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FARM NOTES.

The Promises and Discouragements of the Season.

This season has been exceptional in the alternate promise and discouragement which it has held out to the farmers of Michigan as well as most other sections of the country. The exceptionally early spring was heralded with pleasure by every one and was an agreeable contrast to the springs which have preceded it in recent years. Considerable fear was felt for the effect of this early drought upon wheat, but the crop came through in much better condition than was anticipated. The encouragement of the early spring was followed by the discouragement of a cold wet spell, which delayed corn planting and injured the fruit crop not a little, yet the warm weather which followed, has been favorable for the rapid growth of the corn and there is yet promise of a fair yield of this most important crop to every farmer. But again one extreme has followed another, and the unseasonably hot and dry weather which prevailed during June and the early days of July has brought further discouragements in the shortening of pastures and injury to the spring grain crops and greatly lessening the chances of getting an even and satisfactory stand of clover where the same was seeded in spring grain. However, these discouragements must be expected as a factor in the business of farming in most seasons. We can not change weather conditions and probably the result on the whole would be no better if we could, hence it is useless to complain about the weather. It is a far better plan to do the best we can to promote the successful growth of our crops under the weather conditions which may prevail. As with the wheat in the spring drought and the corn which suffered from the wet weather following it, but which have survived the ordeal better than was expected, so it is likely to be with the other crops. Things are not generally as bad as they look to be when we look at the discouraging factors with which we have to contend upon the farm. It is far better to look on the bright side and keep on "sawing wood," as that course will prove not only more profitable but more satisfactory in a personal way in the end. The dry weather which has prevailed, has been just the thing needed to secure the clover hay in fine condition and where moisture is conserved by frequent cultivation, the spring crops will not suffer because of the lack of rain for some time, and the law of compensation which is universal in nature, is more than likely to send us abundant rains to mature a more bountiful harvest of these crops than would have been secured in a more normal season.

Salt as a Remedy for Canada Thistles.

Tell "Subscriber" from Oakland county to put salt on Canada thistles. It will kill them root and branch in ten days or two weeks.

LENSWEE CO. SUBSCRIBER.

It is true that salt applied liberally enough will kill Canada thistles. Incidentally it will also destroy other vegetation and make the soil unproductive until the salt has been leached from the land, which makes it an impracticable remedy, except where the thistles are present in small patches. In that case they may be easily exterminated by the use of a small, sharp spud with which they should be repeatedly cut off just below the surface. Small patches may also be smothered out by spreading tarred paper over the surface, lapping the sheets a little and weighting them down with stones. In fact, any method which will prevent them from developing leaves will soon destroy the pests. Some farm-

ers make a practice of salting the sheep on these patches of Canada thistles when they appear in the pasture. Between the salt and the sheep this will successfully exterminate them, although it is rather hard on the sheep unless it is done when the thistles are very small. Probably the best remedy for thistles, where they are spread thickly over the field, is to double plow the ground. That is, follow one plow with another running in the bottom of the furrow, plowing a shallow furrow with the first and turning it into the bot-

tom of the soil upon which it is sown. Usually the lesser amount for the reason that buckwheat is ordinarily grown upon the poorer soils of the farm. The better the soil, the more seed may be used.

The Relation of the Working Capital to the Fixed Capital.

In looking over my accounts I find that the working capital of my farm is only \$428.00, which includes my stock and tools, and that my fixed capital which includes the farm, is \$3,000; figuring on a percentage basis shouldn't the working capital be greater than is here shown? I have never heard of your discussing

ital and the fixed investment in a farming proposition, then those engaged in the industry should know that proportion, hence a discussion of this problem by practical farmers might prove beneficial.

Millet as a Forage Crop.

I have an 8-acre field of clay loam which I put into corn. I got it in early but the seed was not good. Then I got different seed and drilled it in and used fertilizer with both plantings. It fitted up good with one spring toothing. The most of this field is covered with Canada thistles. I would like to know if it would be profitable to sow it to millet and get a good crop this season, and what would be the latest I could sow it this season? How much seed does it take to the acre?

Oakland Co. J. L.

Millet is usually seeded the latter part of May or fore part of June, which brings it to maturity at a more favorable time for harvesting successfully than if sown later, which is a rather important consideration from the fact that the hay is rather hard to cure. If seeded at once on this well prepared ground there should be moisture enough to bring it up and the hay would probably be fit to cut before the frost came. In this case it might be better to cut the crop with a binder, binding it into loose bundles and setting it up in open shocks to dry out, as it could be cured more quickly. We have never seen any millet hay handled in this way, but understand that it is sometimes done with success. About one-half bushel of the common sort is generally sown per acre. If even a fair stand of corn can be saved this would be the more profitable course.

