strikes the obstruction. I do not know but what, all things considered, this is about as quick a way to find black queens among black bees as to undertake the very uncertain and laborious method I have already described. Unless one wishes to clip a queen's wings, or to replace or sell her, it is a waste of time to try to find her. If one sees eggs regularly laid, and brood in all stages, with sufficient stores, there is no need whatever of hunting a queen.

New Jersey.

F. G. HERMAN.

LUCKY MISTAKE

Grocer Sent Pkg. of Postum and Opened the Eyes of the Family.

A lady writes from Brookline, Mass.: "A package of Postum was sent me one day by mistake.

"I notified the grocer, but finding that there was no coffee for breakfast next morning, I prepared some of the Postum, following the directions very carefully.

"It was an immediate success in my family, and from that day we have used it constantly, parents and children, too—for my three rosy youngsters are allowed to drink it freely at breakfast and luncheon. They think it delicious, and I would have a mutiny on my hands should I omit the beloved beverage.

"My husband used to have a very delicate stomach while we were using coffee but to our surprise his stomach has grown strong and entirely well since we quit coffee and have been on Postum.

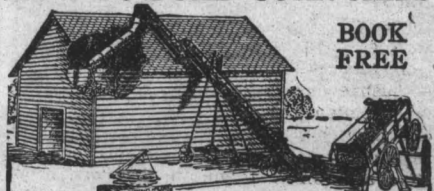
"Noting the good effects in my family I wrote to my sister, who was a coffee toper, and after much persuasion got her to try Postum.

"She was prejudiced against it at first, but when she presently found that all the ailments that coffee gave her left and she got well quickly she became and remains a thorough and enthusiastic Postum convert.

"Her nerves, which had become shattered by the use of coffee have grown healthy again, and today she is a new woman, thanks to Postum." Name given by Postum Co., Battle Creek, Mich., and the "cause why" will be found in the great little book, "The Road to Wellville," which comes in pkgs.

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

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

SINGLE COMB BLACK MINORCAS—A few more pullets to spare. Eggs \$1.50 per setting. R. W. MILLS, Saline, Michigan.

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LIVE STOCK

FEEDERS' PROBLEMS.

Summer Care of the Calves.

Upon the summer care and feed of the calves will depend much of the profit or loss in raising them. If they are allowed to run in a bare barn lot with only skim-milk as feed, they will certainly not keep in thrifty condition and make a satisfactory growth. During the balance of the season they had much better be kept in the barn where the flies will not bother them in the daytime, and be given the run of a convenient pasture or barn lot at night. Where bright clover hay is available, it will prove a much better roughage for them than the dry grass which may be left in the dormant pasture, and better yet, some succulent forage, such as corn, or alfalfa, where this is available, will serve to keep them thrifty and growing rapidly. If a suitable supplementary ration is fed in connection with such forage and skim-milk, the calves will prove a profit to their grower. If there is plenty of skim-milk available, corn meal will balance it up nicely and some ground oats and a little oil meal added will serve to make up a desirable ration.

If they are to make profitable beef animals in the end, the calves must be kept growing from the start. The neglect of the calf crop during mid-summer is the most potent cause of the cheap and inferior grade of market cattle produced on the average farm, and there is no department of farm operations which will pay better for a little thought and judicious investment of labor than will the growing calves.

Maturing the Pig Crop.

With the hog market hovering around the \$7 mark, there is every incentive for those who have spring pigs on the farm to keep them in a thrifty growing condition and taking on a liberal allowance of flesh every day. There is quite a general tendency among farmers who keep but few hogs to run the spring pigs through the summer as cheaply as possible and finish them on the corn crop. The trouble with this plan is that if the pigs are not kept growing throughout the season so as to have well developed frames when corn feeding begins, they will not reach market weights until late in the fall, and the cost of the finished product will be much greater than if the pigs had been fed better earlier in the season, even upon more expensive feeds. Pigs, and in fact, all young animals, make much greater gains upon a given amount of feed during the early period of their lives. It takes a certain amount of feed for a maintenance ration, simply to keep the animal alive and repair the body tissues, without making any gain at all. The longer the period during which this maintenance must be fed, the greater the cost of the gains secured. Then the animal that is not well fed from the start and continuously to maturity, does not get a corresponding development of his digestive organs as compared with the well fed individual, and when it is desired to finish such an animal it will be found that he has not the capacity to digest and assimilate a large quantity of feed, and that for this reason he will not make as rapid or as profitable gains as the one that has been well nurtured from the start.

Then this common plan of carrying the bulk of the spring pigs through for a late finish has a bad influence on the market, since large numbers of this class of hogs are dumped onto the market at a time when it is over supplied, with the natural result that prices take a slump. As a practical proposition, it is usually the "early bird that catches the worm" in the maturing of the early spring pigs.

SILAGE PROFITABLE FOR BEEF PRODUCTION.

The question, "Is silage an economic feed for beef cattle?" is being investigated by many stock farmers.

In a test at the Kansas Station, "a lot of ten steers were fed on corn silage, chopped alfalfa hay and a grain mixture of equal parts ground corn and Kafir corn, in comparison with another lot of twenty steers of the same average weight and quality fed exactly the same feed except silage.

"* * * For every hundred pounds of gain 461 pounds of silage saved 18 pounds of grain and 156 pounds of alfalfa. At present prices of these feeds, this is an

equivalent to \$4.51 per ton for corn silage which can be produced for \$2.00 per ton."

This is not all, for the cattle were shipped to Kansas City and sold at the stockyards and the silage-fed lot brought 25 cents a cwt. more than the others. This is making a profit in two ways: the cost of feed reduced and higher price for animals. If the cattle that are sold for beef each year came up to this standard it would add thousands of dollars to the wealth of our farmers. The fact that so many feeders are putting in large silos is evidence that they believe the above results can be accomplished by feeding silage.

E. H. C.

COMFORT IN THE CALF PEN.

The writer was in a cattle barn last fall where International show cattle were being fitted. It was in the forenoon and the herdsmen were cleaning out the stalls. They were removing every bit of bedding that was at all soiled. Then they were shaking up the remaining litter and putting in new, clean straw until the calves had a nice, soft bed six or eight inches in thickness.

Scarcely would the manure cart be past a stall and the fresh bedding put in before the calves were lying down again. The clean soft bed coaxed them to lie down and be quiet. And when they are quiet and contented they will grow best. Next to the animal's breeding and his feed, comfort means more than any other thing in making profitable gains.

The calves in this barn were all fat and sleek and every one of them was growing splendidly. One of them not yet one year old has been gaining over three pounds per day for two or three months. He did not get milk either.

In addition to the right kind of a bed a few other things are essential for the

same order each day. Quietness is a twin brother to regularity and no man is a good feeder who is not very quiet in the barn.

The feed itself has much to do with comfort. Palatable food will leave a keener sense of satisfaction with the animal. He will be more contented and restful for having eaten feed that he likes. A feeder of a prominent show herd remarked recently that the biggest thing in feeding animals for show and in keeping them in that bloom of flesh desired in show animals, was to learn what the animal likes and to feed it that. Of course, barns and yards, feed, and all conditions cannot be ideal anywhere but there are always many ways by which a little comfort can be added without much extra effort, and it will always pay.

Iowa.

H. E. MCCARTNEY.

WEANING THE COLT.

In my experience in weaning colts I find that it is best to teach the colt to eat before the task of weaning has begun. I always teach them to eat as soon as they are old enough.

I find that the loss in flesh may be reduced to a minimum if the colt is taught to eat with its dam. It is not the best practice to feed the colt large quantities of grain while it is with its dam, but rather to get him to eat small amounts. Teach him to stand tied to his mother before he is weaned so he will not fret when taken away from the mare. Colts that have been taught to lead and stand tied are not so troublesome during weaning time as those that have not been handled.

About six months of age is about the proper time to wean a hearty and strong colt. Many good horsemen prefer to wean them at once while others wean



Well Grown Pigs 130 Days Old, on Farm of J. Lahuis, of Ottawa County.

best of comfort. One of them is sunlight into the stall. During the summer it may be permissible to darken the windows to keep down the flies and to coax the animals to rest more during the long hot days. In the cooler autumn weather and during the winter there is no need of darkened windows. On the other hand, sunlight, and as much of it as can be gotten, is needed to add warmth and cheer to the stall. Everyone has seen examples which illustrate this in going into a barn or shed where there was a bright streak of sunshine streaming across it. The stock always prefer the streaks of sunshine to the cool, damp corners.

Cleanliness of body is another essential. Of course, when the bedding is kept bright and clean the animals will not become badly soiled. A good, brisk brushing once in a while will pay if the animals are pure-bred or are being fitted for show or sale. It goes without saying that no one will tolerate lice. These little parasites not only annoy the animal but suck blood from him, thus reducing his vitality as well as causing discomfort. There is danger of their getting started once in a while and they should be watched for and gotten rid of at once if any appear.

Regularity in care and feeding is a prime necessity in the production of comfort. The animals become accustomed to eating and drinking at certain hours and if they are not cared for at those times they will worry and fret. This uneasiness is more than is shown externally, for the digestive system is more or less deranged when the calf has to wait until some time past the regular time. All the good feeders are extremely regular in habit. They may be slow but they are regular and do their work in the

them gradually allowing them to suck once or twice a day for a number of days before they are taken away entirely. After the colt has been taken away it is essential the mare should have good care, her udder should be washed at least twice a day in cold water and spirits of camphor. This dries up the milk glands and prevents the udder from becoming caked and feverish.

After the colt is taken away from the mare he should be provided with a box stall to stand in, this gives him more room to exercise than does the single stall. After he is provided with a box stall do not think that this is all that he needs; but turn him out every day and if it is possible turn him on the grass. Bran and oats make a good grain ration. The feeder is the only one who can tell how much feed the colts require for their best growth and development. They should have all they will clean up at one feeding. Nothing will cause a colt to grow unthrifty any quicker than allowing stale food to collect in the manger from one feeding to the next. Their digestive organs need rest at times. The colt should never be allowed to lose its foal flesh but kept on the push from time of birth to maturity.

The colt's stall should be kept clean and its hoofs must be watched and kept trimmed. This will keep them from wearing short and uneven. From the time the colt is weaned until fully grown he should be fed on a flesh and bone forming ration and given the run of a good pasture at all times when the weather is thought favorable. While the colt is first being handled great care should be taken not to get it excited and afraid but be as kind as possible and it will soon learn to love you for a master.

Illinois. COY C. MCCUAN.

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VETERINARY

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

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

Functional Paralysis.—My mare, seven years old, is wrong in hind quarters. When she travels her hind quarters wobble and twist, her hind legs wind partly around each other and she has poor control of them. When I bought her three months ago I failed to notice anything wrong with her; this was on account of my poor eyesight. She seems to be sound in all parts except back and hind quarters. J. O. E., Dover, N. H.—This mare has either met with an injury affecting her spine, or else has functional spinal disease causing her to have only partial control of hind legs. A recovery in such cases is always doubtful. Fairly good results may follow giving her 1 dr. ground nux vomica at a dose in feed two or three times a day. Allow the sun to shine on her back part of time and it will have a good effect; also apply one part turpentine, one part aqua ammonia and four parts olive oil three times a week.

Infectious Ophthalmia.—Some time ago one of my cows commenced to have trouble in one eye. At first discharge was watery, soon becoming thicker, and I applied burnt alum, but the eye got no better. The eyeball is festering and the sight is gone. I also have five calves that have had a similar trouble since, and they have gone blind. Now my cows are becoming infected, one after the other. Our local veterinarians do not seem to understand this ailment and as I believe it is catching would like to have your advice. P. W. L., North Branch, Mich.—Your cattle are suffering from infectious or contagious ophthalmia and this is a catarrhal condition which may be the result of local causes or it may assume an epidemic form and affect a great many in the same herd. It is doubtless the result of some bacterial infecting germ when it assumes an epidemic form. You made a mistake in applying burnt alum, for this has a caustic effect and it always does harm when applied to the eye. Blow some boracic acid into the sore eyes once a day, also blow calomel into them once a day. If their bowels are constive give epsom salts to them, and if feverish, give a tablespoonful of powdered nitrate of potash at a dose in feed or water twice a day. You should disinfect your stables by burning sulphur or using coal tar, and your cattle should be kept in a darkened, well ventilated, clean stable in day time and allowed to run in pasture at night.

Atrophy of Hip.—You prescribed for a mare some time ago that was lame in foot and your treatment made her well; now I find the muscles of the hip have shrunk and I would like to know what will make them grow. S. B. B., Yale, Mich.—Rub hip with equal parts turpentine, aqua ammonia and olive oil three times a week and feed her oats twice a day.

Chronic Cough.—Have a six-year-old mare that has had a cough since having distemper last winter. There is a rattling sound in throat at times and she shows symptoms of heaves. She has been in poor condition all summer and although bred several times fails to get with foal. Have been giving her equal parts lobelia, skunk cabbage, blood-root and yellow seal in feed for some time without satisfactory results. I also put tar on her tongue once a day. B. F. C., Clifford, Mich.—Apply iodine ointment to throat three times a week. Give her 1 dr. powdered opium, 1 dr. powdered lobelia, 1 dr. ground nux vomica at a dose in feed two or three times a day. Feed no clover or musty, badly cured fodder of any kind—grain and grass is the best summer feed for her.

Navel Infection.—Have lost two young calves lately and another is affected much the same. A bunch has appeared on each one and they have also had bowel trouble. J. K. L., Ashley, Mich.—Give calf 5 grs. quinine and 15 grs. subnitrate bismuth at a dose four or five times a day and apply iodine ointment to navel and bunch once a day.

Debility—Swollen Joints.—Sow had a litter of pigs ten weeks ago; two weeks after she farrowed she was taken sick, partially recovered, but has been weak in legs ever since. Three of her pigs have swollen hocks which stiffen the joints, but they have good appetite. F. L. J., Bellevue, Mich.—Feed your sow less corn and more oats and oil meal; also give her a teaspoonful air-slaked lime at a dose in feed three times a day for a few days, then twice a day. Paint the joints of young pigs with tincture iodine three times a week.

Acidity of Stomach.—My cows seem to have a craving for wood. H. A. S., Danville, Pa.—Give each cow two tablespoonfuls cooking soda, a tablespoonful of salt, two tablespoonfuls of ground gentian and two tablespoonfuls of powdered charcoal at a dose in feed two or three times a day.

Sore Tendons—Contracted Feet.—I recently purchased a young horse that has been driven on delivery wagon for some time and he travels quite sore in front feet. The cords of both legs are sore and his hoofs are contracted. J. G. Beulah, Mich.—Blister tendons with cerate

of cantharides three times a month and blister coronets once a week. Also stand him in wet clay two or three hours a day.

Sheep Question—Indigestion.—Do you consider it safe to turn sheep on rape all day until they become accustomed to eating this kind of food? I would also like to know what to do for a shepherd dog that is eleven years old but bloats after eating and seems to be losing flesh. F. B. N., Gaylord, Mich.—I should regard it as a mistake and attended with some risk of producing bloat and death to allow hungry sheep to run in rape pasture all day. One hour at a time night and morning is long enough for the first ten days or two weeks. Give your dog 1 oz. of castor oil and the same quantity of olive oil to purge him, then give 5 grs. soda mint (tablet) at a dose in feed three times a day.

LIVE STOCK NOTES.

In consequence of the drought in many sections of the country the demand for stocker and feeder cattle in western markets is cut down a good deal, although good rains in some regions have improved conditions.

Sheepmen throughout the country have disposed of a large share of their spring wool clip, and now there is a quieter feeling in the wool markets of the country, with prices generally unchanged.

The recent restricted demand for stocker and feeder cattle in the markets of the country has resulted in sales of such cattle to a great extent to killers, with most offerings that have any merits going for beef at a low scale of prices.

The refreshing rains in the far west and southwest came when greatly needed, for the country was fast drying up, and farmers were rushing their hogs to market in wretched condition. These bad conditions have been reflected in the extremely light weights of the hogs marketed at Missouri river points. At St. Louis, for instance, recent arrivals have been averaging in weight only 160 to 177 lbs. In many sections considerable time will be necessary to bring up the pasture, and many farmers have sacrificed their entire holdings of cattle, hogs and sheep.

Western packers have been slaughtering hogs at the rate of 560,000 head a week recently, compared with 405,000 a year ago and 355,000 two years ago, the packing to last accounts from March 1 amounting to 11,030,000 hogs, a gain of 3,110,000 over a year ago. For the same period two years ago the packing reached 9,585,000 hogs. In a recent week exports of hog products from our shores amounted to 18,754,000 lbs., compared with 11,074,000 lbs. a year ago.

Western markets are still much overstocked with inferior lambs, and not a few of them are marketed by farmers who have no excuse for doing so. Where pasture and corn are abundant sheepmen should hold their lambs and sheep until they are in fat condition, for sending in thin flocks is sure to be a losing venture. Fat mutton is in good demand, but no one wants common grades. The western ranges are now marketing spring lambs, as well as yearlings, and sheepmen in the corn states will have to make good stock if they are to come out ahead in this competition.

In the Chicago stock yards the speculative holders of stocker and feeder cattle have been obtaining a substantial premium for lots of shaped-up, well-bred steers over lots sold just as they come from farming districts, as the "shaping-up" process compels them to accept a big discount for the cattle thrown out. As a rule, it pays the stockman looking for cattle to fatten to pay a fair premium for selected lots, but sometimes the premium asked is exorbitant.

A recent telegram from Kansas City says: "Not in years have the cattlemen of the southwest met such a crisis as came to them during the first week of July. Five days of that week saw 72,000 head consigned to this market. A large share of these were thin stock taken from pastures because the pastures had dried up for want of rain, the heat having been intense for a long period. Some of these cattle had to go back to the country, while others went to Ohio, Kentucky, Illinois, Iowa, Arkansas and parts of the southwest, where there was sufficient pasture. While this crisis is certain to mean losses in many individual instances, on the whole there is merely a readjustment of holdings, and the stock will be carried through with good profit to the new buyers, who have purchased at a bargain. Not since the 'nineties' has it been possible to get stock cattle so cheap."

The Casper, Wyoming, Tribune says: "The lambing season in central Wyoming this year is just about over and the report from the range is to the effect that the percentage is very satisfactory to the sheepmen, it being estimated that the lamb crop will average 90 per cent. The weather conditions this year have been very favorable in most instances, there being very few storms during the lambing season. The shearing season will soon be over in this part of the state, and already many of the flockmasters have started trailing their herds to their summer range on the Big Horn mountains, and it is said there is an abundance of feed on the range. On the whole, the past year has been favorable."

Producing heavy bullocks is rarely done these times, the business having ceased to be a profitable one in most cases, but quite a number of stockmen are now engaged in fattening car loads of prime cattle, partly for the International Live Stock Exposition the coming fall and partly in the belief that fancy heavy beeves will sell up to \$8 late in the year. However, most farmers no longer care to try their luck in making 1,700-lb. steers.

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For Sale by Michigan Agricultural College, East Lansing, Michigan. 1 pure bred Black Percheron Stallion, 2 years old, October 10, 1911. Weight 1400. Write B. S. Hudson.

REG. PERCHERONS FOR SALE—1 stallion, 1 year old and 1 mare, 2 yrs old, both grays. M. A. BRAY, Okemos, (Ingham Co.) Mich.

A. S. WILCOX, JEROME, MICH.—Live Stock and Real Estate AUCTIONEER. Write for terms and dates.

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

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HOLSTEINS—I have for sale a few cows and yearling heifers bred to Johanna Concordia Champion, the only bull of any breed whose 2 grand dams average 34.06 lbs. butter in 7 days. Also bull calves and service bulls. L. E. Connell, Fayette, O.

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

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

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

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

CHESTER WHITES—Sold out but still in the business of raising Chesters and Holstein cattle. Both Phones. W. O. WILSON, Okemos, Mich.

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

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

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O. I. C.—Choice boars ready for service. Gilts and bred sows for September farrow. Glenwood Stock Farm, Zeeland, Mich. (Phone 94.)

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

Poland-Chinas—A few big type Sept. Gilts bred for Sept. farrow. Also spring pigs. E. D. BISHOP, Route 38, Lake Odessa, Mich.