BUILDING STONE ROADS.

The citizens of Shelby township, Oceana county, believe in good roads, and have gone about building them in a business-like manner. Three years ago they bonded their township for \$20,000 to buy machinery and to build crushed stone roads. To date they have built 11½ miles, have five miles in process of grading and preparing for the stone and money on hand to finish two miles, so satisfied are they that a special election will be called this summer to vote on bonding for ten thousand dollars more, all to be used in the construction of crushed stone roads.

Besides the 11½ miles in the township, the village of Shelby has some three miles of stone roads. In fact, it was the building of the village roads that first called attention in a forcible manner to the stone road idea, and gave the practical arguments necessary to convince the citizens of the township of the economic value of such roads.

The first bonds were made payable in 10 years, and mature at the rate of \$2,000 per year. It is estimated that the system of stone roads in the township, when completed, will save the farmers annually in marketing their crops more than the amount of their taxes to pay the interest on the bonds and the bonds as they fall due. This might not be true where there were only a few miles of road built, and the farmers had to haul their crops most of the way over hilly, sandy, or muddy roads, but where the whole distance is a stone road graded to a six per cent level the expense of marketing is reduced to a half or a quarter of the old cost. Besides this annual saving, they increase the value of farm property and add immeasurably to the comforts and convenience of farm life.

The township owns its road roller, stone crusher, etc. They are using the field stone found in the township, and are paying at a rate that enables the farmers to make wages while picking and hauling the stones to a point convenient to the stretch of road to be built. Many maintain that these stones make a more dur-



Scene at the Completion of a Section of Crushed Stone Road Near Shelby.

tom of the deep furrow made by the second plow, then bury this with the furrow thrown up by the second plow running in the bottom of the first furrow. This will cut up the roots pretty thoroughly and bury them so deeply that many of them will never appear at the surface again. Then, thorough surface cultivation, either of the spring crop or the summer-fallow, as the case may be, will complete the job in a fairly satisfactory manner and make it a comparatively easy task to kill the scattering plants which will be left after this treatment.

Buckwheat Culture.

When is the best time to sow buckwheat? Which is the best kind? How much to the acre?

Ingham Co. M. E. P.
Where sown for a grain crop buckwheat is generally seeded at any time be-

facts in regard to working material to fixed capital and would like to hear from you in regard to this.

Kent Co.

H. D. P.

The proper relation of the working capital of the farm to the fixed capital or value of the farm, will depend altogether upon the kind of farming which is followed. Where any branch of live stock farming is followed, the investment would necessarily be much larger in proportion to the value of the farm than is indicated in this inquiry. Probably in a majority of cases where any considerable amount of live stock is kept, the working capital of the farm should be at least one-third the value of the land; without any doubt, it ought to be at least this large in order to so conduct the farm as to maintain its fertility where general farming is followed and some cash crops are grown and



Hauling the Crushed Stone on the Roads in Shelby Township, Oceana County.

tween June 15 and July 10, which gives it time to mature, as it is only from 70 to 75 days in reaching maturity. There are not a large number of varieties of buckwheat, only three being cultivated in this country to any extent. These are the common or dark colored buckwheat, the silver-hull, which is a lighter colored grain, and the Japanese. The silver-hull ordinarily gives a little better yield than the other varieties, but where the common sort can be easily obtained it is satisfactory for ordinary purposes. From one-half to three-fourths of a bushel per acre are used, according to the character

sold from the farm. Of course, where pure-bred stock is kept and where the equipment of the farm is rather complete, the working capital would be larger than here noted, equaling half or more the value of the farm in many cases. On the other hand, where a system of green manuring is followed to maintain the humus in the soil and where mineral plant food is supplied in the form of commercial fertilizer for the growing of special cash crops, the working capital would not need to be so large. However, this is a point worthy of consideration. If there is any proper relation between the working cap-

able and less dusty road than the limestone, but a few prefer the limestone. The stone is crushed and graded into different sizes; the largest being placed in the bottom of the roadbed, then a course of smaller stones, and last the finest stone. It is all rolled with a heavy steam road roller. I was told that the secret of a good road was to roll when the stone was wet, and good and wet, too. When once these roads are built the cost of keeping them in repair is light. They have the stone hauled to a place convenient to each two miles of road to save expense in hauling the stone to the crusher and in distributing the crushed stone on the road. I noticed, also, a large pile of the crushed stone left at each place for future use in repairing the road, so that the cost will be simply the hauling and rolling of this stone, which will be small.

The country around Shelby is rolling, even hilly, and practically all sand. The roads are leveled to a six per cent grade required by the state reward road law, and they are receiving the \$1,000 per mile for two miles per year from the state. So well pleased do the people seem that I heard but few opposing the proposition to bond again for \$10,000 more to complete their system of township roads. When one drives over these nice stone roads and sees the loads being hauled over them, and then off them into the sandy, hilly roads and notes the loads being hauled there, and our own slow progress and inconvenience, one marvels that more townships and counties are not doing the same thing.

H. B. FULLER.

HARVESTING THE WHEAT CROP.

From present indications the wheat crop will be ready to harvest early in July. Probably some one who reads this article will remember that there was something about the binder that was not working as well as it should have last season, or possibly something was loose or broken. If so we should see that this is repaired before we are ready for the binder.

But granting that the harvest has begun, just how are we going to handle the bundles, and shock them to save time and allow them to keep well and cure well should there come a spell of rainy weather.

In the first place, if one is to do good and fast work in shocking he must have good bundles. Almost any machine will make them if the wheat is straight and even, and the operating of the machine so long as it is working well under these conditions is not difficult. When the straw is of uneven lengths or lodged in places, the operating of the machine so as to do good work, is a difficult problem and one which not all persons seem able to master. One should study every adjustment about the machine and reason whether the quality of its work can be improved in any way. First master the principles of the machine, then study its operation under unfavorable conditions, and you will be able to make fairly good bundles even when the straw is uneven and lodged, but considerable attention must be paid to the adjustment of the butter, the reel, and the binder during each round.

After the bundles are tied in as perfect a manner as possible the question of how to set them arises. All machines are now equipped with bundle carriers which greatly lessens this labor. Much depends upon the condition of the grain and straw as to the size and style of shock. If it is green or there are green weeds or timothy in it a long shock with the bundles set in pairs leaning equally against each other and slightly toward the center makes a shock which dries readily. Any convenient number of bundles can be set in them, and when dry they can be reset into round capped shocks if not ready to haul.

Many set in long shocks altogether, but for clean wheat, not too green, I prefer a round, capped shock. If the wheat is quite green we set ten bundles in a shock, if fairly well ripened, twelve. Two men can work together more conveniently than one can set alone, though one can do good work if careful. To start the shock each man takes a bundle under each arm, setting them firmly upon the ground so that they lean equally toward each other. A bundle is then set at each end and two at each side. All of these bundles are set down so that the longer side of the bundle at the butt is to the outside and the longer side of the heads to the inside of the shock. This allows the bundles to set more firmly and settle together better. In setting the bundles against the shock the bundle is grasped in both hands

and set down firmly. One hand setting is not tolerated, as the bundle can not be set firmly with one hand and a loosely set shock is not likely to stand well.

I like to set the shock lengthwise of the prevailing wind, put the caps on endwise, and place the cap whose butt is toward the prevailing wind on the bottom. If capped in this way we have found that fewer caps blow off, and this is the secret of keeping shocks dry, for the hard winds usually come just before a rain so there is no time to recap the shocks.

Those things may seem commonplace but it is the attention to such little details that makes the difference between a good job and a poor one. Our experience is that not half of the men who have worked on a farm all their lives will do a good job setting up wheat. In a dry season it would make little difference, but we do not know what the weather will be before the wheat is hauled and the safest way is to set it well.

When ten bundles are set to the shock the method is the same except that one bundle is set at each side instead of two.

We sometimes see wheat left in the row where dumped by the carrier until ready to haul. This is not a safe practice unless the wheat is about ready to haul when cut, and wheat should be cut if possible before it becomes so ripe, as the quality is claimed to be better, it cuts and handles better, and less is lost by shelling.

Calhoun Co.

S. B. H.

A DEVICE FOR DISTRIBUTING HAY IN THE MOW.

On account of inquiries, both to the Michigan Farmer and ourselves, about our device for distributing hay in the mow, we thought it would be best to give a short description of it and the way it was made. It is a movable fan and for want of a better name we call it a chute. It is located seven and one-half feet below the track in center of bay, and is 11 ft. in length for 40 ft. bay, eight ft. wide for 18 ft. bay, and 10 ft. wide for 20 ft. bay, with rope fastened to each corner nearest floor, rope long enough to fasten to a post, girt or brace at side of bay next to floor and above scaffold.