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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

INCREASING DAIRY PROFITS.

The widespread interest in the new move to make dairy farming more profitable through the weeding out of inferior cows by means of cow-test associations is convincing proof that many dairy farmers are alive to their needs. By the test we may know what each cow is doing, but that is not enough. Some way needs to be devised by which we may know what each cow is capable of doing. Each cow should be fed according to what she is capable of producing, rather than by any fixed feeding standard. By weighing each cow's feed and figuring the cost, many cows that are now regarded as poor ones, would be able to show a balance on the right side of the account. This is a phase of the subject that must be recognized if the business is developed to its most profitable capacity.

It is not always the cow's fault that she is unprofitable. Because a man buys large quantities of grain and feeds it with a lavish hand, that is not evidence that he is a good feeder. The average dairy farmer feeds his cows alike for two reasons. One is the matter of convenience, and the other and more binding one is the idea that what is good for one cow must of necessity be good for all other cows. The first reason is excusable, but the other is not, and must be rooted out of our minds before we can build up our herds intelligently.

The quantity of food grown per acre with a given expense constitutes a very material element in the cost of producing dairy products, and one that must be given serious consideration by dairy farmers. It is not only a question of knowing how to feed and care for cows, the mixing of suitable rations to produce the most milk, but in order to make the business successful, we must have the grain and roughage at a price that will permit of profit. The profitable feeding of dairy cows begins with the growing of the feed, and not, as many seem to think, when the cows are being fed. The cost of feed, whether purchased or raised on the farm, is an important factor, and one that we cannot afford to overlook.

Increase Crop-Producing Power of Land by Proper Feeding of Good Cows.

In evolving a system of crop growing carrying the largest possibilities and insuring the best returns, we must adopt a suitable rotation of crops that will provide feed for our cows and conserve the fertility of our soils. We must feed our soils as well as our cows. Our best returns lie in this endeavor. Feed the soil by feeding high-class cows. Let the grains and roughage of the farm find their way to market through good cows. Carefully save and apply the manure. It will supply organic matter and plant food. Grow clover and alfalfa in rotation with grain and ensilage crops. These will supply nitrogen. Stable and green manures plowed under, in decaying will liberate mineral plant food. Phosphorus is lacking in many of our soils. It can be supplied in small amounts through stable manure, but that source is inadequate. On the generality of dairy farms it will be found very profitable to reinforce the stable manure with ground rock phosphate or some more readily available form of phosphorus. With phosphorus added, with manures turned under to unlock dormant plant food, with nitrogen supplied from the atmosphere through leguminous plants, and with dairy cows to consume the grain and roughage crops the dairy farmer is sure of profitable returns.

If we secure the best cows we must raise them on our own farms. If we are content with cows that will produce 5,000 or 6,000 pounds of three per cent milk a year we can buy them cheaper than we can raise them; but if we wish larger results, the 10,000 pound a year cows, and that is what we ought to have, we must know what their ancestry is, we must breed them, feed them and develop them. One critical time in the development of the dairy cow is the feeding after she is a year and a half old until she has passed through her first year's milking period. It is just the time when we are fixing the habit of the cow. We want this milk machinery developed and enlarged; we want it to be ideal. Develop her digestive ability, see that it is strong, and then develop her milk-giving

function so that she will take her food and deposit it in the milk pail instead of the manure heap. This is not an easy matter. We cannot take a cow that has been improperly developed and educated during the first few years of her life and make her what she would have been if she had had the right line of treatment at the outset. We all know this, but few of us practice it. Every man's cow will sooner or later reach the level of what his ideal cow is. The 400-pound of butter-fat a year dairy farmer will have 400-pound of butter-fat a year cows.

We are buying too much grain food. When we began purchasing these grain feeds they were cheap. Farm help was scarce and we bought grain cheaper than we could raise it on our farms. Now we are facing changed conditions, grain feeds are high and paying \$30 to \$35 a ton for grain is an awful problem. Then, by buying these foods we are keeping down the crop-producing powers of our land. What we need to understand is that we can gradually build up the productivity of our soils by growing the kinds of food best suited to the needs of our cows. Dairy feeds and farm fertility bear the closest relation.

Cleanliness and Uniformity of Product Are Big Factors.

Dairy profits may be greatly increased by cleanliness. Dairy bacteriology is giving a new force to the word cleanliness. The cleaner the cow, the milk, the stable and the milk room the less bacteria laden dirt, or dust in the air; and hence in the milk. The conditions in many dairies are revolting to our aesthetic sensibilities, to say nothing of bacteria. No man can stand up and defend the cow whose udder is plastered with manure, or milk with a black sediment in the cans or bottles. But many dairymen think that thorough straining removes all the filth from milk. However, modern dairy bacteriology shows us the necessity of keeping out of milk these things which seed milk with bacteria. Soluble and microscopic filth cannot be separated from milk by straining. White-washed stables, washing the cow's udder, clean milkers and plenty of light and pure air may seem like unnecessary precautions to the average dairy farmer, but there are substantial reasons for such improvements. Any means of preventing the entrance of bacterial dirt into milk will tend to improve its sanitary quality. Some bacteria get into milk through uncleanliness of utensils. Rusty tinware should never be used in handling milk. Milk with low bacteria is impossible if the dairymen uses pails, strainers or cans that are rusty or have open seams in which dirt and bacteria may lurk and multiply.

Dairy profits may be greatly increased by putting out a more uniform product. This fact has been recognized ever since the co-operative system of manufacturing cheese and butter was introduced. Whether we are producing market milk, cream, butter or cheese we should strive to have our products uniform in quality. Market milk should be uniform in quality, clean and free from all bacterial dirt. Cream, whether shipped to the city trade or made into butter on the farm, should be properly cared for and uniform in quality. If making butter at home we should know what density of cream is advisable. If we are selling it to a private trade we should know the quality the trade calls for and make every effort to furnish that trade. Variation in test causes a lack of confidence in buyers. Cheese and butter should be of uniform quality. People who have acquired a taste for a certain brand of cheese or butter are slow to make a change as long as their favorite brand is uniform in quality. There are so many causes that contribute to uniformity of quality in dairy products that it would require a special article to enumerate them all and suggest remedies for their improvement.

The Doubtful Economy of Pasturing.

Our present system of pasture management is one of the most neglected phases of dairy farm management. On too many farms it means that we expect to get something, and do not get it. Pastures are poor caretakers of cows. In early spring promises of abundant feed are kept only as long as abundant rains persist. A few weeks of dry weather can reduce a luxuriant pasture to a barren waste. It is imperative that we provide some means of carrying our cows over periods of drouth instead of regretting that it has occurred. At best, the main advantage of pasture is the saving of labor. No crop yields as much feed when pastured as when harvested after it has made its maximum growth. Pas-

tures where four to six acres of land are required to afford meager rations to a cow during four or five months of the year represent an uneconomic area and should be brought into tillable fields. By making our area of tillable land larger it will require more manure and fertilizer to maintain the whole farm in a productive condition, but it will pay. The time has come when we must widen our methods and expand our farming if we get the best returns from our dairy farming. Loafing acres, like robber cows, are a hindrance to success in the dairy business.

New York.

W. MILTON KELLY.

CREAM TEST DROPS.

We are up against the same old proposition after turning our cows out to pasture. Test, (butter-fat), run down from 5 to 10 lbs. on an 80-lb. can of cream, so say the Ohio dairy people, and I don't question them in the least. Now, why is this, if feed makes no difference in quality of milk, all else being equal, everything save feed alone going along just the same? Kindly explain this for me, and others who are in a like position.

Monroe Co.

J. W. K.

It certainly is an established fact that you can't materially increase the per cent of butter-fat in milk by feed. If you increase the feed and thereby increase the flow of milk you get a larger number of pounds of butter-fat per cow because you get more pounds of milk, but the richness of the milk is practically the same. Now this is a general principle; however, there are so many things that enter into the feeding and care of cows that at times it would seem that this general principle is not true. Now, why J. K.'s cows produced milk with a less per cent of butter-fat after they had been turned to pasture than they did before, I cannot explain. I do not know all the facts in connection with it and perhaps if I did then I could not solve the problem very satisfactorily. The probability is that a sudden change from dry feed to pasture is the cause of an abnormal change in the per cent of butter-fat produced by the cow, for it is well known that a sudden change in feed will change the per cent of butter-fat simply because it throws the condition of the cow out of normal and she produces abnormal milk. This only lasts for a short time and the cow resumes her normal quality of milk and consequently if these cows were turned from dry feed abruptly onto the pasture the effect of this change in feed would throw them out of normal condition and they might give thinner milk for a time, but finally they would come back to their old per cent of butter-fat. This is the only explanation that I can offer.

I am of the opinion that had J. K. gradually turned his cows onto grass, had, for instance, a small pasture that he could turn them into at first so that they could get just a little bit of grass, and kept up their barn ration, then gradually gave them a larger pasture and kept up the barn ration and gradually lessened that, eased them, as it were, onto the pasture so that there would have been no abrupt change, he would not have been troubled with a falling off of the test of his cream, providing it was accurately tested. Of course, I am taking for granted that the cream was accurately tested. Some people cannot understand why it is that milk testing 3½ and 4 per cent will not give as heavy cream as milk testing 5 and 5½ per cent. The reason is simply that you set the separator, for instance, to take out one-tenth of the volume of the milk. Now, if it takes out one-tenth of the volume of 5 per cent milk the cream will be heavier than if it only takes the same percentage out of the volume of 3 per cent milk.

COLON C. LILLIE.

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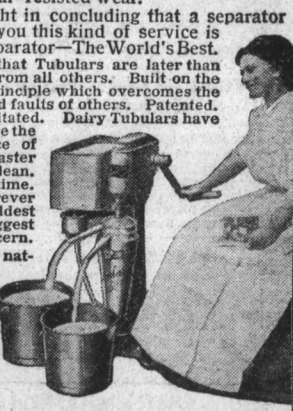
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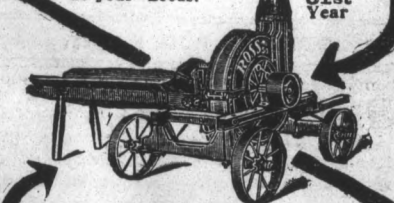


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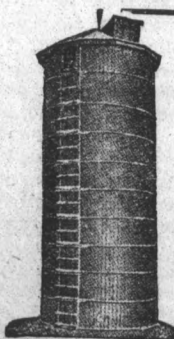
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The Lawrence Pub. Co.,
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DETROIT, AUG. 5, 1911.

CURRENT COMMENT.

The success and remarkable development of co-operative enterprises among the farmers of Denmark has been made the subject of frequent comment in these columns during recent years. There are at the present time more than 3,000 agricultural co-operative societies in existence in the little country of Denmark, which is a very considerable number for a country having not more than two and one-half million inhabitants. It was through the economic operation of these societies that the agriculture of Denmark was rehabilitated, and the exports of meat, bacon, butter and eggs were increased during a period of 30 years from 30,000,000 to more than 3,000,000,000 crowns in value. With such a development of co-operative enterprises without any fostering legislation, it would not appear that legislation would be necessary at this late day and there has been no legislation relating to co-operation with the exception of a few provisions relating to cattle breeding societies and others intended for the development of agricultural credit. Even the legislation at present contemplated is not due to any real need of the co-operative societies, but rather to the desirability of uniform regulations for the limited liability societies, and such legislation was necessarily framed to include all co-operative societies.

The proposed bill, as summarized from the bulletin of the Bureau of Economic and Social Intelligence of the International Institute of Agriculture, is very simple. It consists of 36 articles and tends to give uniformity as far as possible to the practice of the societies. It defines co-operation as essentially economic; co-operative societies are such as "without coming under the head of those provided for in article 1 of the law on limited liability societies are founded with the intention of obtaining for their members the implements or other articles necessary for their business, selling the produce of their members' industry, and otherwise favoring, but always by economic means, their economic interests."

The law prescribes the registration of the society in the registers of the co-operative societies. It leaves it to the societies to establish in their rules

whether they may or may not do business with non-members. The number of members is unlimited.

Unless otherwise provided in their rules, the members are jointly and severally liable to the creditors of the society for the engagements made by it. Yet the creditors may take no measures against the individual members until after having tried in vain to obtain satisfaction from the society.

If the rules provide for limited liability, the amount for which each member is liable to third parties for the engagements of the society can never be less than 100 crowns. In any case the liability of members who have left the society continues for a year from date of their retirement. Other provisions regard the internal life of the society and therefore are of less interest. In the last article it is said that the law is to come into force at the same time as that on the limited liability societies.

But the object of bringing this matter to the attention of Michigan Farmer readers is more particularly to illustrate what has already been done without legislative encouragement in the development of co-operative enterprises by the farmers of the little country of Denmark. It is an object lesson well worthy of our serious consideration, as illustrating the great undeveloped field of similar enterprise in the several communities in which we live.

The penny postage propagandists and the influences at work for it were mentioned in

The People Have Penny Postage. In that comment we attempted to show that the establishment of penny postage would be in the interest of the big business interests of the cities rather than to the residents of rural communities, to whom it would probably be an indirect detriment through the raising of rates on second-class matter. But the agitation to create public sentiment for the move continues, and probably will continue indefinitely since the promoters of the scheme are well organized. But when the reader is being appealed to for support for the penny postage idea, he should remember that except for business letters and the most personal of private correspondence the great body of our people now enjoy penny postage. The marvelous development of the souvenir postal card business and the great popularity of this medium of communication for friendly correspondence has caused a great increase in the use of one-cent stamps for private correspondence in recent years. The proportion of two-cent stamps used in private correspondence has correspondingly decreased, until it can be truly said that except for business purposes, we now enjoy the benefits of one-cent postage.

When, by further economies in the postal service it is possible to give the big business interests a like advantage, well and good, but it should not be done at the expense of increased rates on second-class matter which will necessarily curtail the average family's supply of good reading matter or increase its cost to a degree which will be burdensome to even the least prosperous of our people.

As noted in a previous issue, the supervisors of the state have determined to fight the contention which will be made by the counties of Wayne and Kent before the State Board of Equalization, that the farm properties of the state are under assessed for taxation purposes. At a meeting held in Lansing, prominent supervisors were selected to make investigations regarding the assessment of city properties as compared with that of farm property, and the work will begin at once. It is hoped by this means to counteract the move on the part of the cities in the two most populous counties of the state, who have had a force of men collecting data in other counties by which they will seek to prove their contention.

As previously noted, we believe that the farmers of Michigan will not readily submit to an injustice in the apportionment of state taxes, nor do we believe that the State Board of Equalization, as at present constituted, will discriminate unfairly against them in the coming equalization of valuations for taxation purposes. One phase of this proposition which is worthy of special attention was commented upon in last week's issue by Mr. McBride, of Shiawassee county. There is no question but that the earning power of farm property, when divorced from the personal earnings of the farmer and his family, is much less than that of any other class of property in the

state, a factor which may rightfully be taken into consideration in the adjustment of valuations for taxation purposes. In fact, this factor is worthy of greater consideration than the occasional sale of exceptionally well located farms to city people with money to invest in country homes, which cases will doubtless be included in the data collected by the city representatives to show a high average value of farm lands. At least, the rural districts of the state are to be congratulated on the fact that the organized supervisors of the state are taking active measures looking toward the proper presentation of their cause before the State Board of Equalization this fall.

Acting under the statute which made him ex-officio fire marshal of the

state, State Insurance Commissioner Palmer issued a notice to the chiefs of fire departments of the state, who are made his deputies under the law, designating July 25 as "clean-up" day, for removal of rubbish from alleys and basements within their jurisdiction in order to reduce the danger from fire losses. Under his instructions inspections were to be made after that date to see that the order for a general "clean-up" had been complied with.

This plan of fixing a date for a general clean-up to reduce the danger from fires is a good one, and it is to be regretted that no adequate organization exists by which it could be extended to the country as well as to cities having fire protection. However, it is an example which might well be followed by every farmer, since there is often an accumulation of rubbish about farm buildings which increases the danger of fire to some extent and which is unsightly as well. There is no better time for a general clean-up of the farm and, especially about the farm buildings than just after the harvest season.

HAPPENINGS OF THE WEEK.

National.

One man was killed and fifty injured when two interurban cars collided east of Dearborn, Mich., Sunday.

Following the direction of the courts the Standard Oil Company announces its intention of dissolving and forming 35 separate companies. Each of these companies will be independent and compete with each other as well as with the independent companies now existing.

A large quantity of opium has been discovered in Cincinnati by custom officials, and it is believed to be a portion of a large amount that was recently smuggled across the Detroit river. Investigation is being made.

Detroit is entertaining large delegations of the local lodges of the Knights of Columbus from all over the continent.

An injunction was issued by Judge Wiest of the Ingham county circuit court against the majority of stockholders of ten copper mining companies holding property in the upper peninsula of Michigan, who had agreed upon merging the interests of the different concerns. The order was the result of a suit brought by minority stockholders. The combination of property of the ten companies would aggregate \$82,000,000 and the limit allowed by the Michigan statute is \$10,000,000. To organize the companies in one at a capitalization of \$10,000,000 would permit the concern to be relieved of paying fees on the excess over the limit allowed by the statute.

Suit is being brought against the Michigan United Lines to reimburse stockholders of the Michigan traction company which was swallowed up when the new company was formed, and Judge Knappen, of the federal court, has ordered the defendant company to produce all the books that every detail of the transaction may be understood. This the company had refused to do.

The congressional investigation of the rates charged by express companies is bringing the railroads under "fire" and they are now planning to protect themselves against any cut in tariffs that might result from the inquiry.

Edward M. Shepard, well-known political leader and New York lawyer, died at Lake George, N. Y., last Friday.

Fire in the San Bernardino mountains of California has gotten away from the 400 fire fighters and rangers and run into timber lands where it cannot be brought under control until the high winds subside.

It is reported that 15 persons were killed and twice as many injured in a head-on collision near Bangor, Maine, on the Bangor & Aroostook railroad.

The attitude of the government regarding the control of the coal lands of Alaska, and the conflicting claims of private concerns has delayed the legitimate development of these mines, much to the detriment of the inhabitants, who are suffering considerable loss due to the high prices paid for fuel brought from distant places. Now Washington and Oregon have combined to ask the national government to establish federal collieries and to force the railroads over which the coal would have to be drawn to handle it at a reasonable rate. The matter is to be taken up in congress and will attract considerable interest from the northwestern part of the country.

In a riot between miners of the Mans-

field mine of the Pittsburg Coal Co., at Glendale, an isolated portion of Allegheny county, three constables, two county detectives and a score of miners were injured, a number fatally. Fourteen men and one woman have been arrested. All were held in \$1,000 bail on a charge of rioting.

Foreign.

The ratification of the reciprocity agreement between the United States and Canada is to be the issue in the coming Canadian election the latter part of September when the government and the opposition will record the results of what promises to be a strenuous campaign.

The capture of French soldiers by German troops on the frontier of Morocco this last week is not likely to assist in the peaceful settlement of the claims of the two governments regarding their interest in the African country.

It is announced from London, England, that the famous American artist, Edwin A. Abbey, is dying in that city.

Turkey is preparing to send troops against the Mallesores who are terrorizing the northern part of the country and taking refuge in Montenegro whenever pursued. The latter country has been notified of the move and directed not to harbor the rebels.

The action of the British parliament on the veto bill continues to be interesting in that the Unionists who have been more or less divided are now getting together with the idea of voting a unit upon the measure. Consideration of the bill has been postponed until August 7. The recess is being used to advantage by both sides.

Nine strikers were killed and 32 others wounded when troops fired upon a mob of miners from La Esperanza mine near El Oro, Mexico. It is stated that fully 4,000 men have gone out from mines in that section demanding more wages, and 3,000 more on the other side of the mountain are likely to go out at any time for the same reason.

Another war vessel has been sent to Hayti, making five in all, to protect American interests there during the rebellion which is now in progress. President Simon has ordered out the federal forces and hopes to put down the rebels who are strongest in the northern part of the island, but it is believed at Washington that the present government will fail to restore order and that a new regime will follow the disturbance.