The way to make them is like this. Take a tough, dry elm pole about six inches in diameter and cut it the exact length of the distance between the center post above the main end beam and the perline girt on opposite side of bay, at least seven and one-half ft. below track using double harpoon hay fork. For slings it may have to go lower. It would depend on the space required, as there must be room between the track and chute for the fork or sling load to move into position to trip onto the chute. Each end of this pole is fitted with stubs or gudgeons 1 in. or 1½ in. in size, projecting beyond the ends 4 or 5 inches, being fitted into grooves and secured by two bolts through the stub and pole. The stubs on old dump rakes are just right. We used them for two of our chutes. On the other we used shafting cut to the right length and drilled for bolts, two for each stub. Now slightly flatten a six-inch space about four feet each way from center of pole for an eight-foot chute and lay a 12-foot inch strip six inches wide across center of strip and bore holes through strips and about half way through pole and drive a short bolt into this hole, one that is a little larger so that it will fit snugly and you have the truss support on under side of chute. Now turn this over and slightly flatten the top of pole for the width you want the chute and nail 11-ft. boards at center of same until you have it wide enough. Then nail an inch strip 4 in. wide on the under side of each end of chute and spring the ends of truss support up to it, and put bolts down through them. Saw off ends of support even with ends of chute, then bore a hole at each corner nearest the drive floor for attaching a rope to hold the chute in position and you have it complete.

In placing it in position for the outside end we simply bored a hole in post the size of the stub or gudgeon on end of pole, and for end next floor we bolted an iron box on under side of perline girt. To raise it into its place we fastened a pulley to track directly above each end of pole, ran ropes through, drew it up and slipped it into its hole in post, bolted box in position and all was done. Of course, this plan of setting these chutes would not work in all barns as there are so many different kinds of frames. But most farmers have ingenuity enough to find a way to set one if he wishes to try it. Two of our chutes have been doing business for 18 years, the other we put in

a few years later, after adding 20 feet more to barn. We are not sure that any one is using this device with slings but we know one man who uses two double harpoon forks at once, and his loads probably equal those generally taken by the sling method. Several in this vicinity who have been here for measurements have put in chutes with a sawed stick in place of a pole, but they should be pretty good and reliable timber. The ropes fastened to the two corners next floor to hold the chute in position we leave in one piece, as it is handier that way. In fastening chute in position draw ropes as tight as possible. This chute in no way interferes in filling bay to track, but it should be left in a vertical position in filling bay, as were it otherwise the setting hay would break it down by setting the chute at different angles.

The hay goes different distances and after a little practice one will be able to mow away a great deal of hay with no one in the mow. Of course, this is better for high barns than for low, but some are using them around here in barns with the old style of roof. If barn is new it should be watched that the beam does not spring enough to let the stub out. On one of ours we bored a hole in a block of wood to fit the stub, sawed it across the center of hole, slipped it along the post at end of pole and nailed it, to fill up the opening caused by the springing of end beam.

Eaton Co.

E. J. BOYD.

LILLIE FARMSTEAD NOTES.

The dry weather of the last few weeks has enabled us to do an immense amount of tillage. During the wet spell we were practically at a standstill so far as tillage was concerned and were doing other work. However, since then we have finished planting the corn, planted our potatoes, cultivated our beets, have got them now, June 25, blocked and thinned, and a fairly good job done. The beets, however, have not done well this dry weather. It was too cold previous to this and came off so hot and dry that the clay ground has dried down too hard and the moisture has evaporated even though we harrowed crosswise with a spike-tooth harrow to prevent this very thing, and on the hard clay spots the beets are at a standstill and I think will remain so until we get rain. We finished planting the potatoes on June 23. This is rather late but we are used to getting our potatoes in late, always leaving that until the last job of planting. The ground was in fairly good condition and we planted whole potatoes, following Brother Woodman's plan of putting a rather small-sized potato in each hill.

This year I tried a new remedy for scab, one that I got from Dr. Chamberlain, and that is to thoroughly sprinkle the seed potatoes with flour of sulphur. Shovel them over so that the sulphur covers the entire surface, which it is claimed will prevent scab as well as formaldehyde. Sulphur costs a little bit more than formaldehyde but it is much more easily applied. Using the formaldehyde solution for the prevention of scab in potatoes some years we have had poor results from the seed. Much of the seed would not germinate, and I have an idea that we had the solution either too strong, or else we left the potatoes in too long which killed the germinating power of the potatoes. Sulphur, of course, will not do this and there is no danger whatever.

We marked our potato ground both ways with a marker, making the rows 28 in. apart, and then planted, as I said before, a whole potato in each hill. Tomorrow morning we will harrow this field with a spike-tooth harrow and will try and harrow it once more before the potatoes come up. This will preserve moisture and will kill all the seed that have germinated since the last cultivation, and will do much more good than cultivating. Then, as we took pains to plant the rows straight, planting the seed exactly where the marks come, we anticipate that the stand will be so straight and even in the rows that we will have no difficulty in cultivating both ways with our small two-horse cultivators which we use for cultivating beets in 28-in. rows. I like to have the beets and also the potatoes so that we can cultivate them with two-horse cultivators. Cultivating with a single horse is getting rather out of date. One man ought to cultivate a row at a time. In fact, I am getting so that I think a man ought to cultivate two rows at a time and use a two-row cultivator in corn, but I do not know of any cultivator that will work well in potatoes and beets for two rows.