Sir Wilfred Laurier has made known to the Canadian parliament the provisions of the co-operative agreement between the colonies and the mother country as to the organization of colonial navies and their relation to each other. The mother country will aid the colonies in their effort to build up competent navies.

CROP AND MARKET NOTES.

Emmet Co., July 27.—Light rainfall during June and the most of July. Too dry for peas and oats, but plenty of rain during the earlier part of the season made for a good crop of hay and wheat. The drouth was broken by rains during the latter part of July and a severe wind and rain storm did considerable damage to fruit trees and growing crops and to hay yet in cocks. The raspberry crop is a failure, there being but little of this fruit on the market. The rains will help out pastures and new seedlings and in making a good late potato crop. There is a larger number of summer visitors this season than in previous years.

Ottawa Co., July 27.—The heavy wind storm of the 24th did great injury to the fruit crop. Nearly two-thirds of all the apples in this section were blown off and will prove a dead loss. Many fields of corn were also considerably injured by the wind storm. Oat harvest is practically finished, which is something unusual so early in the season. Oats, as a general thing, are a light crop, and there was never known to be so many weeds in oats as this season. This is on account of heavy rains just after the crop was sown, which caused the oats to rot and weeds to grow. Potatoes are scarce and correspondingly high in price. There is a good demand for hay and good prices are being offered for the same. In the local market, corn is higher in price than wheat.

Gratiot Co., July 24.—Wheat about all secured and much of it threshed. From 20 to 40 bu. per acre, with 25 to 30 as an average, is about the yield in this section. The few oats left to cut are in bad condition and 25 to 50 per cent of the crop will be lost. They were looking well until late last week when they began going down. Those cut before the storms will be a fair crop. Corn and beans are looking well. Meadows were slow in starting, as it has been too dry. Fruit is not as good as was thought last month. Today, July 24, the wind has blown a gale for 12 hours and pears and apples have fallen heavily. Old oats were rushed onto the market at a rapid rate last week, beginning at 46c and closing at 40c.

Cass Co., July 24.—The wheat yield is the lowest in years. The highest yield reported is 33 bushels to the acre, but much has been reported as low as five bushels. Oats are yielding well. The corn crop was beginning to look bad, but recent rains, those of last week and this, will help fruit, corn and potatoes. It has been years since this county has had a better crop of all kinds of fruit. There has been a wonderful crop of cherries, the last ones being picked during the past week. Never before have cherries lasted so well or been larger in size or more productive. The huckleberries have been bountiful and are nearly all picked. They have been selling from \$2.25 down to \$1.60 per crate. Blackberries, wild and tame, are now on the market, selling from \$1 to \$1.60 per crate. They are of good size and bid fair to

(Continued on page 110).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

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

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

THE RECLAMATION of the SOUTHWEST

BY LOUISE E. DEW.

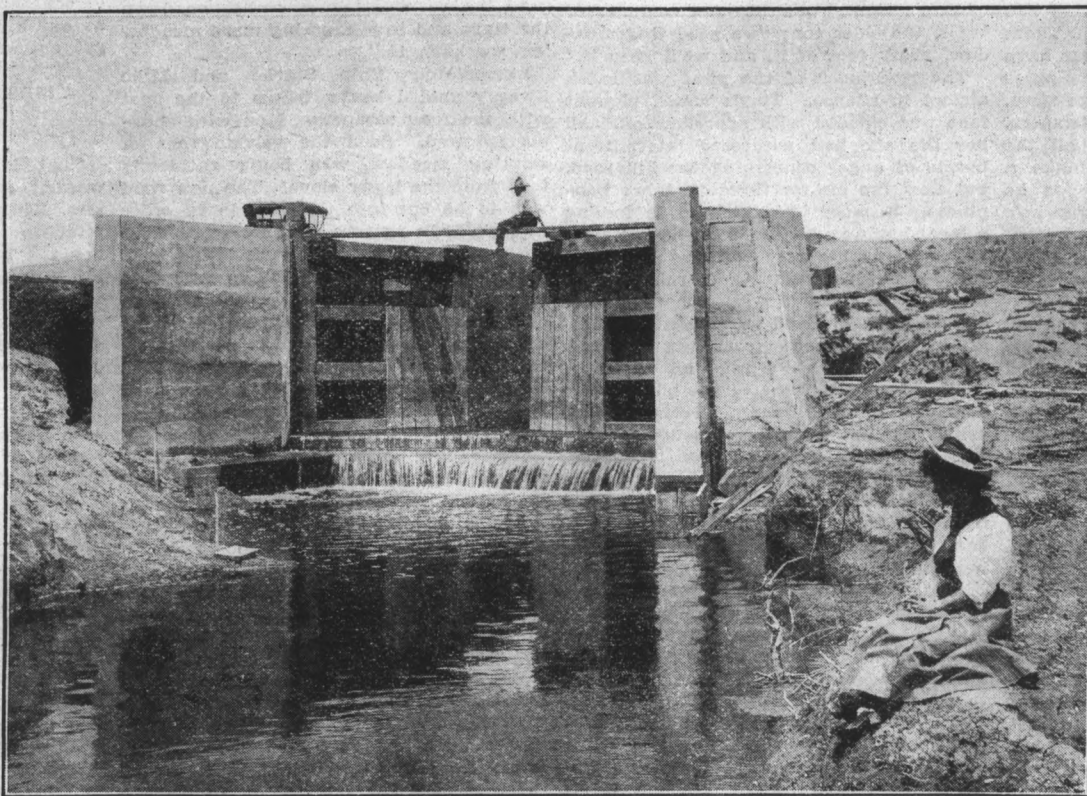
WHILE traveling in the Orient a few years ago, I was kept in a constant state of amazement at the feats of legerdemain practiced by the native magicians. Sometimes it was the seed of a palm dropped into an earthen vessel, and when a wand was waved over the receptacle, there would slowly arise from the earth, a tiny sprig of green that pushed itself upward until it was a full grown tree, loaded with bunches of luscious dates, all in the space of a few minutes. To prove to his incredulous spectators that they were not the victims of an optical illusion, and that the dates were real, the magician would pluck a handful from the tree and toss them into the crowd. That they were genuine none could deny. How it was done I do not know; wiser ones than I have been unable to explain the mysterious proceeding.

In witnessing the transformation of the southwest from a barren and waste territory into a farming district which is rapidly taking a place in the lead of the agricultural communities of the world, I am no less surprised. In the southernmost portion of Texas there is a district known as the Lower Rio Grande Valley, which exceeds the area of the state of Massachusetts by some two hundred square miles, and which has been transformed, as if by magic, from its arid state into a veritable garden spot, by irrigation. For centuries it has lain in a crude and undeveloped state, covered with a dense undergrowth of native vegetation and its agricultural possibilities unknown and unheralded, because of the caprices of fickle Nature whose whims withheld from this valley sufficient rainfall to make agriculture possible.

Where before, millions of acres remained a stranger to the plowshare, there are today thousands of acres under cultivation by the aid of irrigation, which has arrived at a perfected state under most adverse and peculiar circumstances; and, in consequence, the solution of the water problem has brought a steady influx of northern and eastern homeseekers to this agricultural nugget. The historic Rio Grande, which skirts the border of this "American Valley of the Nile," dividing it from the republic of Mexico, has been utilized for a new purpose. Upon its banks there have been erected at convenient places, tremendous plants for drawing the silt-laden waters from their onward flow into a network of irrigating canals with their tributary laterals and drainage ditches which wind their way through a wonderfully productive country.

The writer has made a personal inspection of this section of the southwest, and has seen growing upon ground which was covered by such a dense growth that the task of clearing it seemed to the uninitiated almost impossible, cotton, corn, alfalfa, kaffir corn, peanuts, sorghum, and in fact all of

the crops raised by the farmer of the north, flourishing in such a state that the cultivation and harvesting of from two to three crops a year was made possible. I found alfalfa which was sown upon ground cleared in the late winter, the crops raised by the farmer of the Lower Rio Grande Valley, are utilizing their acreage for double crops, and with plenty of water at a time when it is needed, they are virtually controlling crop production. The experimental stage has been



A Lock in the Gravity Canal that will Admit Boats and Barges.

passed, and the progress and perfection of the irrigating systems have been watched with keen interest by agricultural experts from every section of the country. At one point in Texas there is in operation an irrigating system entirely different from those established elsewhere. It is a natural gravity proposition and constitutes one hundred and fourteen and one-half miles of waterway. Its base of supply is fourteen miles from

the massive headgate which has been constructed of reinforced concrete and corrugated steel. The headgate, whose base rests twenty-six feet below the deepest point of the bed of the Rio Grande, contains eight portals or gates which can be thrown open by rack and pinion lifting screws, thus forming a natural suction which diverts the onward course of the river through these channels into an artificial canal, one mile and a half in length, which in turn passes it on to the eighty-seven miles of laterals and drainage ditches.

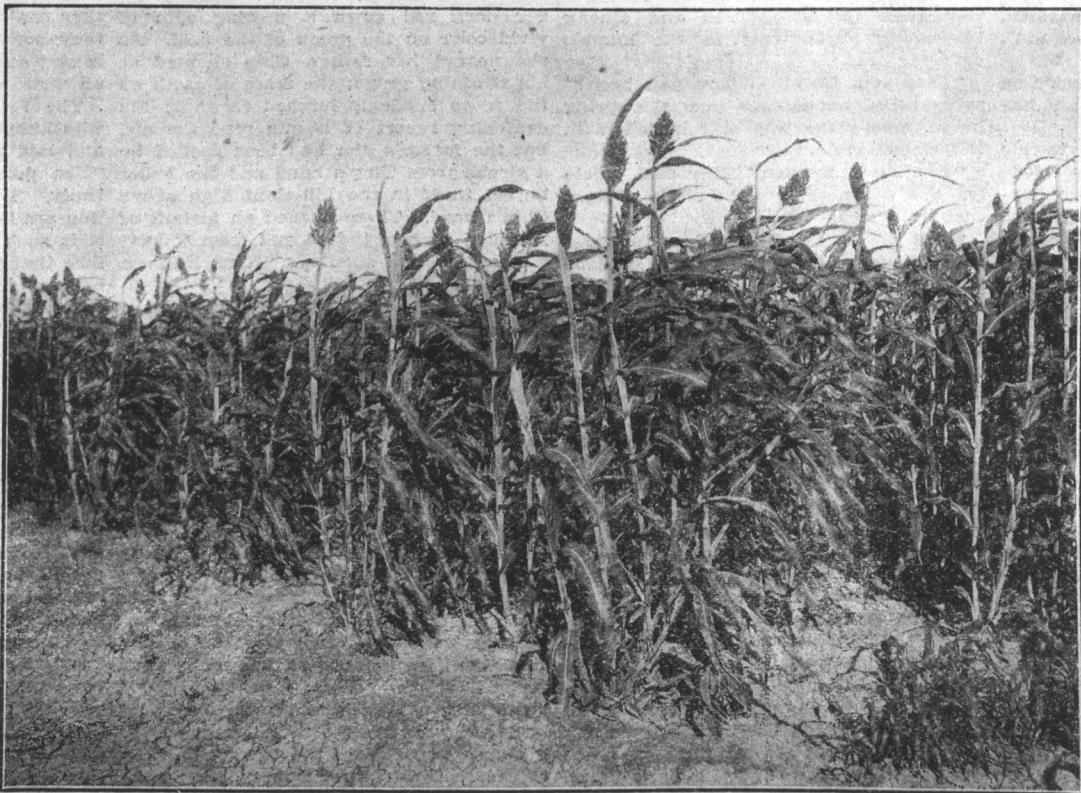
The utilization of old resacas, or dry river beds, in their construction, saved an additional expenditure of \$2,000,000. These resacas traverse a tract of thirty thousand acres with peculiar regularity, and the genius who discovered them saw the possibility of again causing the waters of the Rio Grande to flow over their former delta. It was simply a case of letting water run down a hill and distributing it over a territory by means of irrigating ditches.

The true story of the development of the southwest would read to the layman like a tale from the Arabian Nights. The introduction of irrigation and the advent of a railroad have not only developed this former wild territory into an agricultural Eden, but it has given employment to thousands of native inhabitants—Mexicans—who have welcomed the advent of civilization and become valuable assets to the farmer.

The illustrations shown with this article are from photographs taken in this section and give some idea of what has already been accomplished. Not only has the growing of crops been made possible, but the cultivation of semi-tropic and citrus fruits is receiving a great deal of attention. It is safe to predict that within the next decade scarcely a vestige of native vegetation will be in evidence.

Another innovation which irrigation has made possible is the establishment of several new industries, one being broom corn, and a factory has been erected to dispose of this product. Canning factories will also be a new feature in the near future to take care of perishable products that will not stand shipment. Sugar mills have been erected at various points on the irrigating canals to take care of the cane which grows very luxuriantly here. At the Brulay Sugar Plantation, the oldest in this section of the country, the cane has had a continuous growth for twenty-seven years. A stone's throw away, on the site of the historic battleground of Resaca de la Palma, are nineteen hundred acres of cane which has had a continuous growth of seven years.

Northern farmers are certainly in the majority here, and many professional men have left their offices to live in the open, and have a share in the strenuous life



Kaffir Corn, where Cacti, Mesquite and Chaparral Formerly Flourished.

of a country where every day of the year is one of field activity. While the farmer of the north is swapping stories in the corner grocery about next year's crops, or drinking hard cider and roasting apples before the fire of his cosy home,

and while the icy hand of winter has tied up his acreage until spring, his brother of the southwest, with uprolled sleeves and perspiring brow, is harvesting bumper crops and re-sowing his fields for another harvest.

JUD BALLARD'S HILL—By Mary E. Underwood.

"By jinks, I'll see both you and Chip Starke at the creek bottom first. Folks back o' the ridge has always driv their teams over that hill an' they will so long as I live. I ain't minded to have my paster cut up with no four-rod highway. But that hill wouldn't raise beans an' the public is welcome to travel it the same as they have ever since old man Starke an' I fit it out 'fore my Tiny was born. That's my say an' it's final; mind that."

Jud Ballard firmly planted his foot on the log he had been converting to firewood, cut a fresh slice from his plug of tobacco, fixed his keen gray eyes on the good-natured face of Bill Flack and waited the usual surrender to his wishes.

"Come, come, Jud," expostulated the road commissioner, "that north line has been hooped in the air long enough. Them farmers behind that ridge very near have to haul their stuff up to the pearly gates 'fore they can land it at the village store. It's wearing on their teams and tempers. As for Chip Starke, near 'bout all the logs brung to his mill has to make a circle in the sky. Consequence is he don't get half a cut. And seeing he's lected pathmaster for this section, naturally he aims to force that road down on the flat. Best give in."

"Young Starke's right named," exploded Jud. "He's a silver from the old block. But I beat old Starke at this game, an' I'll beat Chip. He's flooded ten acres o' my land by damming the river; now he wants a four-rod strip round the foot o' that hill in my meadow. Top o' all that he has the gall to ask me for my daughter—for Tiny. He's mad, stark mad. You tell him I don't give a hoot for his notices and injunctions. Tell him that road stays where it is—likewise Tiny."

Bill Flack, having legally given notification, climbed heavily into his decrepit buggy with its frayed belongings, took up the lines with a click and briskly drove his lean bay through the yard bars and turned down the river road.

Jud, at the rear of his illy-constructed, unpainted dwelling, watched his portly neighbor drive to the base of the disputed hill road and commence the ascent. Foot by foot the sagging vehicle mounted upward until it became a silhouette against the evening sky. A moment later it dipped over the curve and disappeared. The owner of the hill then allowed his gaze to include the emerald fields, dotted with a grazing herd, that swept back from part way up the slope to the encroaching forest at the rear and back to the small barn, flanked by the dark green of an orchard.

"I'll keep 'em out-a that paster so long as I can hold a gun," he muttered. "Chip Starke can run his logs down a chute or sail 'em over in a flyin' machine, 'cording to his notion. But he ain't runnin' road matters—not yet."

"What's keepin' you, Jud? Chuck's on the table gittin' cold," called an impatient voice.

"I'm comin'," Jud responded to his wife's admonition. He obediently strode to the open door and entered the low-raftered room where the evening meal steamed on the square table. But an expression of combative spite overspread his leathery, sun-tanned countenance as he seated himself opposite his two stalwart sons, with wife and daughter on either hand, and asked the low-toned blessing. Grace before meals at the Ballard table was as recurrent as sunrise, noon and sunset. No pressure of work or perturbation of mind excused its omission. Consequently Jud, despite his quarrel, uttered the customary words of devotion.

"What were you an' Bill Flack jawin' 'bout 'stead o' comin' to supper?" Mrs. Ballard queried with the tactless persistence of the uninspired while she poured tea into blue cups. She was a faded replica of Tiny, her slender, dark-haired daughter. Years of poverty had dimmed the luster of her black eyes, while her once delicate features attained sharpness of outline. Her facial expression, however, was that of placidity—the content of one who has little to hope for or fear.

"He give notice that the old hill road

was to be located on the flat," Jud explained grimly as he helped himself to a wedge of corn bread and savagely buttered it.

"I'm sick o' this road janglin'," declared Mrs. Ballard. "That hill's been a bone o' contention nigh twenty years. Might as well let 'em bring the highway down; mebbe the hill 'ud raise peaches."

"The land on that hog's back wouldn't raise ghosts," Jud declared. "They got-a keep off my level; it's Chip Starke's doings an' I'll show him he ain't runnin' the town."

"Seems as if that hill is prolific all right," commented Jake Ballard, pouring cream over his dish of strawberries; "it raises enough rows for one neighborhood."

"Dad's right," was the quiet comment of Walt, the elder son; "we need that meadow, every foot of it, and we'll keep it."

The remainder of the meal was eaten almost in silence. Tiny's small, piquant face was clouded with apprehension. All her life she had witnessed intermittent bursts of anger concerning the hill road, but now the matter threatened her happiness. Because Chip insisted on forcing a level highway he had been turned from the door with curses and she had been commanded to sever their relations as lovers. Now the quarrel had reached a climax. If Chip could be induced to withdraw his influence from the majority favoring the meadow road all might be well. She determined to see him despite her father's command. Perhaps love could find the highway of peace.

A full moon silvered the landscape, frogs piped a full chorus from a swamp and a whip-poor-will sang his weird cry from the bending cedars on the river bank before Tiny finished her dishwashing and slipped out into the night. With detours for safety from parental observation she flitted like a shadow direct to the spot whence issued the bird's call. In an open by the glistening stream a fair-haired man, denim clad, advanced to meet her.

"Chip," she whispered from his encircling arms, "give up the hill quarrel; father is desperately angry; I never saw him so angry. He'd almost kill me if he knew we met here by signal. My dear, I'm frightened, horribly frightened. Give up or we'll be forever parted."

"I can't, sweetheart; the mill's short a half season's cut just for the lack of a level haul. If I don't stock the pond I won't clear off the mortgage; and it's all for your sake, sweetheart—success in business. When the mill makes good I'll win your father's consent, never fear."

For minutes of stolen rapture the big lumberman held Tiny in close embrace and argued. Then with flushed cheeks and eyes like stars, she slowly made her way back through shrubs and among blossoming apple trees to the humble cottage.

"That you, Tiny? Where you been?" softly called her mother from the spring house, where she was still busied with the churning.

"You know, mother," Tiny said quietly. She advanced into the circle of light cast by a small lamp.

"Quit it," advised her mother; "suppose your father knew or found out. He'd be raging."

"Oh, I wish that hill was at the bottom of the sea!" cried Tiny. "It's nothing but a trouble breeder; it always will be."

One July morning Bill Flack and his road gang, armed with axes, shovels and scrapers met at the disputed point ready for work. The road gang cut through a bit of woods leading from the rear base of the hill to the field. Then they spied what had before escaped observation because of their rear approach.

"By jing, there's a capper for you; look at that!" cried Bob White, a small man of excitable temperament.

"Well, I'll be darned," Bill Flack exclaimed, wide-eyed with amazement.

"It's a root-hog-or-die job, this is," declared Mike Sweeney with a laugh. "Now you know why Jud has been so quiet."

The object that riveted their gaze was nothing less than Jud Ballard's barn. The small structure with its attendant satellites of lean-tos and sheds had been

moved by Jud and his sons across the meadow and planted directly on the coveted right of way. A coop surrounded by energetically scratching hens added bulk and embarrassment to the highway problem.

The road commissioner lifted his cap and thoughtfully scratched his head.

"We got-a hist 'em back," declared Bill. "Bob, you and Mike go for jack screws and the rest o' us'll get rollers."

"No," objected Chip Starke, "you can't move a timber. Jud Ballard's ready to serve an injunction the minute he sees a crowbar thrust under a sill. Go on and put the road through the barn; then get him for obstructing the highway."

The road gang listened to the mill owner's advice with expressions of approval. If a load of hay could be driven through the big barn doors any other load could follow. Instead of losing time while processes of law slowly forced a passage, they would accomplish what had been planned for that day.

"You're right," admitted Flack. "Jud could injunct us to quit. By the time we got around him with the law we'd be gray-headed. Put the teams and scrapers to cutting off the toe of the hill beyond the barn. Might as well shave down the slant and save mussing more meadow 'en we have to."

Immediately Chip Starke and Mike Sweeney guided heavy teams to the spot with the road scrapers. Men with shovels followed. Soon the velvet green of slanting meadow was being ruthlessly torn from the lower slope. The new road was to be cut into the hillside in order to save Jud's pasture land from excessive onslaught. The scrapers were biting deep into the side of the miniature mountain before the owner appeared, stern faced, ominously quiet. The failure of his coup d'etat as an impediment to road building both astonished and maddened him. In his left hand he carried a rifle. For some moments he stood waiting to command his voice, then—

"The first man that drags another scraper through the dirt digs his grave," he called, with shrill intensity.

"Now, Jud," pacified Bill Flack, "you don't mean no such thing. Why, it wouldn't be good sense now, would it? You're just trying to scare us an' I don't know's I blame you. But we ain't going to cut into the paster more 'en two rod, an' mebbe not that."

But as Bill talked Jud slid the gun to his shoulder and sighted along the barrel with his keen gray eyes fixed on Chip Starke. All the rest of the road gang had paused in their tracks as if turned to stone, but the fair-haired lumberman still urged his team forward with an empty scraper set deep for fresh excavation.

"Do you hear?" shrilled Jud in white rage; "when that dirt moves you drop!"

For answer Chip shouted at his grays until they leaned to the collars tugging at their task. Breathless, palsied, the road gang watched the horses strain at the great iron scoop while Chip buried its point deeper and deeper until it stuck fast as if caught on a submerged boulder. They saw Tiny come flying from the distant cottage, a slight, nimble form, her dark red gown a moving spot of vivid color on the green of the field. As she neared her father, Chip shouted at his straining grays; the mass of earth on the scoop suddenly lurched forward; the deafening report of a gun rent the air, but the father's aim had been spoiled by a stroke from Tiny's hand and the bullet buried itself in the hill-slant high above Chip's head. There ensued an instant of horrified silence, then a yell from Chip.

"Iron ore," he shouted. "Here, Bill, see this!"

Wonderingly the man started toward the spot. Tiny had taken the gun from Jud's unresisting hands, while the would-be murderer stood staring like one awakened from a nightmare.

"He nigh killed you," cried Sweeney; "ain't you goin' to do nothin' 'bout it?"

"Nonsense," declared Chip, "he didn't aim to hit. Anyway, it's all over and no one needs to mention it if I don't; remember that."

Bill Flack was lifting chunks of heavy black rock. His eyes gleamed.

"Say, Jud," he shouted, "you're rich. Hear that? I've worked 'round mines nuff to know the clear stuff an' I say that this here day's work has made your fortune."

Still like a man in a trance, Jud Ballard advanced to the wondering group; his eyes swept from the outcropping ore to the circle of familiar faces, then rested on Tiny.

"My girl! my girl!" he cried, "you kept

my hands from bloodshed, thank God!"

Then covering his face he shook with the sobbing grief of an old man's repentance. His anger had gone out like the wind-blown flame of a lamp. His one act of violence had in an instant obliterated the pent-up madness of years.

That evening Chip Starke joined the Ballard family at the supper of unusual excellence served in the low-raftered room. The tinkling of bells from the meadow, the chirp of crickets, the occasional low call of a whip-poor-will came in cheerily at the open door. Mrs. Ballard's thin face was flushed from biscuit baking and the joy of present peace and prospect of future prosperity. Tiny's small dark face was dimpled with smiles, and Jake and Walt, wearied from a day's planting, hungrily waited the usual grace before the meal. Jud, calmly content, like a mariner after a storm, bowed his gray head and prayed: "Lord, we thank thee for deliverance from evil; for the son this day added to our household; and for the riches stored under the hill road for thy unworthy servant."

"Seems to me," commented Jake, spooning a generous quantity of creamed chicken on his plate, "that if every bone o' contention was as well worth picking as our hill it 'ud pay uncommon well to get out and hunt a few."

MRS. KINGSLEY'S CALLERS.

BY HILDA RICHMOND.

"Let her have all the visitors she wants," advised the family doctor, when Mrs. Kingsley came home from the hospital in a city many miles from her home. "She has seen and heard nothing but sickness for five weeks, and a change will do her good. After being laid away on a shelf, so to speak, for a long time a whiff of outside air will do you a lot of good, won't it, Mrs. Kingsley?"

"Indeed it will, doctor," said the patient with energy. "I thank you very much, Doctor Kingsley, for saying I may have company. Fred wants to keep me wrapped in cotton wool, it seems."

"I suppose it's all right if you say so, Doctor," said Mr. Kingsley doubtfully, "but I'm just a little bit afraid of company so soon; I'm afraid they'll want to know about the operation and her hospital experience, and make her nervous. You know how women are."

"Nonsense! They'll tell her about the new bonnets and the parties and church socials, and never mention the hospital. See if they don't!"

As a result of the doctor's edict Mr. Kingsley telephoned to several ladies, and the news went round rapidly after that that Mrs. Kingsley was able to see callers. Mr. Kingsley looked worried as he noted the flush on his wife's thin cheeks at the prospect of seeing company after her long seclusion, but an important case called him to his office, so his plans to "head off" objectionable guests came to nothing.

"Just tell them the surgeon said you must forget about the operation as soon as possible, Amy," he directed, kissing her goodbye. "Talk about anything else under the sun, but don't let them worry you. Some women have the idea that they are not properly sympathetic unless they pry into every detail. Remember! If you don't sleep tonight I will keep out all visitors in spite of the doctor."

The first caller was Mrs. Van Horne who kissed Mrs. Kingsley on both cheeks and laid a bunch of violets in her lap. "You poor child!" she said sympathetically, "I've been just wild to see you. You are looking remarkably well. I think it is such a blessing not to show in your face that you have been ill. Now I can't have a finger ache without looking all dragged out. People always say that I look so very bad, and that makes me feel worse. I have been having such a time with my nerves lately. It is dreadful to be nervous. You were always so calm and quiet that you can scarcely sympathize with me, dear. Just yesterday I thought I would have to go to that nerve specialist Mrs. Wilkes says did her so much good. Of course, my case is far more complicated than hers, but he might be able to relieve me a little. I've given up all hope of ever seeing a well day again, but it is worth something to find temporary relief. There is Mrs. Clayton coming up the steps! I'll be going, dear, for that may give her a hint not to stay too long."

But Mrs. Clayton was already in the sitting room, being a quick, wiry person, and Mrs. Van Horne was able to make the hint still more plain. "How do you do, Mrs. Clayton?" she said graciously. "Isn't it delightful to see dear Mrs.

Kingsley looking so well? I have been here a few minutes cheering her up, for I don't believe in making long calls in a sick room. Goodbye, dear! Goodbye, Mrs. Clayton!"

"So you are really almost well," said Mrs. Clayton. "Isn't that lovely? Really I think the happiest time in my life was when I got home from the hospital five years ago. You know I had a very serious operation, and for days and days they didn't think I would recover. I had two nurses, and Charles was there for weeks. The surgeon said mine was a very rare case—I think only three others on record like it—and neither of the other patients got well. I often wonder now how I ever picked up courage to undergo it. Of course, I had my children to think of and everything, but it was hard. The surgeon said I had more courage than any patient he ever had."

At this moment the maid ushered stout Mrs. Lang into the room, and the thread of Mrs. Clayton's narrative was broken. It took some time for the newcomer to kiss the hostess and subside into a chair, but the instant she was settled Mrs. Clayton neatly repaired the broken thread and went on. "I was just telling Mrs. Kingsley as you came in, Mrs. Lang, about my hospital experience," she explained. "You know mine was a very rare operation and they never dreamed I'd get well at first. For days and days I just hung between life and death. If I hadn't been afraid my poor children would have been neglected, I never could have consented to have the knife put on me. I know Charles would have done his best, but a man can't do much alone with children. I know he never would have brought a stepmother into the house to abuse them, but a home doesn't amount to much without a mother to see after things. When I hear people groaning over little aches and ails I wonder what they would do if they were called upon to endure real troubles."

"That's what I often say to John," broke in Mrs. Lang who had been watching her chance. "I am a perfect martyr to rheumatism and asthma, but it isn't a bit of use to say so. People think because I look well there is nothing the matter with me. Time and again I've been nearly crazy with pain, and folks would say to me how well I looked. I've known of many a woman in this town going to a hospital for treatment for troubles not to be compared with mine. I've always been the kind not to parade my aches and ails before the world, and I'm glad I can hide things so successfully. I often say to John there's enough trouble in the world now, without turning any more loose. And I don't believe in digging every calamity out of its grave whenever calamities are mentioned," she went on with a glance at her hostess. "For my part I endure enough every day in the way of trouble with my asthma and rheumatism, without dwelling on things that happened years ago."

Mrs. Clayton had made several ineffectual attempts to break into the lengthy account of Mrs. Lang's woes, so she now rose to depart. "Did you ever see anybody like Sally Clayton?" asked Mrs. Lang with a little laugh, before the departing caller was fairly down the steps. "She is a good woman, but so tiresome. She doesn't mean to be untruthful, but really you must take a grain of salt with what she says about her experience in the hospital. Sister Mary's niece had the same nurse that took care of Mrs. Clayton, and she said the way she took on was something dreadful. I've heard her tell that story time and again, and she never gets it alike twice. Today she said it was a very rare operation, did you notice? It was nothing in the world but a common tumor, but she had worked herself up to such a pitch that she was hysterical for days. I feel sorry for people like that, for they suffer more from acute imagination than anything else. I suppose if poor Sally Clayton ever gets really sick she will die at once, without thinking of Charles alone with the children. I will have to be going, Mrs. Kingsley. It looks a little like rain, and dampness always affects my rheumatism. I suppose tonight I will suffer dreadfully for going out today, but I did want to hear all about how you are getting along so much. Be thankful, child, that your trouble could be gotten rid of. If you had to deal with incurable things you would know the meaning of the word affliction. I can tell you it isn't pleasant to live, knowing you may have an attack and maybe never recover. Well, goodbye! I hope you will continue to improve."

There was a slight intermission after

Mrs. Lang wheezed out of the room, but presently another guest was announced. "I am so glad to see you up and dressed, dear," she said sympathetically. "Now don't exert yourself in the least. I think the great danger in convalescence is in allowing the patient to talk too much. After being shut in for days an invalid naturally takes an interest in outside affairs, but it pays to be prudent. And above all things I hope you don't allow anyone to question you about your operation. Some people have a morbid curiosity about such things, but I'm glad I haven't. You know the time Mother Brooks had that operation on her eye, and would have me right in the room with her. Well, that settled me on hospitals. My dear, if you could have seen the way that surgeon took out the eye you would have fainted right on the floor as I did. Wasn't it odd that with three daughters of her own Mother wanted me with her and no one else? Of course, I couldn't refuse the dear old lady, especially when we didn't know how it would turn out."

"And after that experience I had to take Ralph to have his adenoids removed. The poor child is so nervous, and I couldn't think of leaving him alone, but it was very trying. The very sight of a knife made me shudder for days. I think those things are harder on the friends than on the patients themselves. The patients are unconscious while the friends are suffering agonies. I know exactly how Mr. Kingsley felt while you were in the operating room. It's curious how rapidly the mind works on such occasions. Before I fainted, holding Mother's hand, I had arranged every detail of the funeral, and was even worrying about the state of the guest chamber. I knew Aunt Sophia would have to sleep there if she came on to the funeral, and she is so desperately neat. I remember, just as I became unconscious, of planning to lock all the dresser drawers and pretend to have lost the key. Those things sound funny afterward, but at the time they are very tragic."

That evening Mr. Kingsley bounded up the stairs, three steps at a time, and anxiously inquired how his wife felt. "Anna told me there were only four callers here, but I want to know exactly how you feel. Four curious women can ask a great many questions and—"

"Fred," interrupted Mrs. Kingsley solemnly, "set your mind at rest at once. I never had a chance to put a word in edgewise all afternoon, and before the last caller had gone I almost felt like apologizing for being ill at all. I discovered that my afflictions were as nothing compared with the everyday aches my friends smilingly endure and never mention. Maybe some day I'll have a chance to tell my experience when I make sick calls, but it's certain I won't be bothered with questions about it while I'm getting well."

"We'll just tell Anna to keep all visitors out," said Mr. Kingsley with decision. "I felt all the time he was doing wrong in saying you might see callers."

"Indeed we won't, Fred. I thoroughly enjoyed being headed off this afternoon when I tried to relate my modest adventures, and I want to see if the same thing will happen tomorrow. You needn't worry a bit about my sleeping. I am so thankful not to have anything serious that I can afford to sleep soundly. Honestly, dear, it was very amusing and I feel quite cheered up."

SMILE PROVOKERS.

To what extent the automobile has invaded the preparatory school may be judged from the following occurrence:

Teacher (to beginners' class in Latin) —"Can any of you boys give the rules for accentuation of Latin words?" Only one hand was raised.

"Well, Tenney, what are the rules?" "Words of two cylinders accent the first cylinder, and words of three cylinders accent the antepenult."

Rook—Taylor was always a fortunate man, but doesn't it seem wonderful that his luck should stay with him to the very last.

Raleigh—How was that? Rook—Why, he was operated on for the removal of a pearl which he had accidentally swallowed while eating oysters, and when the pearl was examined it was found to be valuable enough to pay for both the operation and the funeral.

"This large bump running across the back of your head means that you are inclined to be curious to the point of recklessness."

"I know it. I got that by sticking my head into an elevator shaft to see if the elevator was coming up, and it was coming down."



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(Copy)

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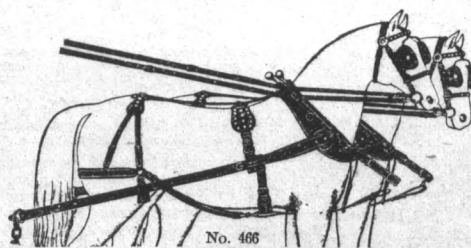
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IN DAYS OF "AULD LANG SYNE."

BY G. A. RANDALL.

Harking back to times when the latch-string hung from the punchon door of the rude log house of our grandsires—a welcome at all times to the belated or storm-caught traveler to come in and eat and rest for the night while the blaze in the wide, deep recessed fireplace, frequently replenished with huge sticks, roared up the flue in merry defiance to the storm without—the picture is suggestive. It brings to those of us privileged with a knowledge of those times, vistas of a departed epoch—a time when brawny masculine arms, bared and browned to the elbow, swung with the precision of a pendulum the old-fashioned "grape-vine twist" grain cradle in and out among the stumps on new ground where golden grain grew at its best; for it was virgin soil those days and the husbandman smiled at the mention of clover to keep up fertility, and commercial fertilizers were not known. It smacks of "hard bone" labor and none of the modern machinery our young are privileged to use in these times. The old Morgan mowing machine, the revolving wood-spindle hay rake, and finally the grain self-rake and dropper, were hailed with wonder at their advent. The flail was in common use. The first machine for threshing grain I ever saw (but not in use, for at that time horse-power threshers were employed) was simply a box frame mounted with a round spiked-tooth cylinder driven by a jack and horse or sweep power, the threshed grain, chaff and straw, all mixed, being afterward winnowed out with forks by hand.

The telephone, and phonograph, and rural delivery, and automobiles, and the thousand and one modern improvements and inventions along all lines are at our present command and enjoyment, but after all are we better off than they of the olden "ox-team" times? No, we would not "swap back," but the best we can do these times, any of us, is to be satisfied and content; they did even as much or more in those days. Environments and circumstances are great factors in establishing the individuality of a people, and so far as healthful manhood and womanhood is concerned they were our peers. And there were great intellects then, also, and colleges for learning,

but not nearly so numerous as now. I imagine, from memory of childhood days, that grandmother's pies, too, and pastries, and puddings, were just as savory, and palatable, and healthful, eaten in the old log house from a table covered with snowy white linen, amid quaint dishes and spoons and other eating utensils of blue pottery and polished steel, as any that I have ever been privileged to enjoy at the best modern cafes with all the

But somebody's face'll be full of joy when she greets her boy back there.

I'm goin' back, for I've had my fill—I've seen what there is to see; The city may still be the place for you, but it's lost its charm for me; And won't I be lonesome there, you say, with the people so far apart? Well, mebbey they're few and far between, but each one of 'em's got a heart; There ain't no hundreds of thousands there to push you around, I know, Not carin' a cent where you're comin'.



Suggestive of the "Log-cabin" and "Ox-team" Days of Our Grandsires.

patent and prepared foods and silver service at command. No! we would not swap if we could, yet, for all that is dear we would be loth to change in any particular, were it in our power, the dream memories of the vanished days of "auld lang syne" down home on the farm.

GOIN' BACK.

BY E. RUSSELL.

I've packed my traps and I'm goin' back where the fields are green and broad, And the colts, with their legs all doubled up, are rollin' on the sod; They'll smile, I 'spose, when they see me come, and they'll, some of 'em, likely say They thought I'd forsaken the farm for good the day that I went away. But let 'em smile—I'm goin' back—I'm sick of the noise and fuss, Where a couple of dollars count for more than the life of a common cuss; They'll nobody notice I've went away— if you told 'em they wouldn't care,

from or where you're tryin' to go— For the one that's jostled day after day with never a friend to greet There ain't a lonesomer place on earth than the city's crowded street.

I'm goin' back where the dog's asleep on the step by the kitchen door, With his nose pushed down between his paws—I'm sick of the smoke and roar;

There's money to make where the crowds are thick and they're tryin' to rip things loose— There's money to get if you've got the grit, but, dang it all! what's the use? They hustle for dollars all through the day and dream of dollars in bed, And forgive the gougins a fellow may do as long as he gets ahead, They hustle and bustle and coop themselves in dark little holes and fret, And honor a person accordin' to the money he's managed to get.

I'm goin' back where the poplars stand in tall rows down the lane, Where the bobsled's settin' behind the barn, defyin' the sun and rain; Where the birds are singin' away as though they were hired to fill the air With a sweetness that nobody ever can know who was never a boy out there;

I'm goin' back where they'll not expect me to sit in the kitchen when I'm courtin' the girl I love because I'm workin' for other men, Where the richest among 'em'll shake my hand, instead of lettin' me see That they think the money they've got must make them a blamed sight better than me.

I'm goin' back, and you'll stay here and rush, in the same old way, Goin' to work and then goin' home—the same thing day after day— And you'll think you're havin' a high old time, and I'll pity you, lookin' back (From where I whistle across the fields) at you in the same old track! I'm goin' back, but the crowds won't know, and they'll still keep rushin' on;

They'll never notice that someone's face is missin' when I'm gone; No, they'll never notice that someone's gone—if they did they wouldn't care— But every tree'll be noddin' to me when I turn up the lane back there.

THE WAY OF A LOAF.

BY FLOY SCHOONMAKER ARMSTRONG.

The loaf was large and golden-brown, No fairer loaf in all the town An oven graced that day; Then, at the mother's sharpened blade, It met the fate for which 'twas made, And started on its way.

Two slices went to school with Son, Who, so intent on noon-hour fun, Had scarcely time to eat. He munched the slices as he ran, Then threw the crusts at Bess and Nan Who tossed them in the street.