COLON C. LILLIE.

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LIVE STOCK

FRIENDLY CRITICISMS BENEFICIAL.

I was gratified to notice in the issue of the Michigan Farmer of June 25, page 5, that Mr. Kelly comments on a criticism. I made some time ago on the time of selecting the brood sows. I was glad to notice that Mr. Kelly frankly admits that I was right on this point and I appreciate his gentlemanly manner in referring to the same.

Calling attention to important points in breeding operations is certainly beneficial; it emphasizes facts and should have the effect of fixing them in the minds of the practical breeder. If they were left unnoticed their importance would not have been appreciated. By private letter, as well as by word of mouth, breeders of all breeds of stock have expressed their appreciation to me of a friendly criticism as well as suggestive hints.

On this point I have a case in mind that should be fresh in the minds of Berkshire breeders of Michigan. At an auction sale of Berkshires held in the fall of 1905, there came into the ring a young sow that did not seem to attract much attention, and the bidding was slow. As I was clerk of the sale I stood on the elevated platform and had an opportunity to get a good view of the pig before me. It was an evenly proportioned pig, with perfect head, and top and bottom lines. For years I had held in mind an ideal young sow, and as Thomas Bates expressed it when he simply saw the head of the bull Belvedere, by shouting "Eureka! I have found it," I felt like saying the same thing. I stopped the auctioneer and called the attention of the bidders to her fine proportions and harmonious de-

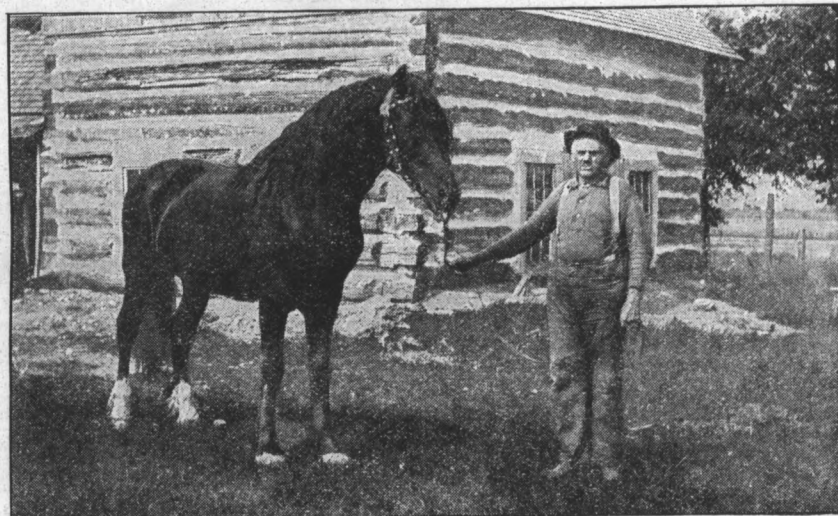
these fine distinguishing differences are not well understood. With the practical and experienced breeder of pure-bred swine, (the class Mr. Kelly was talking to), it is different. There are fine shadings in build and capabilities in development that the skillful breeder can see and comprehend, and thereby avoid the evils when apparent. He knows well that the foundation, the frame work, must be well developed while young, or it never can be afterwards, and the vital organs, the seat of constitutional vigor, must have full development and free play. It is not the fine-boned, fat, wheezy pig that wins today as an economical pork producer, or as a prize taker, but it is the harmoniously developed pig that has had a constant growth of all parts from the time it chased its dam in pursuit of food and enjoyed a frolic, to the time it is driven out as a highly developed specimen of its breed, to win the awards given by the judges at the fairs, and meet "the admiring gaze of the sight-seeing crowds." Let us cultivate our perceptive faculties so that we can see that there is a difference between the north and northeast, and also that there are shadings of differences between the excessively fat pigs, and the strongly and evenly developed pigs that represent the products of the best skill in breeding and management. As a recipient of benefits, I appreciate the value of friendly criticisms.

Wayne Co.

N. A. CLAPP.

THE SHEEP MAGGOT PEST.