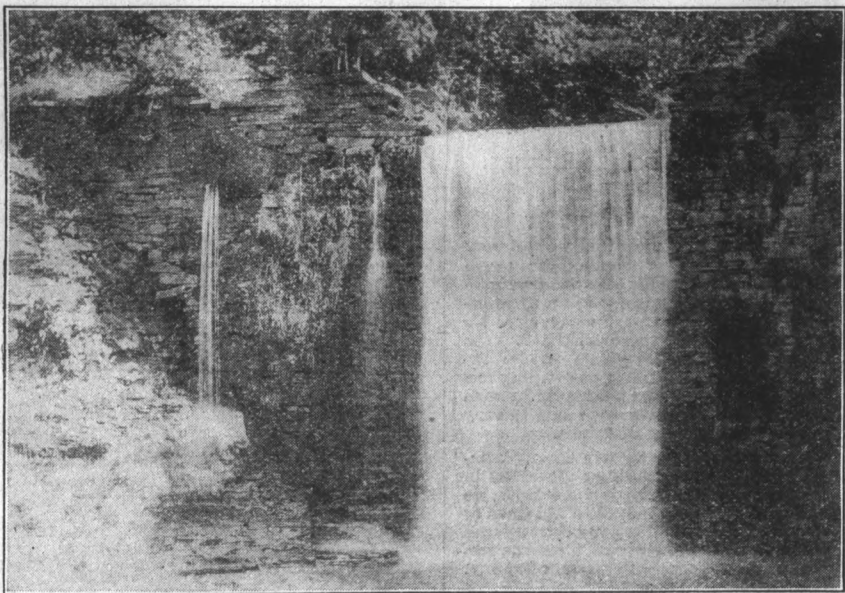
No sooner rang the master's bell Than down two squirrels ran, pell-mell, From leafy boughs o'erhead, And bore away the crusts so brown; Then chatty sparrows fluttered down And ate the crumbs of bread.

At noon when welcome dinner-horn Called weary men from fields of corn To mid-day meal and rest, Sliced was the loaf of snowy bread, And every hungry workman said, Of good things 'twas the best.

The last two slices went to bless An aged beggar in distress, Who, to the mother, said: "Your loaf was made for many ways, But they all lead to world-old praise; Thank God for daily bread!"

THE WATER-FALL DOWN IN THE GLEN.

BY LALIA MITCHELL.

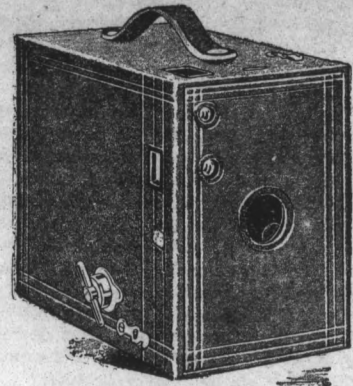


You may sing of the swell of old ocean, You may chant of the rhythmical laughter Of the billows that riot and roll; Of the sailor's exalted emotion As the ship bears him on toward his goal; Of the billows, foam-crested and dancing, As far as his eyes can discern, And his joy in the vistas entrancing Where stars on the horizon burn; But my heart holds a memory fairer Than lover of ocean can pen, 'Tis of silver and gold intermingled— The water-fall down in the glen.

You may tell of the lake's silver border, Of the shimmer of sand on its shore, Of the waves in their rhythmic order And the treasure of sea flowers they bore; Of the sheen of the moon's golden glory Of the sea birds that make it their home; 'Tis a theme for a song or a story 'Tis a subject for page or for tome, But my heart knows a vista more pleasing, Green bordered, by forest and fen, Like a gem in an emerald setting— 'Tis the water-fall down in the glen.

It was there that in boyhood I wandered, Its music delighting my ears, It was there that I fashioned and pondered Just what I should do with the years. Its waters oft sprinkled me over, As I dashed in and out through the spray, But they christened me ever their lover, Wherever my foot-steps might stray. So today, though you sing of old ocean, Of river or lake, yet I ken That I give my unaltered devotion To the water-fall down in the glen.

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GRANDMOTHER'S MEMORY IS POOR.

ISN'T it the queerest thing in the world that when a mother becomes a grandmother she forgets all about what sort of children her own offspring were when they were tiny? No matter how much trouble she may have had with them, how disobedient and saucy they may have been, she forgets it absolutely when they become parents and a daughter-in-law has a baby to bring up.

How many times has your husband's mother shaken her head sadly, when young Jack has tried his small will against yours, and remarked:

"I can't see who that child takes after. John always minded me. I never had to do anything but speak to him." Then she looks at you suspiciously, and the next time any of your old friends visit you she begins to inquire into your childhood days, especially with regard to your temper.

And your own mother is just the same. She vows you were always an angel child, and talks darkly about how much like his father little Jacky is, when he shows traces of any bad habit.

If grandparents only knew how many heartaches they cause young parents by

such methods, I wonder if they would do it? Or if they could remember things as they really were, could they do it? The whole thing is the result of the habit we have of forgetting disagreeable things as soon as they are over and done with. Looking back on your past life, isn't it true that the unpleasant experiences are remembered but dimly, while the happy times stand out vividly? It is a wise thought of the Creator to constitute us so that we dwell mostly on the good times, and in the majority of cases it works out only for good. But in this matter of grandmother's remembrance it is a bad thing. Grandmother can remember only how cute and bright her babies were and how she loved them. The fact that they were naughty, too, and had to be punished sometimes has entirely faded away.

As a matter of fact, there isn't a man or a woman living who is worth while that wasn't a mischievous baby with streaks of naughtiness interwoven with streaks of goodness. Just remember that, young mothers, next time the grandmothers remark on your baby's wilfulness, and don't let their comments hurt you.

DEBORAH.

A SUMMER AFTERNOON'S ENTERTAINMENT.

BY ELLA E. ROCKWOOD.

In some circles the social life of the country woman is bewailed as wholly lacking. Her hard work and long hours are set down as inflexible and a fate which condemns her to all work and no play seems to be taken for granted. Now in actual life we all know that under ordinary circumstances there is far more of work than of play for others besides those whose homes are in the country, that for the vast majority that is the rule which prevails. Yet there are so many hundreds of communities where the social life is ample and enjoyable that the neighborhood where there is none is sadly in the minority, taking it the country over.

Winter time has been called the farmer's holiday. Then it is that there is more leisure for him and for his family. But for all that summer is the busy season there is almost always an opportunity for such social gatherings as bring the women folks together even though the men are too busy to leave home.

It is an agreeable change from the canning and preserving, the cooking and the baking, or the shopping trip to town, to leave these duties for a while and meet with other women of the community at the home of some friend. The very getting away will do one good. The dressing up, the pleasant chatter which marks a gathering of the sex, the greeting of friends, the dainty refreshments, then the home-going as the shadows lengthen, all are beneficial and form a very acceptable break in the week's work. The neglected duties, if such there are left behind, will be taken up all the more cheerfully because of the afternoon off. There are few men who are unwilling to eat a supper which is a little delayed or if necessary lend a hand with its preparation in order to secure a half holiday for the wife occasionally, even if it is in the busy season.

One of the pleasantest of afternoon teas can be arranged with very little trouble. The invitations may be informally delivered over the telephone. If the lawn is reasonably smooth and shady it is a fine idea to serve supper there. Small tables may be placed conveniently or a long one in picnic fashion made of rough boards provided by the handy man, if he has a little time to spare. Still more informally, tables may be dispensed with entirely and napkins and plates held on the lap. Napkins of generous size and not of paper, should be provided.

Such a gathering does not demand an elaborate menu. Sandwiches, coffee, pickles, olives, ice cream and cake would answer nicely. With the addition of a hot dish, such as scalloped potatoes, with cold chicken or pressed veal it would be

ample. Not very much work to carry it out, but a whole lot of pleasure for all concerned. A party of women can spend the hour or two before refreshments in conversation, or games or music may be arranged for.

Summer offers just the time in which to pay off one's social obligations to city friends, since roads and weather are more dependable than in winter. Likewise the guests will better enjoy the ride and the environment of the country home.

RECIPES.

We do not pay for recipes. If you wish a recipe ask for it, and in return contribute your own favorites.

Canning Asparagus and Spinach.

Mrs. F. C. S.—Cut young asparagus in inch pieces, fill cans, and pour on cold water to overflowing. Fit on new rubbers, lay on covers and set in the boiler on a layer of hay or straw, or boards in which two or three holes have been bored. Pour cold water in the boiler until half way up the cans and boil for one hour and a half. Then remove, see that the cans are filled to overflowing, tighten the covers and set away to cool. When cold, tighten covers again and set in a dark place.

Spinach.—Blanch young spinach six minutes in boiling water, cool under cold running water, chop, return to kettle and heat to boiling, adding salt to taste, can hot as fruit.

Asparagus and Endive.

Mrs. E. McW.—I can find no recipe for canning endive. For asparagus, see answer to Mrs. F. C. S.

A Substitute for Graham Bread.

When making white bread add one cupful of wheat bran and a tablespoonful of lard for each loaf. Mix into a hard loaf, let rise the same as white bread, and bake.—Mrs. D. S., Breckenridge.

Drop Sugar Cookies.

Here is a recipe for drop sugar cookies. They are fine and I make a good big batch. Two cups granulated sugar, half cup butter. Work butter and sugar together thoroughly. Two eggs, or three, if plentiful, half cup sweet milk, half teaspoon soda wet in three tablespoonfuls of sour milk or buttermilk, two teaspoons heaping, of baking powder, four cups of flour. Drop in little patties and smooth out a little with spoon. Try this, as it is much easier than kneading and rolling them out.—An Interested Reader.

Cream Puffs—No. 1.

Half cup of butter put in one cup of boiling water and set on range to boil. Stir into this one cup of flour, dry, and cook until it is thick paste, after which beat into this three eggs broken in separately and drop from spoon into pan in which they are to be baked. Bake until they can be readily lifted from pan. Then fill with a nice custard made from com-



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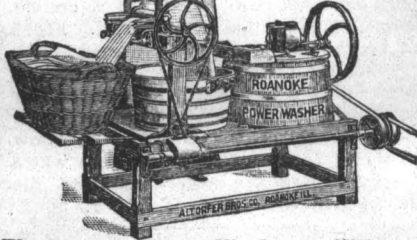
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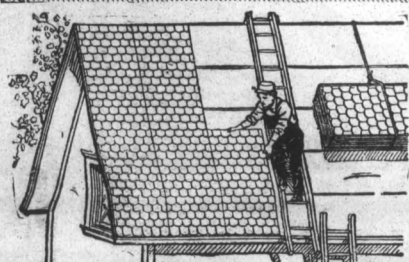
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mon recipe, or whipped cream. They are delicious. This makes one dozen.—Mrs. C. J., Sparta.

Cucumber Pickles.

A long time ago I noticed in your columns a woman asking for a recipe for canning cucumbers, and as I am such a busy woman have waited to see if "somebody else" would send a recipe. If they have I have not noticed it, and as we are using our last can, put up last cucumber time, and they are crisp, fresh and good yet, think she will find our recipe satisfactory. To one gallon of good vinegar, add cup of salt and cup of mustard. The mustard, of course, must be made in smooth paste, with vinegar or water; stir all together thoroughly and pour over cucumbers packed tightly in can.

Have recipe for splendid sunshine cake which I will send if you want me to.—"Peggy."

(Send on the cake recipe. Several recipes for pickling were published but as yours is "different," will pass it on.—Ed.)

Cream Puffs—No. 2.

Beat three eggs five minutes, add one teacup of sifted flour, slowly, alternating with sweet milk, using one pint; add level teaspoon of salt and one of melted butter. Grease patty pans and fill half full; bake in quick oven. Serve hot.—Mrs. J. J. O'C.

Corn Fritters.

To one pint of sweet milk add enough flour to make a stiff batter, one egg, one teaspoonful of baking powder sifted in the flour, a pinch of salt. Add to this a half can of canned corn or the same amount of cooked corn cut from the cob. Drop in hot fat with a tablespoon and fry until browned.—R. R.

Peas in Carrot Cups.

Scrape carrots, slicing off the bottom so they will stand up, and cut to the height of small cups. Cook the cups and also the ends that have been cut off until tender. Chop the ends up into small pieces. Season a pint of cooked peas with cream and butter, salt and pepper, or a thickening can be made for them. Add the chopped carrots to the peas and serve in the carrot cups.—P. V. V.

Honey Gems.

Sift three cups of flour with two level teaspoonfuls of baking powder, and a dash of salt. Rub in four tablespoons of butter, three eggs well beaten, six tablespoons of cream and a half cup of strained honey. Mix and put into a well buttered gem pan. Bake in a hot oven until a rich brown. Serve with whipped cream, stained with strawberry juice, or other fruit juice if preferable, or the ordinary pudding sauce can be used.—Z. I. D.

Cream Pie.

Half cup sugar, two eggs, two tablespoons flour, a little salt, and butter the size of a hickory nut. Flavoring as desired, one cup milk. Cook in a double boiler and pour in a baked crust. Frost and brown.—V. W.

The secret of a good meringue lies in placing it in a hot oven to brown lightly and quickly. A moment's unnecessary baking toughens the meringue. Allow one tablespoonful of sugar for each white of egg, folding the sugar well into the stiff frothed egg.—Mrs. J. J. O'C.

PRETTY COUNTRY WEDDINGS.

BY HILDA RICHMOND.

Although there are many country weddings in winter and spring, summer and autumn see the prettiest of them all, because then the distinctive country touch can be given to the decorations, and the lawn may be used to supplement the house. When cold weather confines the guests to the house many of them would not know whether they were attending a city wedding or a country one, since furniture, decorations and clothes are much the same, but when the doors and windows are open, and especially when it is a daytime affair, there is a charm to a country wedding that a city one can never have, unless the parents of the bride have a large lawn or garden.

Usually the decorations are in the hands of the friends of the bride, and a dozen or more young men and women can not only accomplish much in the way of artistic effects, but they can have good times while doing the work. When there is a carefully thought out plan, or a sketch made by one of the friends, or the bride, matters are much simplified. Also if the young people know just where to put their hands on the necessary flowers at the proper time, everything will move off smoothly. With the color scheme thought out, the flowers located, the

sketch made or every detail clearly in the minds of the young people and articles all gathered together that will be needed, the real work of decorating the rooms, or the church, or both, will not take long.

For a very early wedding in summer white lilacs, or purple and white lilacs are beautiful, and are so common that it is easy to get loads of them. Some brides object to purple, but when the lilacs shade off to a delicate lavender they are exquisite. Masses of wild cowslip with their own green foliage make another good decoration, though the old-fashioned "hundred leaf" June roses or clove pinks are perhaps the very best flowers for the early summer weddings. Masses of fragrant roses in concealed bowls or jars are simple, and are the most effective flowers the country can produce, while their fragrance will add a joy to the occasion that the costliest hot house blooms could not give. Then, as the summer advances all the other flowers pass along in fragrant procession, ending with the gorgeous leaves and berries and vines and blossoms of autumn. It goes without saying that the very prettiest decorations are those that are noted for their simplicity, and the most common roadside blossoms can be arranged to the best advantage by even an amateur, if only simplicity is the keynote of the whole color scheme.

Whether it is a home or church wedding, the home must be decorated and much made of the porch and lawn. The breakfast or luncheon served on the lawn under the shade trees is a pretty idea, and one that gives more room in case the house is small or the number of guests large. At a very beautiful country wedding the bride and groom stood on the porch with the entire company on the sloping lawn, and then the feast was set out on the lawn under the trees just tinted with autumn colors. Autumn leaves, trailing clematis, bright berries, and golden rod were used to decorate the house at this wedding, the tints blending well and being in accord with the season. The lawn was thickly strewn with autumn leaves and the place cards were made of large yellow leaves marked with the names of the guests.

The final touch of beauty was added to one country wedding when the bride and groom departed, for instead of the annoying rice and old shoes thrown at and after them, they were showered with flowers and leaves. This last idea was a secret to all but a few of the young people and the newly wedded pair literally walked on a path of roses to the waiting automobile. Some of the flowers were raised by the bride herself, so there was a poetic touch to the final shower she received, while the others came from the gardens of dear friends and were all redolent of love and good wishes. The very best and prettiest things used in country weddings cost nothing, for everybody is willing to give flowers for the bride, and the woods are full of treasures to be had for the picking, so it always pays to ignore the costly hot house flowers that city people must use and cling to the dear home-grown flowers. Even the bride's bouquet should be an old-fashioned nosegay picked by the groom, instead of the smart affair that looks as if constructed by a milliner, and everything will be in keeping with the surroundings, and the wedding a golden day, not only for the happy pair but for all who attend.

GLASS OVEN DOORS A NEW IDEA.

Verily the world moves! Yesterday the making of delicate cake was a task to be attempted only by the veteran housewife, she who knew her oven as the Musselman knows his prayers and could tell to the fraction of a second just when to open the door and when to alter the heat, without looking at her cake. For if a blast of cool air struck the dough at any but the psychological moment the result would be fatal. Now, thanks to the ingenuity of man, or possibly woman, our oven doors have been made transparent and the novice can make even angel food and be able to watch the result without opening the door.

At first pieces of mica were tried for windows, but now one more enterprising than the rest has put out an oven with glass doors. It is one of the portable affairs which you can use with oil, gasoline, acetylene, alcohol or gas, so any housewife, country or city, may use it. The glass door is held in place by yielding pressure retaining strips which permit expansion as the oven heats, and contract readily when it cools, thus doing



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away with the danger of glass breakage. Yet the door is said to fit so tightly as to prevent the escape of heat even when the oven is in use.

If the oven works out as well as its friends claim it will, it should be of untold value to busy housewives. The time saved by being able to glance at your baking as you go by the stove instead of having to stop and open a door would be of as great value as the cakes saved through not being exposed to draughts.

KEEP THE DEED TO YOUR OWN PROPERTY.

BY JENNIE A. MACK.

There is an old saying that if mistakes were haystacks there would be no poor cattle. Mistakes are incident to human frailty, and want of judgment. We all make them and in most cases they are born of ignorance or want of foresight. Parents often make mistakes in the government of their children and not infrequently in after life regret them.

There is a class of mistakes wherein parents have over confidence in the love of their children and trust them with the interest of their declining years. Believing that their children would never forsake them they sometimes trust them with their property, with the understanding that the children take care of them in their old age. There may be cases, and doubtless have been, where such an arrangement worked out perfectly satisfactory to all concerned, but there is always a risk, and such risks are expensive.

I have a case in mind, being that of a mechanic who owned a beautiful home in the suburbs of a village. After his death, his son, a popular young man of twenty-five, persuaded his mother to sell the place and invest in a farm, as he had a mind for agriculture. The farm was deeded to the son, though a will had left the old home to his mother. Within a year following, the mother and daughter-in-law failing to agree the mother went to work for strangers. A few years later her health failed, and after being cared for by friends for a time she finally was taken to an infirmary where she died.

Another case of a peculiar character brought a good and well meaning man to poverty and grief. His wife having died, he was left with several children and with a splendid farm of 200 acres, without incumbrance. Having married again and having children by the second marriage, wife number two conceived the idea that it would result to her interest as well as that of her children if they could make a settlement on the children of the first family, having them quitclaim their interests in their father's estate, to eventually accrue to the children of wife number two. This plan was carried out in part. Not having a bank account it was determined to mortgage the farm to the value of the assumed heirship of the former children. For a while the interest was paid annually, but the man, now past middle life, began to fail in health. It was difficult to obtain reliable help, the repairs about the farm were neglected and the interest was not regularly paid. This, together with the depreciative appearance of the farm through neglect of repairs, terminated in foreclosure. The family was dispossessed, and for years suffered for the necessities of life. Death finally came to the release of him who had foolishly squandered a valuable farm which, judiciously used, should have afforded him an ample living and blessed his declining years. It is scarcely necessary to state that the first children squandered the money paid them by their father, the saloon getting a large share. I have in mind a number of cases where the property was deeded to children, under promise of supporting the old people, but the case above is a peculiar one on account of the unusual circumstances attending it.

Another case of unusual character was that of a man owning a good farm, who had the lives of his children, as well as that of his own and wife, insured, each carrying heavy policies. At the time, the farm was paying well, but during the hard times, 20 years ago, products began to fail to meet the demands of the policies. Money was borrowed from the insurance company and a mortgage given on the farm. In less than ten years, foreclosure resulted, leaving above the incumbrance only enough to buy a house and lot in the country, into which the old people moved. I had known them well in the days of their prosperity, and after their fall, visited the old couple, now alone, and heard their tale of woe.

But they blamed none but themselves, and attributed their downfall to lack of judgment. A sad feature of the case was that their children had moved away and neglected the parents who were now old and unable to work. All this resulted from overconfidence of the parents, in their efforts to benefit the children.

It is deplorable that children so often fail to appreciate the love and care bestowed upon them by parents. Often when property has been turned over to them their selfishness loses sight of their obligations, and too often results in devoted parents being reduced to want. Take my advice, don't do it.

HOME QUERIES.

Pearl.—To obtain the best results, fresh hyacinth bulbs should be bought each year. If you wish to use your old bulbs, however, leave in the ground until ripened after blooming, and then store in a dark cellar until late autumn. To blossoms at Easter they must be planted before Christmas. Soak the blue letters in cold water.

SHORT CUTS TO HOUSEKEEPING.

Before working in the garden or doing other rough work, rub your finger nails over a piece of soap. This will prevent the earth from getting in under the nails, and when you wash your hands the soap will come out easily. This is recommended to people who find it hard to do garden work with gloves on their hands.

—Mrs. J. J. O'C.

Wash and boil the peelings of apples and peaches. Strain the juice through a jelly bag, boil down with sugar. It is nice to spread on pancakes or bread.—Z. I. D.

When making a berry pie, try using bread crumbs instead of flour for thickening. It is fine.—Mrs. L. L. G.

If you are cooking preserves, apple butter, pumpkin, or anything which requires long cooking, drop a marble, which has been thoroughly disinfected, into the kettle. The contents will not then burn easily, as the marble moves constantly about over the bottom.—I. M.

Save the muddled flaps that come on open letters, to label fruit cans and mend paper patterns and sheet music, etc.—F. D. C.

MICHIGAN FARMER PATTERNS.

These patterns may be obtained from the Michigan Farmer office at the price named. Be sure to give pattern number and size.



No. 4916—Children's Dress.—Cut in sizes 2 to 10 years. For 6 years it requires 2½ yards of wide flouncing, 1½ yards material 36 inches wide, 1¾ yards of wide insertion, 2¾ yards narrow insertion. Price, 10 cents.

No. 5410—Children's Dresses Closed at Front.—Cut in sizes 2, 4, 6 and 8 years. Age 8 requires 2¾ yards of 27-inch goods. Price, 10 cents.

No. 3287—Men's Negligee Coat Shirt.—Cut in sizes 32 to 44 inches, breast measure. For size 36 breast it requires 4 yards 27 inches wide. Price, 10 cents.

No. 4976—Ladies' Box-plaited Six-gored Skirt.—Cut in sizes 22 to 32 inches, waist measure. For size 24 it requires 5¾ yards 50 inches wide. Price, 10 cents.

No. 5121—Ladies' Waist Closed at Back.—Cut in sizes 32 to 42, bust measure. Size 36 requires 2½ yards of 27-inch goods, with ¾ yards of 36-inch net. Price, 10 cents.



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BOX F, care MICHIGAN FARMER, Detroit, Mich.

HORTICULTURE

SUMMER CARE OF YOUNG ORCHARDS.

We have just sown a cover crop of oats and winter vetch in our two-year-old orchard of apple and peach. Ten acres of this had not been cropped this year, two acres are in strawberries, and five acres adjoining set last spring is planted to corn. Nothing was sown in the strawberries as this part will have a mulch of marsh hay in December. We intended to sow the part in corn at this time, but a hard rain and wind has blown the corn over so badly that it is impossible to get through with a horse and cultivator, and I fear it will not straighten up enough to allow us to do so. In this case we shall wait until the corn is cut, which I think we can do by September 1. This is later than it should be, but it seems to be the best we can do.

The ten acres which has been kept cultivated has also had a mulch of coarse manure about the trees, and they have made an excellent growth this season. We are sowing 15 pounds of vetch per acre and one bushel of oats. This is a somewhat lighter seeding of vetch than is recommended, but the seed is rather expensive, (11 cents per pound), and we thought to help out the fall mulch with oats. I think the vetch will be quite thick after its spring growth. We also sowed the vetch rather light near the rows of trees so it would not interfere so much with the plowing and harrowing here where the backfurrow comes in plowing under in the spring. Here the oats were sown a little heavier. We intend to spread what is left of the mulch about the trees before plowing in the spring and use clean cultivation next season.

Another small orchard, which we term our variety orchard, was sown to a variety of cover crops last year as an experiment by a college student. Most of these contained a mixture of clover. We did not plow this under last spring, but put some coarse manure mulch about the trees, and mowed the cover crop. The second growth, together with weeds which have come up in places, is about ready to mow again. We shall probably plow this under in the spring.

Another four-acre orchard coming four years of age is partly in strawberries which we are renewing to keep for the third season, and partly in sod with a mulch about the trees. The sod has been mowed for hay. The trees have done very well, though I believe those in the strawberry patch are a little larger than the mulched trees. I have noticed that they are more susceptible to the twig blight, however, while the trees in sod have more nests of the tent caterpillar and are bothered more by grasshoppers.

Combating Blight and Insect Pests.

Another orchard of four acres set five and six years ago last spring is partly in raspberries and partly in strawberries which were kept over last year without care. The raspberries have now been mowed, and the raspberries will be soon. We expect to leave the side hill, which is pretty well sodded and plow the balance next spring. The strawberry mulch was left on the ground, and considerable had been put around the trees. They seem to be doing well, making a better growth than usual this season. The Wageners have been troubled with the blight more than I have ever known them to be before, at least half of the trees being affected. We have been over them twice cutting it out. We try to cut six to ten inches below the visible infection when a large limb or the trunk does not prevent, and after each tree or after each cut where it is necessary to cut near the infection the shears are wiped with a cloth saturated with carbolic acid water. We have noticed that the blight was much more prevalent in the part where the raspberries are which was kept cultivated. Worms' nests are also troublesome. We strip these from the trees and put the leaves in a basket carried for the purpose. This gets the worms without destroying the branch or the buds on it. The tip will continue to grow, and strong buds will form for next season, or if early they sometimes start again this season. I believe this is better than cutting the branch, and nearly as rapid.

The red humped apple worm is just starting to work, and we must look out for them or young trees will be defoliated rapidly. They are small at first but grow to be an inch and a half long, of a reddish color, with a hump of brighter color

on their back near the front end. They work in colonies, clustering around the leaf with their heads toward the margin and work inwards and toward the stem after which they start on the next leaf. This habit makes it comparatively easy to locate and get them by picking the leaves on which the clusters are working. We have found some tussock moth and yellow necked datana on the young trees, but the tent caterpillar and the red-humped worm are the only ones that have thus far done enough damage to make it worth while to fight them, and they can be controlled more cheaply on young trees by stripping the leaves than by spraying, also more successfully.

The orchard in question is composed of King and Grimes' Golden trees as permanent apples, with Wagener and Wealthy fillers, and peach sub-fillers. The peach trees have mostly gone out with the yellows, and the remaining ones during their short life, but it is hard to sacrifice them just as they reach an age when they should be at their prime. The Wagener and Wealthy are bearing their first crop worthy of mention. We have thinned them considerably so they have from a peck to a half bushel on the larger trees. The Wealthys are bearing more perfect apples than the Wageners, but none of them are as perfect as on the larger trees, as they are troubled much more by curculio and more of them are ill-shaped, especially the Wageners. In the thinning all imperfect specimens were taken off, but we have just had a severe hail storm which has cut the exposed apples badly, and it is likely that more of them will have to come off. There are some scattering Grimes' Golden on the six-year trees and occasionally a King.

Another small orchard of two acres set five years ago last spring and mulched from the start is now making a good growth, though the Wageners did not do well for the first five years, but they were a poor lot of trees. The Stark have made an excellent growth from the beginning, and have some apples this year. The Wageners are bearing from a dozen to a peck each, but they are badly hail scarred. It is taking rather more mulch than we can secure to mulch all of our orchards which are now mulched, and we shall cultivate and grow cover crops on more of them as they become larger, but I do not think we shall disturb the soil on the side hills.

Calhoun Co. S. B. HARTMAN.

BLIGHT OF FRUIT TREES.

Prof. H. J. Eustace, of M. A. C., calls attention to the "blight" which is doing great damage the present season, in the Western Michigan apple, pear, and quince orchards.

"The disease is an old and common one. Its appearance is very striking. The diseased parts of the tree, whether young shoots, blossoms, fruits, or fruit spurs, turn brown and the leaves do not fall off but hang on the tree. Hence the presence of the disease is easy to detect.

"The trouble is usually more common and serious on pears and quinces, of all ages, than on old apples, but it is often very destructive of young apple trees.

"Many methods of control have been suggested and tried but the only one that has been successful is the eradication of the diseased portions. That this method may be successful, requires a systematic inspection, at frequent intervals, of every tree in the orchard and the removal of all diseased portions.

"The inspection and eradication should be done in pear and quince orchards of all ages and in young apple orchards. The trouble is seldom serious enough on old apple trees to pay for the labor of cutting out the diseased portion, however, it may be advisable on some varieties that are very susceptible to the disease, like the Talman Sweet.

"Certain precautions must be carefully followed in cutting out the diseased portions. Unless these are taken the work will not be effective and may be worse than if no efforts were made to check it.

"The rules for cutting out the diseased parts are as follows:

"1. Make the cut well back into the healthy wood. The cause of the trouble may extend farther than it appears.

"2. After every operation, wipe off the tool and also the cut surface with some disinfectant solution. A good one is corrosive sublimate, 1 to 1,000 strength. This is easily prepared by placing in a pint of water one corrosive sublimate tablet which can be secured of any druggist.

"3. Keep the diseased twigs in a bag or basket and burn them."

Double Orchard Profits

PLANT TREES WITH

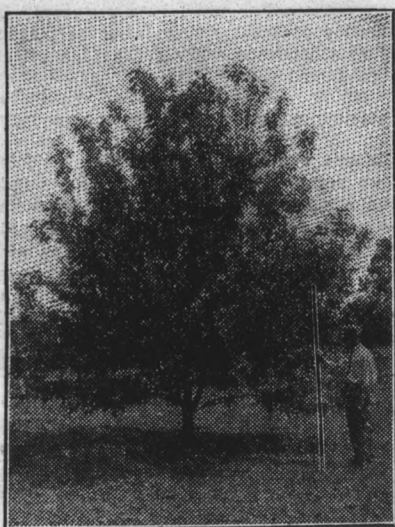
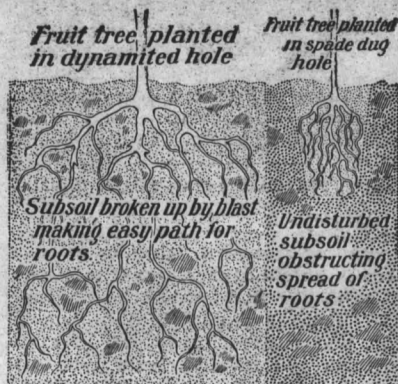
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Learn the methods used by Hale, "The Peach Tree King," and other leading orchardists.



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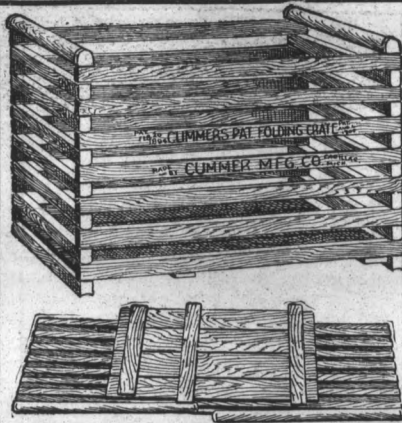
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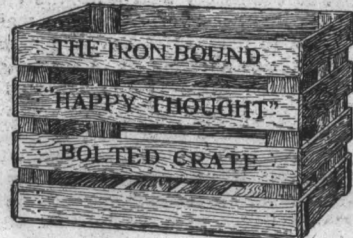
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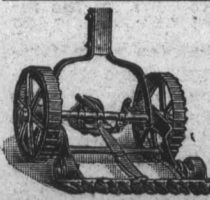
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FARMERS' CLUBS

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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.

COMPULSORY SPRAYING.

Address of Mr. D. Munro, before the State Association of Farmers' Clubs at the last annual meeting of that organization.

When we consider that 7,000,000 of the 10,000,000 apples trees of our state are neglected, entailing an annual loss of thousands of trees and a very much diminished and inferior crop of fruit, we are not stating other than a fact when we say the question of the farmer's orchard is most vital and pressing.

Our state law, as passed in 1905, is very rigid, but the machinery of the law has not accomplished all that the farmers should desire.

The fruit growers of our state are not indifferent to their trees. They care for them regardless of the law. They know their business; they know where their interests lie. They also know that if the farmer continues to neglect his orchard he will have no fruit for market, and will be forced to buy for his own use high priced fruit. Already this is the case in many localities.

Perhaps all the delegates here present are posted, but the farmers you represent are not generally intelligent on this subject. The writer recently spoke to the board of supervisors of St. Clair county and asked for a showing of hands of all who knew whether there was any San Jose scale in their townships. Not one response. After showing some cuttings and fruit infested with scale a number said there was lots of it in their section, and lots of trees dead and dying. The bulletin from the Department of Agriculture at Washington, has this to say: "Perhaps no other insect has been so widely exploited as the San Jose scale. The fears aroused by this insect have led to more legislation by the several states, and by various foreign countries than has been induced by all other insect pests together. In fact, as a result of the San Jose scale insects have assumed international importance and occupy a prominent place in the regulation of commerce. Some useful results have followed. Keen interest in the several subjects of insect control have been aroused. Valuable and effective means of controlling insect pests, notably scale insects, have been discovered, and all lines of applied entomology have been stimulated and benefited. In spite of all efforts to prevent it the San Jose scale has slowly extended its range until it now occurs in practically every state in the Union and in portions of Canada. It is most abundant and widespread in the Pacific Coast states and in the Atlantic and Gulf States. It is less abundant in the middle west and the central states of the northern tier. The early losses from it were considerable, as it is perhaps the only scale pest which, unchecked, will in two or three years actually kill, or at least ruin, the plant attacked."

The great need is education. The fruit grower is posted, the farmer as a rule, is not. Clay is the only township in St. Clair county where an inspector has been appointed. The chairman of the board of supervisors told the writer that for a day after he addressed the board they talked nothing but scale. Arousement must come before law enforcement. But law enforcement should and must follow.

In preparation for this paper letters were sent to Ohio, New York, Washington, Oregon, California, Ontario, and Washington, D. C. The following questions were asked: "Does your state law require the appointment of inspectors? Are they appointed by counties or by townships? What is their compensation? Is the work of inspection carried on vigorously in your state?"

California.

"Inspection is carried on very vigorously. We do not admit nursery stock into this state or into any county from another county without a tree to tree inspection. Our state law is not as complete as our county law and will probably be changed at the coming legisla-

ture. County horticultural commissioners are appointed for a term of four years. Compensation—County commissioner, six dollars per day and expenses. Deputies get five dollars. Local inspectors \$3.50 per day. They are appointed by the county board of supervisors. They have to do with fruit and weed inspection. It costs the state \$50,000 a year to care for the fruit interests."

New York.

"Inspection in this state is carried on as thoroughly as can be on an annual appropriation of about \$50,000. There is no so-called noxious weed law in this state. All inspectors are appointed from the civil service eligible list, and by the commissioner of agriculture. There is no county or township separation of the work of the state. Every person, when he becomes aware of the existence of disease or insect pest, shall forthwith report to the commissioner of agriculture at Albany, and the commissioner shall take such action as the law provides. The inspector or his agent or agents are empowered to take such steps and do whatever may be deemed necessary to so control or prevent the spread, or extirpate such pest or pests, disease or diseases. Every nursery must be examined once each year prior to September first."

Ohio.

"The Ohio department of agriculture has a division of Nursery and Orchard Inspection, with a chief inspector and assistants. This division has been working nine years. There is one chief and seven assistants, and some who give part time, some full time; and a secretary. Beside inspection, talks are made before horticultural societies, high-schools, farmers' clubs and institutes. The chief urges that provision be made for greatly extending this line of work. The inspectors interest themselves in farm crop insects and diseases, and weeds, and suggest that bee culture be included. It appears at last to be dawning upon the owners of small orchards that something must be done in the way of treatment, if any desirable fruit is to be available for family use. The commercial orchardist is on the alert and needs little assistance from this division; but the man whose time and thought are largely given to other work has expected his orchard to take care of itself. He begins to realize that but little returns are being received. By inspection, talks and demonstrations in pruning and spraying, we have endeavored to encourage better care of the small orchard. It is impossible, under present conditions, for us to cover very much territory at that period of the year when this work should be done. To perform this work successfully, and for the best interests of the farmer and fruit grower, there should be available in each county or group of counties of the state, an inspector. Many thousands of nursery stock have been destroyed because of infestation by San Jose scale. Quite often poor judgment is shown by the nurseryman in planting stock in dangerous proximity to such places. Four hundred requests came for inspection, 277 orchards were visited. Others neglected for want of inspectors. The entire cost is provided by the state."

Ontario.

"The township councils are empowered to appoint inspectors. These inspectors are approved by the Minister of Agriculture for the Province and their remuneration which runs from \$2.00 to \$3.00 per day, is borne equally by the township and the province. In addition to the local inspectors, the province employs two inspectors who are paid \$4.00 per day, and who supervise the work of the local inspectors to a certain extent, and also visit districts where special attention is necessary. In some sections devoted to the raising of the more tender fruits the inspection is looked after very carefully. As to noxious weeds, the appointment of inspectors is entirely in the hands of the township council, who also must bear the entire expense. I regret to say that the law is not so vigorously enforced as could be desired. The fruit branch of the Department of Agriculture also has to do with the inspection of apiaries. The expenditure of the branch last year was about \$50,000. A great awakening seems to be taking place along horticultural lines in Ontario, and we may expect increasing demands on this Department for aid in all branches of orchard work. The department continues to bonus co-operative spraying, limiting it to those farmers who have not as yet benefited by spraying."

(Continued next week.)

GRANGE

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

THE AUGUST PROGRAMS.

State Lecturer's Suggestions for First Meeting.

"Our object should be to help develop in the country community the great ideals of community life as well as of personal character."—Roosevelt.

Roll call, responded to by each telling of the greatest ride he or she ever took.

Music.

Summer rations for cows.

Recitation.

My method of canning corn, fruit and vegetables.

Song.

Some noted people of today—1. Men.

2. Women.

Suggestions for Second Meeting.

"Work without rest is like bread without yeast—it is hard and heavy."

Roll call, responded to by each naming an evidence that the world is growing wiser, brighter or better.

Co-operative ownership of farm machinery—is it feasible in this locality? If so, what machines?

Conundrum contest.

Vacation experiences.

Select reading.

Value of a power engine in the work of the farm and home.

Prime lemonade, by men named A to J; served with choice cakes, by women named K. to Z.

Intersperse this program with songs from "Song Knapsack."

THE GRANGE BROADENS ONE'S VIEW OF LIFE.

"What all there is in prejudice, No one has yet said."

We come as naturally by our prejudices as by any other possession. Now and then, it must be admitted, they serve a good purpose, but on the whole they greatly hinder our progress. They hinder us most because they tend to keep up apart and prevent, in a measure, that harmony and spirit of co-operation that are indispensable to a people who must govern themselves and who have so many problems that must be worked out in common.

Our political and religious prejudices—how they stand in our way! Members of opposing political parties cannot work together with the same feeling, cannot co-operate with the same degree of success. Members of different churches often lack the mutual confidence and that spirit of broad charity which we must have if we get the most out of life. They lack these things because they do not know each other, and they do not know each other because they have failed to understand their limitations or to appreciate the power of environment in the moulding of human lives, and, failing to know these things, they cannot see each other's viewpoint and so do not understand how men, equally honest and competent, can differ widely in opinion upon some matters of great importance.