Large flockmasters whose sheep receive prompt and skilled attention, are known to be a good deal worried with the depredations of the maggot, while those with smaller flocks and less knowledge of how to treat them are frequently more seriously troubled by this pest. Three months will, as a rule, cover the whole period in



1,800 lb. Percheron Stallion, "Bill McGee."

Owned by D. H. Tibbits, of Isabella Co.

velopment. The bidding was not spirited and the pig sold at a moderate price. Later I asked the seller how he happened to put so excellent a sow in the sale. He replied that he had plenty of them equally as good and concluded to let her go as a sample. Subsequent showings have not proven that there were many her equal, as the same sow was none other than Lady Nina 5th, 88520, that, when four years of age, farrowed 18 pigs in the spring, was Grand Champion at the New York State Fair, and Grand Champion at the American Royal at Kansas City, being the sensational sow of the season. A few days after winning at the Royal she farrowed 16 pigs, a total of 34 during the year. Such was the outcome with a sow that was not fully appreciated by her breeder when small. She did not accumulate an excessive amount of fat when young, and therefore her vital energies were not diminished.

As to the paragraph quoted by Mr. Kelly in regard to developing young animals, I am ready to say that I do not desire to change it in the least. It is the doctrine I have advocated and can prove the wisdom of it by numerous examples. I think Mr. Kelly is in error if he thinks I am trying to play "possum." I think I have been awake to the important subject of distinguishing between constant growth and development and the superabundant accumulation of adipose membrane—fat—very often found on the pigs while running with their mother. It would be well if we all would keep our perceptions sharpened so well that we will not be misled and deceived by the "little fat pigs" that appear so very attractive while young, but are, in reality, reduced in constitutional vigor.

With the average farmer and pig raiser

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SPREADING LIME AND COMMERCIAL FERTILIZERS BROADCAST ON THE SOIL.

The universal practice in European countries is to sow these artificial fertilizers broadcast, for the reason that all the soil is thus made equally productive, so that no matter in which direction the plant roots spread the plant food is there. Our farmers in this country are practicing this method more and more. Our prediction, now that there has been perfected a machine that successfully sows in wide range of quantities such enrichers as granular lime, nitrate of soda, land plaster and all commercial fertilizers is that the farmers in America will use the broadcast method. The machine to which we refer is the Empire Broadcast Fertilizer Sower, made by the American Seeding-Machine Co., Incorporated, Richmond, Indiana. Write the manufacturers for a copy of their Empire Broadcast Fertilizer catalogue. After reading it, go to your retail implement dealer and insist on seeing the Empire. It is fully guaranteed and you run no risk in buying one.

THICK, SWOLLEN GLANDS

that make a horse Wheezy; Roar, have Thick Wind, or Choke-down, can be removed with

ABSORBINE

on any Bunch or Swelling. No blister, no hair gone, and horse kept at work. \$2.00 per bottle, delivered. Book 3 D free.

ABSORBINE, JR., for mankind, \$1.00, delivered. Reduces Goitre, Tumors, Wens, Varicose Veins, Ulcers, Hydrocele, Varicocele. Book free. Made only by W. F. YOUNG, P.O.F., 268 Temple St., Springfield, Mass.



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Don't Let Worms Kill Them Off

I'll save your lambs—I'll save your sheep—I'll improve your flock to such a degree you will marvel at the change. I have seen

SAL-VET

The Great Worm Destroyer and Conditioner

do this so often—seen it almost bring the dead back to life—that I have no hesitancy in offering to feed your sheep your lambs or your hogs, horses and cattle for 60 days to prove its wonderful merit, before you pay a cent. Just read this letter:

"My lambs were so sick with worms they could hardly walk. One of them was nearly dead. I never expected it would live. After feeding them Sal-Vet they got better and all are well and lively now."

S. Y. THORNTON, Blackwater, Mo.

Send No Money

Sal-Vet is a wonder worker, a medicated salt that cleans out the worms— aids digestion—puts stock in the pink of condition. Costs but little, and I prove it does all I claim before you pay. Fill in the coupon—don't delay.

Sidney R. Feil, Pres.

THE S. R. FEIL COMPANY

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Prices: 40 lbs. \$2.25; 100 lbs. \$5.00; 200 lbs. \$9.00; 300 lbs. \$13.00; 500 lbs. \$21.00.



Send me enough Sal-Vet to feed my stock 60 days. If it does the charge. Name..... P.O. Shipping Sta. No. Sheep..... Cattle..... Hogs..... State.....
If not you are to cancel
M.F. 7-10

where, with a general harrassed appearance, depend upon it, maggots are there. A sheep with a clean fleece need hardly be suspected, but those with a good deal of droppings adhering to their hind quarters are favorite subjects with the maggots. It is a good plan to anticipate maggots in such cases, and clip off all the dirty wool. If a greasy spot is seen anywhere look to that, and take special note of the rump, as thereabouts is the favorite spot for the maggots.