The Grange brings men of different political and religious beliefs together in common, and they learn to know each other, as a natural result. A short time ago, I was called to attend a Pomona meeting in a strong Grange county in the northern part of the state. The entertaining Grange gave the evening program. The program opened with roll call and each one present was requested to say what church he attended, if any, and to recite a verse from the book of James. Well! I wondered if that lecturer had gone crazy. What did she mean? Were we really going to discuss religious creeds in our order? But there was no use in worrying for I thought the lecturer appeared to be one who gets what she goes after and I should soon discover her purpose.

The hall was well filled and the roll call experience was a very profitable one to the writer, at least. Nearly everybody responded, and in that company were subscribers to almost every form of religious creed common to this country. Church-goers from the devout Episcopalian to the fellow who modestly confessed that he didn't attend meeting regularly but went to the Free-Methodist camp meeting once a year. Before this experience was half over the lesson dawned upon me, for there we were, differing so widely in some respects and yet working together for the Grange, the community, the school and the state, and enabled thus to work harmoniously because, through the Grange, we had been brought together and had acquired that

degree of mutual confidence and respect which is indispensable to harmonious action.

W. F. TAYLOR.

THE GRANGE IN OTHER STATES.

The Patrons of Maine, at their last state meeting adopted the following clear-cut resolution touching the relation of the Grange to the rural school. It is well worth reading: Resolved, That while the common school is not the proper place for the teaching of scientific agriculture, yet the Grange believes that there is a close and vital relationship between the rural school and the industry of agriculture, that the country school must be made so good a school that no farmer will need to remove from his farm to educate his children; that it is essential to such a school that there be trained and efficient teachers, reasonably permanent in their tenure of position; that it should be housed in decent and well-equipped buildings, and should have a course of study adapted to the practical needs of country children; that the Grange endorses an increased amount of handwork, for rural schools, the organization of boys' agricultural clubs, the establishment of school and home gardens, and such other incentives as will lead to the later study, in higher institutions, of scientific agriculture and to the development of a respect for the occupation that is fundamental to the welfare of all the people.

Union League Grange, of Oregon, is considering the organization of a new feature of Grange work, or work and recreation combined. As a dinner club has in its very title something attractive and suggestive of sociability, it is proposed that farmers' families who come to town on Saturdays to buy groceries or market farm products bring their loaded lunch pails and at noon repair to the Grange hall, where stoves, tables and dishes may be provided and a committee be in readiness to help serve the lunch in a homelike manner. When all are seated the master of the Grange or other presiding officer will introduce the subject or subjects for the day's discussion. Thus eating and talking together, a pleasant and profitable hour or two would be passed. If any chose to pay 15 cents for the lunch rather than bring one, they could do so. In most places this noon-day plan should certainly prove feasible.

The Patrons' Co-operative bank of Olathe, Kan., now nearly 30 years old, officered and run by members of the Grange and with their own money, reports deposits of \$450,000, with \$1,000 more profits than the year before, paying a semi-annual dividend of 15 per cent and adding a neat sum to the undivided profits or surplus.

The executive committee of Maine State Grange recently outlined a campaign against the repeal of the Maine prohibitory law. At its annual meeting the State Grange took strong action against the repeal, and now the executive committee is seeking to put those resolutions into effect. It is proposed to co-operate with and assist the churches, civic league, W. C. T. U. organizations and other temperance societies in their efforts to retain the present law, and with all these agencies combating any movement to repeal it there is good reason to believe that their efforts will be successful. At the meeting of the executive committee it was voted to hold a series of field meetings this summer throughout the state. The next State Grange meeting will probably be held at Lewiston.

A prominent New York institute worker found a Grange at Balmville, Orange Co., that state, that was doing work far beyond the ordinary, and thus describes it: A neat hall, costing about \$2,500, stands out in the open country a half mile from the end of the trolley line. It is located here because it is a central point between two hamlets and one strong Grange could be maintained here rather than two weak ones at the hamlets on either side. This hall is open any night in the week for young or old who care to gather there for social, intellectual or agricultural intercourse. The people avail themselves of it. Not far away is a rural school, and near it is a half acre devoted to a school garden. This garden had its rise in Balmville Grange. A committee was appointed to take the matter up with the school trustees. Francis B. Kelley, a gardener and florist of many years' experience, a native of Greenock, Scotland, where school gardens are conducted on a large scale, has had charge of the work. Some forty-six children ranging in age from seven to 14 years, are enrolled in the garden school. Even during the vacation months the attendance averages 20. The garden is 250 feet long by 60 feet wide. There are 16 plots, in which are grown a variety of vegetables, the children doing all the planting, weeding and whatever other work is necessary. Last year the state department of agriculture awarded 16 certificates to the children for proficiency and one to Mr. Kelley as instructor.

COMING EVENTS.

Pomona Meetings.

Gratiot Co., with Arcadia Grange, Saturday, Aug. 5. Miss Jennie Buehl, state speaker.

Charlevoix Co., with Boyne River Grange, Thursday, Aug. 10.

Kent Co. farmers' annual picnic, at John Ball park, Wednesday, Aug. 16. Former State Master Horton, state speaker.

MARKETS

DETROIT WHOLESALE MARKET.

August 2, 1911.

Grains and Seeds.

Wheat.—With an increase of nearly 7,000,000 bushels in the visible supply of wheat due to the heavy selling by farmers, still the market has been able to advance values over three cents for cash wheat. This situation is largely the outcome of the work of black rust in the northwestern fields, serious damage having resulted to the spring wheat crop and the output of the Dakotas, Minnesota, and some of the Canadian provinces will be restricted considerably should further investigation prove these early reports to be true. Buyers have put confidence in the news and are bidding eagerly for the offerings, believing that a diminishing of the yield of the great wheat states will bring about better figures later on. Another factor in the deal is the shortage of exports from Russia. Her export surplus is put at one-half the quantity delivered a year ago. Argentine shipments are fairly liberal but those from Australia are small. The general tendency of the week's news is therefore encouraging to farmers. One year ago the price paid on this market for No. 2 red wheat was \$1.01½c per bu. Quotations for the past week are:

	Red.	White.	Sept.	Dec.
Thursday	86	83½	88½	92½
Friday	87½	85	90	94
Saturday	87½	84½	89½	93½
Monday	87	84½	89½	93½
Tuesday	88½	85½	90½	94½
Wednesday	88½	85½	90	94½

Corn.—Copious rains in the corn belt have been detrimental to prices, a decline having accompanied the rise in wheat values. The improvement in the crop is quite general over the corn belt although the Iowa state report indicates substantial losses during the past month to her crop. There were also unfavorable advices from Illinois and Nebraska where special mention is made of the poor earing of the stalks. One year ago the price for No. 3 corn was 66½c per bu. Quotations for the week are:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	66½	67½
Friday	66½	67½
Saturday	66½	67½
Monday	66½	67½
Tuesday	66	67
Wednesday	66½	67½

Oats.—The condition of the new crop in this and other states hardly justified the sharp decline which occurred last week and this week's opening found prices moving in the other direction. There is little in the situation at this time that can be construed to favor lower values. A year ago standard oats sold in this market at 43c per bu. Quotations for the week are:

	Standard	No. 3
	White.	White.
Thursday	40	39½
Friday	40½	40
Saturday	40½	40
Monday	41	40½
Tuesday	41½	41
Wednesday	41	40½

Beans.—Interest in this market increases with the approach of the crucial period in the development of the new crop. The success of many fields depends upon the arrival of rains within the next few weeks. There is some demand for cash beans this week and an advance of 8c was offered on Tuesday for immediate shipment stock. Quotations for the past week are:

	Cash.	Oct.
Thursday	\$2.20	\$2.05
Friday	2.20	2.05
Saturday	2.20	2.05
Monday	2.20	2.05
Tuesday	2.28	2.07
Wednesday	2.28	2.07

Clover Seed.—The crop outlook is not considered especially flattering and as a result quotations have been advanced during the past week, October quotations being placed on a par with those for prime spot. Alsike is also a little higher. Quotations are:

	Prime.	Oct.	Alsike.
Thursday	\$10.25	\$10.25	\$9.00
Friday	10.50	10.50	9.00
Saturday	10.50	10.50	9.25
Monday	10.50	10.50	9.25
Tuesday	10.50	10.50	9.25
Wednesday	10.75	10.75	9.25

Rye.—No. 1 is quoted at 79c per bu., which is a 2c advance over last week's quotation.

Visible Supply of Grain.

	This week.	Last week.
Wheat	41,316,000	34,394,000
Corn	8,201,000	8,517,000
Oats	11,203,000	10,901,000
Rye	14,000	13,000
Barley	714,000	902,000

Flour, Feed, Provisions, Etc.

Flour.—Market is slow with prices unchanged. Quotations are:

Clear	\$4.00
Straight	4.25
Patent Michigan	4.75
Ordinary Patent	4.50

Feed.—Corn and oat meals are lower. Carlot prices on track are: Bran, \$25 per ton; coarse middlings, \$26; fine middlings, \$27; cracked corn, \$23; coarse corn meal, \$23; corn and oat chop, \$26 per ton.

Hay and Straw.—Prime new hay is selling around \$19.20 per ton. Old hay is a little easier, while straw rules higher. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$21@22; No. 2 timothy, \$20; clover, mixed, \$18@19; rye straw, \$8.50; wheat and oat straw, \$7.50 per ton.

Potatoes.—Potatoes are still too few to properly care for the demand although

a noticeable increase in the offerings is tending to satisfy potato eaters but at last week's range of prices. Quoted at \$1.60@1.75 per bu.

Provisions.—Family pork, \$17@18; mess pork, \$16.75; medium clear, \$16.50@17.50; smoked hams, 14@16c; briskets, 10½@11½c; shoulders, 10½c; picnic hams, 10c; bacon, 14@16c; pure lard in tierces, 9½c; kettle rendered lard, 10½c per lb.

Dairy and Poultry Products.

Butter.—Creameries moved up a cent on Tuesday, thus keeping pace with Elgin and other outside markets. Dairies are steady. Quotations: Extra creamery, 26c; firsts, do., 25c; dairy, 18c; packing stock, 17c per lb.

Eggs.—This deal is active at unchanged prices and conditions substantially the same as a week ago. Fresh eggs, case count, cases included, are quoted at 14½c per dozen.

Poultry.—The direction of values is downward with the trade receiving a good supply. Quotations are: Live—Hens, 12½@13c; old roosters, 9c; turkeys, 14@15c; geese, 8@9c; ducks, 12@13c; broilers, 16@17c per lb.

Cheese.—Michigan, old, 17c; Michigan, late, 13½@15c; York state, new, 14@15c; Swiss, domestic block, 19@21c; cream brick, 14@15c.

Veal.—Market steady at last week's figures. Fancy, 10½@11c; choice, 8@9c per lb.

Fruits and Vegetables.

Cabbage.—Higher. Selling at \$2.75 per bbl. for home-grown.

Pineapples.—\$3.75@4 per case.

Currents.—Scarce and higher, selling at \$3.50@4 per bu. for red.

Blackberries.—\$1.50@1.75 per 16-qt. case.

Raspberries.—Offerings light and of inferior quality, due to dry weather. Red \$4.75@5 per bu.

Huckleberries.—In light supply and steady. Quoted at \$3.50 per bu.

Apples.—There is a good movement of this fruit and the shipments are satisfying the trade at prices ruling below the figures of last week. New Michigan grown are quoted at 75c@81c per bu.

OTHER MARKETS.

Grand Rapids.

Plums brought \$2 on the city market Tuesday morning. This fruit is ripening fast. Early apples are leaders in the fruit line now, the Duchess and Astrachans going out in carloads. Potatoes have weakened a little, though home-grown stock is still bringing around \$1.50 per bu. Green corn is worth 10@15c, green peppers, 25c a dozen; string beans, \$2; peas, \$2; cucumbers, 25@40c. Strictly fresh eggs are higher, bringing 21c in a retail way. Creamery butter is 1c higher. Dairy butter is worth 20@22c to the country trade. Dressed hogs are bringing 8½@9c. The mills are paying 80c for No. 2 red wheat; 68c for rye, and 38c for new oats.

Chicago.

Wheat.—No. 2 red, 86½@87½c; Sept. 90½c; Dec., 94½c per bu.

Corn.—No. 2, 62½@63c; Sept., 63½c; Dec., 61½c per bu.

Oats.—No. 2 white, 39@39½c; Sept., 41c; Dec., 43½c.

Barley.—Malt grades, 80c@81c per bu; feeding, 65@75c.

Butter.—Although trade remains quiet, and there has been no change in the situation that would encourage an advance, prices were moved up a cent on Tuesday to keep pace with other markets. Quotations: Creameries, 21@26c; dairies, 19@23c per lb.

Eggs.—Receipts are hardly up to requirements and all grades are higher. Quotations: Prime firsts, 17c; firsts, 15½c; at mark, cases included, 6@13c per dozen.

Potatoes.—Receipts at this week's opening were nearly double those of the corresponding time last week. Prices gradually declining. Good to choice new now selling at \$1.40@1.45 per bu.

Beans.—Holding firm at recently advanced figures. Condition of new crop being closely watched. Choice hand-picked pea beans are quoted at \$2.33@2.38 per bu; prime, \$2.10@2.20; red kidneys, \$3.50@3.85 per bu.

Hay and Straw.—An advance of \$1 and upward has been scored by all grades of hay, and the market is steady. Rye straw also higher. Quotations: Choice timothy, \$26@27; No. 1 timothy, \$24.50@25.50; No. 2 do., \$22@23; No. 3 do., \$18@20; No. 1 clover mixed, \$19@22; No. 2 do. and no grade, \$5@12; clover, \$5@10; rye straw, \$8.50@9; oat straw, \$6.50@7; wheat straw, \$6@6.50 per ton.

New York.

Butter.—All grades of creamery show a fractional advance. Market reported firm. Creamery specials are quoted at 27c; extras, 26c; firsts, 23½@24½c; seconds, 21½@23c; thirds, 20@20½c.

Eggs.—Little change since last week. Market generally steady. Fresh gathered extras, 22@25c; firsts, 18½@20c; seconds, 15@17c; western gathered whites, 19@23c per dozen.

Poultry.—Dressed—Steady, following a decline on both old fowls and broilers. Turkeys, 12@15c; fowls, 10@15c; western broilers, 13½@16c.

Boston.

Wool.—The uncertainties that hover over the wool markets are diminishing trading and prices have shrunk, due to the desire of traders to unload. Nobody wishes to stock up while congress is revising the tariff schedule. Half-bloods show the most activity. Following are the leading domestic quotations of the week: Ohio and Pennsylvania fleeces—Delaine unwashed, 29@30c; XX, 27@28c; fine unmerchantable, 21@22c; ¼-blood combing, 25@26c; ½-blood combing, 25@25½c; ¾-blood combing, 24c; delaine unwashed, 24½@25c; fine unwashed, 19½@20c. Michigan, Wisconsin and New York fleeces—Fine unwashed 18@

19c; delaine unwashed, 23½@24c; ¼-blood unwashed, 25c. Kentucky, Indiana and Missouri—¾-blood, 24c; ¼-blood, 23@24c.

Elgin.

Butter.—Market firm at 26c per lb., which is an advance of 1c over last week's quotation. Output for the week, 933,700 lbs., as compared with 986,300 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

July 31, 1911.

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

Receipts of stock here today as follows: Cattle, 180 cars; hogs, 65 double decks; sheep and lambs 47 double decks; calves, 1,400 head.

With 180 cars of cattle on our market here today, and 26,000 reported in Chicago, our market is barely steady to strong on the best grades of heavy cattle, and the medium butchering cattle and commoner grades are selling from 10@15c per cwt, lower than last week, and in many instances from 20@25c per cwt lower.

We quote: Best 1,400 to 1,600-lb. steers \$6.75@7.25; good prime 1,300 to 1,400-lb. steers, \$6.50@6.75; good prime 1,200 to 1,300-lb. steers, \$6.25@6.50; best 1,100 to 1,200-lb. shipping steers, \$5.65@6.25; medium butcher steers, 1,000 to 1,100 lbs., \$5.25@5.75; light butcher steers, \$4.75@5.25; best fat cows, \$4.75@5.25; fair to good do., \$3.50@4.25; common to medium do., \$2.75@3.25; trimmers, \$1.75@2.75; best fat heifers, \$5.75@6; good fat heifers, \$5@5.40; fair to good do., \$4.25@4.85; stock heifers, \$3.25@3.50; best feeding steers, dehorned, \$4@4.25; common do., \$3@3.25; best butcher and export bulls, \$4.50@5; bologna bulls, \$3.50@4; stock bulls, \$3@3.25; best milkers and springers \$5@5.55; common to good do., \$2@3.00.

The milker and springer trade was from \$3@75 lower than last week. Almost impossible to sell the common kind by the dollar; have to be sold mostly by the pound.

With 65 double decks of hogs on the market today, trade opened active, with prices ruling full strong with the close of last week. The bulk of the good quality yorkers, mixed and light weights, sold at \$7.75, with a few at \$7.70, and a limited number of choice quality, selected yorkers late at \$7.80. Odd bunches of heavier grades selling mostly around \$7.50@7.65. The bulk of the pigs of good quality sold at \$7.50, with a few running to light yorkers in weights at around \$7.60@7.65. Rough sows sold generally around \$7.50; stags from \$5@5.50. Everything sold; market closing firm, and we think the prospects fair for the balance of the week.

The sheep and lamb market was slow today, especially on the common kind, and we look for low prices on this class for the next 90 days. Most of the choice lambs sold for \$6.50; few fancy at \$6.75; wethers, \$4@4.25. Look for steady prices the balance of the week.

We quote: Best spring lambs, \$6.25@6.50; wethers, \$4@4.25; cull sheep, \$1.50@2.50; bucks, \$2.50@2.75; yearling lambs, \$5@5.25; handy ewes, \$3.50@3.75; heavy ewes, \$3.25@3.50; veals, choice to extra, \$8.25@8.50; fair to good do., \$7@7.25; heavy calves, \$3.25@4.50.

Chicago.

July 31, 1911.

Received today 27,000 37,000 26,000
Cattle Hogs Sheep
Same day last year. 23,069 30,074 19,374
Received last week. 60,351 120,840 119,525
Same week last year. 69,605 118,641 105,090

Cattle sold surprisingly well on the whole last week despite the increasing receipts, prevailing prices being the highest recorded since early last March for desirable beef steers. Strange to say, although 26,771 head arrived on Monday, this liberal supply was well taken at firm values, with a new high record of \$7.15 for prime heavy Hereford steers. The next best sale that day was at \$7.05, but by Wednesday a lively demand resulted in another up-turn, and lots of cattle sold at \$7.05@7.15, while 15 head of fancy Missouri 1,520-lb. steers found a buyer at \$7.35. Sales of steers for the week were largely at \$5.85@6.85, with plenty of distillery-fed steers going at \$6.55@7.15. The poorer lots of steers went at \$5@6, while sales were made at \$6.35@6.75 for a pretty good class and at \$6.80@7.15 for choice lots. Exporters paid \$6.25@6.75 for steers, and fat yearlings sold freely at \$6.35@7.05. The stiff advance that has taken place in choice beefs is largely explained by the meager supplies offered on Missouri river markets, turning the demand largely to this market. The truth is that there is only a limited supply of prime beef cattle in the country, and further advances are probable. Now, if ever, is the time it will pay richly to make cattle choice. Cows and heifers have been selling freely on the basis of \$3.40@6.50, with a scarcity of the best grade of heifers, such as sell for \$6 and over. Canners sold at \$1.75@2.75, cutters at \$2.80@3.35 and bulls at \$2.90@5.75. Calves have found buyers at \$2.75@8.25, firmness being confined to the choicer lots. There was a fairly animated traffic in stockers and feeders, although advanced prices and limited offerings checked the sales of the better class of these cattle. Buyers took stockers usually at \$3@4.80 and feeders at \$4.25@5.25, a few selling up to \$5.50. Stock heifers sold largely at \$3.25@3.50 and milch cows at \$3@6 each.