There is a pleasure in exterminating these pests which makes one a perfect savage, but it is useless trying to kill all by hand, and although many stuffs are advised, I have found nothing so effective as the liquid used for dipping. If a quantity of this is kept ready in jar or bottle, and a little of it is rubbed in, where the maggots are, they will be killed with little work and small expense.

As warmth develops the maggot so freely, sheep with their old coats on are more subject to it than those that are clipped, and early shearing has done much to lessen the prevalence of this pest. But clipping is not always a preventive, and a frequent and keen eye must still be kept on them.

It may be well to point out, too, that lambs are sometimes infested with maggots, and it is just as necessary to watch the lambs as the ewes.

Canada. W. R. GILBERT.

FEEDERS' PROBLEMS.

Flaxseed Meal for Calves.

We have been feeding ground flaxseed to the calves. Our supply is exhausted and the elevator men say flaxseed is so dear they cannot handle it any more. What would be the best substitute?

J. L. D.

In using flaxseed meal with skim-milk for calves, one should purchase the whole meal of the flaxseed, not the oil cake or meal from which the oil has been extracted, for the reason that it is the fat or oil contained in this feed which supplies the deficiency of this element in the skim-milk which has had the fat removed from it by the separator. The oil meal which can ordinarily be purchased from the elevator has had the fat removed from it and is, like the skim-milk, a feed high in protein so that it does not make a good combination to feed with skim-milk to growing calves. Notwithstanding the fact that flaxseed is high in price at present, it is really the cheapest feed that you can purchase to supply this deficiency of fat in skim-milk, on account of the large amount of readily digestible fat which it contains. It is worth in the market about \$2.15 per bushel at the present time, but one will scarcely need to purchase it by the bushel for the feeding of calves. A few pounds can be secured at the grocery or drug store and made into a jelly by boiling with water and this used to supplement the skim-milk during the first few weeks of the calf's life, after which corn meal can be substituted for it very satisfactorily, as corn meal and skim-milk make a very well balanced ration. This feed, however, would be improved by the addition of some sifted oat meal, particularly when the corn meal is first substituted for the flaxseed meal, but, owing to its peculiar adaptability to this use, the extra expense for a few pounds of flaxseed meal upon which to start the calf will be well repaid, even if purchased at a high price from your grocer or druggist.

LIVE STOCK NOTES.

If meat eaters could buy mutton and lamb in the butcher shops at relatively the same prices as live sheep and lambs are bringing, consumption would be wonderfully increased. Retail prices all the year have been entirely out of line.

Around 2,000 unbroken range horses, chiefly from Wyoming and South Dakota, were sold recently at auction in Omaha, where there was a large attendance of buyers from all parts of the country. The horses sold all the way from \$100@140 for the better class down to \$15@30 for the commoner ones, with the best horses selling \$20@40 below the sensational prices paid last year.

The state wool associations of Wisconsin, Minnesota, Wyoming and New Mexico have obtained an option on a plant located in Albuquerque, N. M., where their wool will be manufactured. The members of the associations are determined to fight the trust, which they accuse of forcing the decline of prices.

A Chicago report on cattle conditions says: "Cattle feeders have been afraid to carry steers into the heavy stage for months past, retaining vivid recollection of the punishment that policy entailed a year ago. As a result finished bullocks are as scarce as in 1902, and prices are gradually working higher. The country has been bullish on corn and bearish on cattle, the logical sequence of this sentiment being plenty of feed at this juncture, but empty feed lots, as cattle have been pushed into the market arena as fast as they were ready."

VETERINARY

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

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

Spinal Disease.—I would like a little advice regarding the doctoring of a calf that seems to have but little use of its hind quarters. This calf, when assisted on its feet will walk a short distance, then commence wabbling behind and soon falls down and is then quite helpless. This calf eats and drinks all right. A. B. McBain, Mich.—Your calf will never recover.

Foot Soreness—Bog Spavin—Swollen Stifle.—Have a Percheron mare 17 years old that is stiff in fore quarters, has two bog spavins that are hardening, causing her to travel stiff and I also have another three-year-old filly that is troubled with capped stifle. What had better be done for them? L. W. B., Jeddo, Mich.—Stand mare in wet clay three hours a day. Apply equal parts spirits of camphor and tincture iodine to hocks three times a week and apply one part red iodine mercury and eight parts lard to swollen stifle once a week.