Hogs advanced last week at a remarkably lively pace, the upward movement evidently taking country shippers by surprise. It has been a case of seriously curtailed receipts of hogs at the other western markets, owing chiefly to the breaking of the drought in the south-west, and as there were thin pickings at Missouri river receiving points, killers

were more dependent on Chicago for hogs than usual. The stoppage of enforced shipments from the dry regions on account of welcome general rains caused the average quality of the hogs to show improvement, and there was a great narrowing in the spread in prices for pigs for this reason. Hogs are still selling much lower than the unusually high prices paid one and two years ago, but they are much higher than in most former years, light and medium weight butcher lots being still the market top-pers. Extremely heavy hogs are the lowest. There is a good fresh meat trade, and cured meats and lard are having a large consumption, while there is a good foreign demand still.

Sheep and lambs failed to develop any strikingly new features last week, with spring lambs still comprising a large share of the receipts and attracting much more attention from killers than either yearlings or sheep. Increasing supplies of spring lambs are coming from the ranges, far-away Oregon and Washington contributing some long trains of lambs, yearlings and sheep, and as the season advances the range offerings will naturally increase materially. Fat lambs have sold higher on good buying, although liberal supplies resulted in sharp reactions from the top quotations. The demand for good breeding ewes has become much larger, good buying orders coming from Michigan and Kentucky, but buyers did not take to common kinds, even at the low prices asked. There were plenty of feeders, and these were in increasing demand at the low prices current. The best Washington range spring lambs averaging 75 to 76 lbs. sold at the beginning of the week at \$7.55.

CROP AND MARKET NOTES.

(Continued from page 100).

rival the huckleberries in productiveness. Eggs and butter are advancing a trifle—eggs 14c butter 24c. Hay is scarce and will continue so, for there has been but little hay made. Hot weather last spring ruined both hay and wheat. There is something wonderful about Michigan—if one crop proves a failure there is always some crop productive enough so that the farmer is never wholly "down and out."

Lapeer Co.—Wheat harvest was the earliest in years, being hastened by the dry weather. It was a nice crop and the acreage in this section was the largest ever known. The hay crop was lighter than last year and short crops of potatoes and beans are expected, although recent rains have improved them materially. Corn is more advanced and promises better than at this date last year. Fruit is a very short crop—even where orchards have been sprayed. Potato bugs giving lots of trouble. Wages very high this season—\$2 to \$2.50 per day and scarce at that. Something unusual here this season is that many have summer fallowed in preparation for wheat this fall.

Branch Co., July 31.—Threshing is in progress; wheat turning out 15 to 20 bu. per acre and now selling for 78c per bu. Threshers have advanced price ½c per bu. Oats not very promising, owing to drouth in May and hot, dry weather when they were filling. New seeding small and many pieces partially killed by drouth. Hay not more than half a crop and there will be but little clover seed. Pastures short and milk yield falling off. Early potato crop almost a failure; promise of late potatoes no better. Corn very uneven and will be much less than a full crop.

Washtenaw Co., July 31.—The most protracted and severe drouth to which this vicinity has ever been subjected still continues. The last rain of any importance came on the first Sunday in June. The extraordinary hot weather since that time has used up every particle of moisture. Clover seeding in most cases has been completely destroyed, insuring another short hay crop next season. Corn badly burned—half a crop or less. Pastures poor and burned. Cows that are not being fed from corn fields are losing in flesh and milk yield. Potatoes a good deal of a luxury; early ones almost a total failure and late ones uneven. If the coming month of August proves dry the loss in this county will be many thousands of dollars. Price of wheat, 75c; oats, 40c; eggs, 14c; butter, 25c.

Wisconsin.

Ashland Co., July 31.—Frequent showers through July have been the order and new seeding and pastures are looking good on this account. It has also put all root crops on a sure basis. Haying all done and out and wheat harvest the order now. Grains of all kinds good. Oats lodging in places. Potato blight is reported in many places and a great many complain of few potatoes in the hill among the early planted, but late ones seem to be setting full; too early to prophesy as to crop yet. The hay and feed problem is the one subject which the farmer is most worried about and nothing in the way of roughage is being neglected that will in any way help out. Almost impossible to get a farmer to name a price on a ton of hay at present. All seem to think prices will be above those of a year ago. New potatoes, \$2.25 per bu; eggs, 23c; butter, creamery, 28c; dairy, 24c.

Indiana.

Laporte Co., July 26.—Heavy rain last week ended a long term of extreme heat and dry weather. Harvest came early and was hot. Rains continuing this week, to benefit of all vegetation. Early-sown wheat has been a light crop, injured by fly. Late-sown was a fair crop, yielding 15 to 26 bu. Corn will now mature a good crop. Timothy and clover light. Marsh grass is of fine quality—more tame grass mixed with it than usual. Cows have shown some falling off in milk yield, although output is still fairly good.

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.
August 3, 1911.

Cattle.

Receipts, 1,471. Good grades steady; common 15¢ to 25¢ lower than last week. Trade active.

We quote: Extra dry-fed steers and heifers, \$5.50@5.75; steers and heifers, 1,000 to 1,200, \$5@5.25; steers and heifers 800 to 1,000, \$4@4.75; grass steers and heifers that are fat, 800 to 1,000, \$4@4.75; do. 500 to 700, \$3.75@4.75; choice fat cows \$3.75@4.25; good fat cows, \$3.50@3.75; common cows, \$3@3.25; canners, \$1.50@2.75; choice heavy bulls, \$4; fair to good hognags, bulls, \$3.50@3.75; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4.25@4.75; fair do., 800 to 1,000, \$3.50@4; choice stockers, 500 to 700, \$3.75@4.25; fair stockers, 500 to 700, \$3@3.50; stock heifers, \$3@3.25; milkers, large, young, medium age, \$4@5.00; common milkers, \$2.50@3.50.

Bishop, B. & H. sold Mich. B. Co. 2 heifers av 735 at \$4.50, 1 cow weighing 860 at \$2.75, 9 butchers av 746 at \$4.25, 1 bull weighing 750 at \$3.50, 61 butchers av 781 at \$4.40, 10 do av 784 at \$3.90, 1 cow weighing 740 at \$2.50; to Rattkowsky 8 butchers av 746 at \$4, 7 do av 490 at \$3.25; to Parker, W. & Co. 1 bull weighing 900 at \$3.50, 5 do av 968 at \$3.50, 3 do av 543 at \$3, 1 do weighing 1,000 at \$3.50, 4 butchers av 812 at \$4; to Sullivan P. Co. 2 steers av 925 at \$5.75, 6 cows av 983 at \$3.80, 13 steers av 850 at \$5.50, 3 cows av 1,213 at \$4.50; to Goschen 6 stockers av 476 at \$3.25; to Gerish 13 steers av 880 at \$5.25, 2 do av 850 at \$5; to Kamman 21 butchers av 470 at \$3.40; to Breitenbeck 22 steers av 933 at \$5; to Goose 22 butchers av 695 at \$3.30, 4 cows av 1,022 at \$3.50; to Hammond, S. & Co. 2 canners av 960 at \$2.50, 4 do av 900 at \$2.50, 1 cow weighing 1,100 at \$3.75, 3 do av 970 at \$2.75, 2 do av 860 at \$2.75, 2 do av 1,105 at \$3.75, 3 steers av 1,050 at \$5.50, 5 butchers av 850 at \$4, 4 bulls av 425 at \$2.75, 2 cow and bull av 1,005 at \$4; to Rattkowsky 4 cows av 902 at \$3; to Kerger 10 stockers av 702 at \$3.75; to Sullivan P. Co. 1 cow weighing 920 at \$1.50, 3 do av 940 at \$3.50, 1 steer weighing 1,000 at \$4.50, 8 do av 1,116 at \$5.75, 2 heifers av 785 at \$3.75, 1 bull weighing 1,420 at \$4, 2 heifers av 630 at \$3.50, 8 sheep av 637 at \$4.75, 3 do av 480 at \$3; to Regan 7 heifers av 567 at \$3.65; to Thompson Bros. 7 cows av 1,047 at \$4.15, 2 heifers av 875 at \$5.50, 10 steers av 935 at \$5.35; to Hammond, S. & Co. 4 cows av 980 at \$3.50, 1 bull weighing 670 at \$3, 5 canners av 916 at \$2.75; to Lowenstein 10 butchers av 629 at \$3.40; to Urban 12 butchers av 742 at \$4.30; to Parker, W. & Co. 4 do av 955 at \$4.50, 10 steers av 1,058 at \$5.50; to Kamman B. Co. 9 do av 855 at \$4.85; to McMannus 2 cows av 1,135 at \$5.

Spicer & R. sold Breitenbeck 24 butchers av 795 at \$4.60; to Kamman B. Co. 30 do av 756 at \$4.55; to Schlischer 13 do av 640 at \$3.75; to Hammond, S. & Co. 4 cows av 1,070 at \$3.85; to Regan 16 butchers av 576 at \$3.40; to Mich. B. Co. 1 cow weighing 950 at \$3.50; to Johnston 26 feeders av 827 at \$4.40; to Cooke 16 steers av 822 at \$4.75, 1 bull weighing 610 at \$3.50, 14 steers av 776 at \$4.75.

Robb sold Kamman 1 steer weighing 910 at \$3.50.

Halsted sold same 2 cows av 910 at \$3.50, 12 butchers av 831 at \$4.40.

Haley & M. sold Hammond, S. & Co. 2 heifers av 690 at \$4.10, 2 cows av 1,055 at \$4.10, 2 bulls av 1,175 at \$3.75, 1 do weighing 1,500 at \$4, 2 cows av 1,140 at \$2.25, 1 do weighing 1,000 at \$2.75, 1 do weighing 1,000 at \$3.75, 4 heifers av 597 at \$3.80, 5 cows av 1,046 at \$3.80, 8 butchers av 725 at \$4.35, 13 do av 881 at \$5; to Applebaum 5 do av 590 at \$3.90, 2 do av 410 at \$3.50, 1 cow weighing 1,020 at \$3.40; to Breitenbeck 7 do av 1,060 at \$3.50; to Herschman 10 stockers av 690 at \$4.40; to Lachalt 12 butchers av 875 at \$4.65; to Mich. B. Co. 1 cow weighing 900 at \$2.50, 21 butchers av 857 at \$4.60, 1 steer weighing 770 at \$4.10, 5 butchers av 630 at \$4.10, 1 bull weighing 1,330 at \$4.10; to Fry 26 butchers av 734 at \$4.15; to Marx 1 cow weighing 870 at \$3.75, 2 steers av 710 at \$4.15, 6 butchers av 730 at \$4.15, 1 bull weighing 870 at \$4; to Hammond, S. & Co. 8 steers av 780 at \$4.40, 2 cows av 1,115 at \$3.90, 1 bull weighing 1,130 at \$3.75, 5 do av 576 at \$3.75, 1 do weighing 660 at \$3.75; to LaBoe 4 steers av 822 at \$4.50; to Graicher 3 stockers av 560 at \$3.50.

Roe Com. Co. sold Kamman 3 butchers av 900 at \$4.10, 4 do av 925 at \$5, 4 do av 760 at \$3.75; to Newton B. Co. 21 do av 820 at \$4.60, 4 do av 790 at \$4.75, 1 heifer weighing 710 at \$4, 2 cows av 1,040 at \$2.50, 1 do weighing 1,080 at \$4, 4 bulls av 985 at \$3.75, 6 cows av 1,010 at \$3.85.

Allington sold Goose 2 cows av 940 at \$3.25.

Groff & S. sold same 5 do av 744 at \$3.25.

Johnson sold Gerish 5 steers av 1,000 at \$5.25.

Weeks sold Mich. B. Co. 10 butchers av 913 at \$4.25, 1 bull weighing 1,440 at \$4, 1 do weighing 640 at \$3.50.

Robb sold same 2 bulls av 916 at \$3.75.

McLachan sold same 1 bull weighing 1,280 at \$4.

Robb sold Fromm 3 bulls av 560 at \$3.25, 11 butchers av 573 at \$3.75.

Johnson sold Grant 4 steers av 567 at \$3.65.

Torrey sold Urban Bros. 6 heifers av 766 at \$4.50, 2 do av 780 at \$4.

Long sold Newton B. Co. 3 bulls av 923 at \$3.50, 6 heifers av 826 at \$4.25.

Henderson sold McManus 8 steers av 986 at \$4.90.

Veal Calves.

Receipts, 765. Market 25¢ higher than on Wednesday; 50¢ to 75¢ higher than last week. Best, \$7.50@8.25; others, \$4@7. milch cows and springers steady.

Bishop, B. & H. sold Hammond, S. & Co. 4 av 135 at \$7, 1 weighing 130 at \$7.50; to Parker, W. & Co. 1 weighing 160 at \$7.75, 1 weighing 200 at \$4.50, 4 av 150 at \$7.50, 3 av 170 at \$7.50, 1 weighing 250 at \$5, 10 av 171 at \$7.50; to Sullivan P. Co. 4 av 150 at \$6, 12 av 165 at \$8, 14 av 150 at \$8, 4 av 170 at \$6, 4 av 150 at \$6, 12 av 160 at \$8; to Burnstine 2 av 175 at \$3, 9 av 150 at \$7.75, 5 av 160 at \$8.25, 5 av 130 at \$7.75, 19 av 175 at \$8; to Hammond, S. & Co. 3 av 160 at \$7.75, 22 av 155 at \$7.75, 3 av 150 at \$6, 17 av 160 at \$8; to Goose 16 av 170 at \$7.25; to Rattkowsky 4 av 225 at \$5, 8 av 150 at \$7.50.

Sharp sold Mich. B. Co. 8 av 155 at \$7.50.

Johnson sold same 8 av 150 at \$7.25, 1 weighing 160 at \$7.25.

Halsted sold same 5 av 164 at \$5, 8 av 155 at \$7.

Torrey sold Sullivan P. Co. 2 av 125 at \$7.25.

Haley & M. sold Newton B. Co. 28 av 155 at \$7.50; to Parker, W. & Co. 7 av 145 at \$7.50, 4 av 145 at \$7, 1 weighing 190 at \$4.50, 21 av 150 at \$7, 6 av 135 at \$7, 2 av 150 at \$4.

Roe Com. Co. sold Hammond, S. & Co. 5 av 120 at \$5, 10 av 132 at \$7.25; to Sullivan P. Co. 7 av 145 at \$7; to Burnstine 3 av 155 at \$8.

Sheep and Lambs.

Receipts, 2,628. Market lower than Wednesday; fully \$1 lower than last week. Common grades very dull. Best lambs, \$5.50@5.75; fair to good lambs, \$5.25@5.50; light to common lambs, \$2.50@3.50; yearlings, \$3.50@4.25; fair to good sheep, \$3.25@3.50; culls and common, \$2@2.50.

Bishop, B. & H. sold Sullivan P. Co. 19 lambs av 65 at \$5, 10 do av 73 at \$4.50, 23 do av 75 at \$5.50, 10 do av 82 at \$4, 42 sheep av 63 at \$3.50; to Newton B. Co. 80 do av 68 at \$5.50; to Mich. B. Co. 18 lambs av 75 at \$5.90, 1 buck weighing 120 at \$3.50, 51 sheep av 115 at \$3.50, 52 lambs av 68 at \$5.75; to Fitzpatrick Bros. 70 do av 72 at \$5.50, 26 do av 70 at \$5.50, 8 yearlings av 78 at \$4, 20 do av 87 at \$4, 27 do av 85 at \$4, 37 sheep av 125 at \$3.40, 26 yearlings av 90 at \$4.25, 22 sheep av 105 at \$3, 38 do av 75 at \$3.50, 9 do av 92 at \$3.25; to Sullivan P. Co. 33 lambs av 60 at \$5, 20 do av 60 at \$5; to Thompson Bros. 10 sheep av 114 at \$3, 19 do av 70 at \$2.75.

Haley & M. sold Newton B. Co. 7 yearlings av 100 at \$4, 1 buck weighing 170 at \$3, 26 lambs av 68 at \$5.50; to Eschrich 29 do av 60 at \$5, 23 sheep av 105 at \$3.25; to Hayes 57 lambs av 60 at \$4.50.

Roe Com. Co. sold Hayes 5 lambs av 55 at \$5.

Spicer & R. sold Newton B. Co. 17 sheep av 90 at \$3.25; to Mich. B. Co. 13 lambs av 65 at \$5.65, 18 sheep av 85 at \$3.25; to Young 65 mixed av 67 at \$4.25.

Hogs.

Receipts, 1,876. Market steady with Wednesday; 30¢ to 40¢ higher than last Thursday.

Range of prices: Light to good butchers, \$7.35@7.40; pigs, \$7.15@7.25; light yorkers, \$7.35@7.40; heavy, \$7.35@7.40. Hogs coming very badly mixed; a large amount of green hogs in receipts that are hard to sell.

Bishop, B. & H. sold Hammond, S. & Co. 1,340 av 170 at \$7.40, 215 av 150 at \$7.25.

Roe Com. Co. sold Sullivan P. Co. 83 av 190 at \$7.40, 46 av 180 at \$7.35, 35 av 180 at \$7.25.

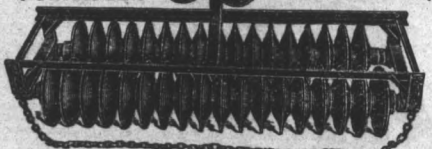
Spicer & R. sold Parker, W. & Co. 215 av 210 at \$7.40.

Haley & M. sold same 240 av 190 at \$7.40.

Owing to the drought in Oklahoma, cattle shipped there last spring from Texas for maturing have been loaded on cars and reshipped to southern Texas, where there is fair pasture.

Leading live stock commission firms are advising their country patrons not to hold back their fat hogs after they weigh much over 225 lbs. It is pointed out that the hot weather and large offerings of fat brood sows usually bring about a buyers' market in July and August.

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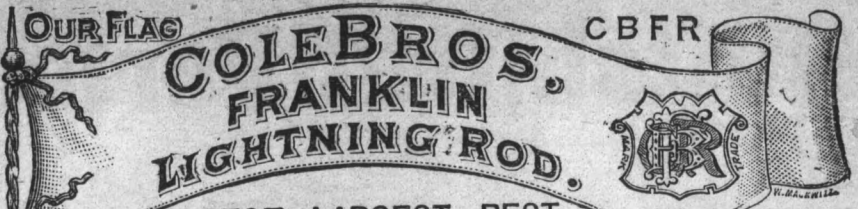
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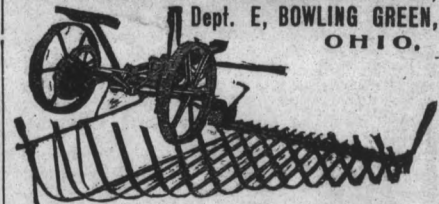
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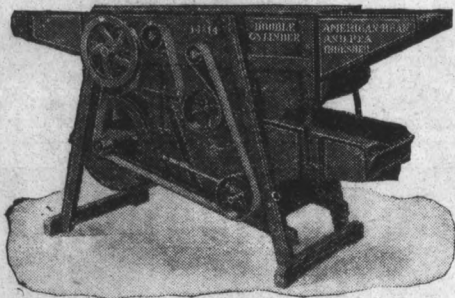


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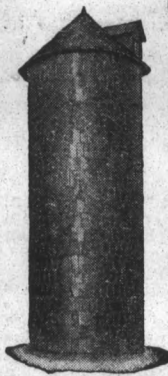
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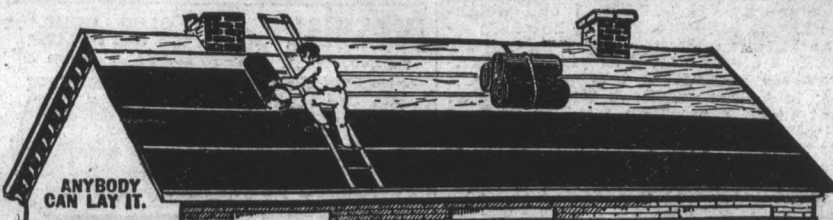
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