Should a mare be assisted in foaling before labor pains come on?—I would like to know whether a veterinarian would be using good judgment or not by taking a colt away from a mare before labor pains had come on? In speaking with a veterinarian in Canada he told me that it should not be done, and in my case the colt died. This mare was a few days past due, but had shown no indication of wanting to foal and was working every day. L. W. B., Jeddo, Mich.—If the colt is alive and the mare seemingly in good health, I believe it is good practice to wait until nature demands some assistance, for most mares that have been exercised regularly require no assistance in foaling and seem to do better if left alone. The only time that I assist a mare is when she is unable to expel her colt or when the presentation is wrong—or when I am sure the colt is dead.

Abscess.—A small swelling takes place just above the toe on my chicken and some time later bursts, discharges blood and pus and these sores are not inclined to heal; besides, one seems to affect the other. B. M. C., Littleville, Mich.—It is possible that the same exciting cause that produced this suppurating trouble in one chicken is producing it on others; therefore, I suggest that you thoroughly clean and disinfect their roost by using one part carbolic acid and 30 parts water and whitewash with a solution made out of fresh lime. Also dissolve 2 ozs. powdered sulphate copper in a gallon of water and dip the diseased feet in this solution once a day. I also suggest that you spray plenty of whitewash or spread air-slaked lime on the floor of your roost and about the chicken yard. All the better if you can give them new ground to run on until they get well.

Work Horses Out of Condition.—Will you please give me a recipe to tone up my work horses. I feed them well cured timothy and 11 lbs. of corn meal a day and their work is only ordinary farm work. I have another horse that has heaves and am giving him a guaranteed heave remedy—the guarantee states if the horse is not well after given three packages the money will be refunded. Will it do any harm to turn these horses out on grass an hour or two every evening and feed them dry fodder during the night? A. B., Fennville, Mich.—Mix together equal parts by weight, powdered sulphate

(Continued on page 31).

KEKIONGA STOCK FARM

DECATUR, IND.,

Importers and breeders of

Belgian & Percheron

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Our last importation arrived last November, and are in a very good condition and of the VERY BEST TYPICAL DRAFT QUALITY. We have over 60 head of Stallions and Mares from two to five years for sale, and we invite prospective buyers to come to our barns where he will find THE IDEAL DRAFT HORSE, of both breeds above mentioned. Our terms are liberal, and every sale is backed up with the best of guarantees.

Write, or better—come and see us. Address FRISINGER & SPRINGER, Decatur, Indiana.

REGISTERED PERCHERONS For Sale—1 mare 2-yr-old & 1 stallion 1-yr-old, grays. Stubblefield Register. M. A. Bray, Okemos Ingham Co., Mich.

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WINTER WHEAT ACREAGE.

It is idle to suppose that the acreage of winter wheat will be less in 1911 than in 1910. It would be a grave mistake for our readers to plant fewer acres this year than they did last. This being the case, a good many of our farmers are going to buy a grain drill this fall. Now, what drill will they buy? There are a great many drills on the market, and it is essential to act wisely. Therefore, we urge our readers to investigate the Buckeye—a drill that has given the best of satisfaction for more than fifty years. This drill has positive force feeds for both grain and fertilizer. Any style furrow openers can be had—single or double discs, hoes or shoes in plain grain and combined grain and fertilizer styles. Send for a Buckeye catalogue to The American Seeding-Machine Co., Incorporated, Springfield, Ohio, and then go to your nearest implement dealer and ask to see the Buckeye. Our readers are assured that the drill will do all the makers claim for it, because it is sold under one of the strongest guarantees possible to make—a warranty that absolutely protects the buyer.

For Sale—Horses, Cattle, Sheep, Hogs, Dogs or Poultry, nearly all breeds. Sires exchanged. Southwest Michigan Pedigreed Stock Association, R. E. Jennings, Sec., Paw Paw, Mich.

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN-ANGUS.

Herd headed by UNULATA BLACKBIRD ITO 33836, one of the best sons of PRINCE ITO 50006, and Grand Champion Bull at the Detroit and Grand Rapids Fairs of 1907, 1908 and 1909. Herd consists of Erics, Blackbirds, Prides, etc.

WOODCOTE STOCK FARM, Ionia, Mich.

Ayrshire Bull Calves. Berkshire swine. Eggs for setting. High bred stock. White & Buff Oringtons, White & Barred Rocks, Light Brahmas, White Leghorns and White Wyandottes \$1 per 15. Mich. School for the Deaf, Flint.

Angus Bulls—Polled Durhams, Hampshire, Cotswold, and South Down Rams on sale at Clover Blossom Farm, Port Austin, Mich.

GUERNSEYS—BULL CALVES. Herd tuberculin tested. ALLAN KELSEY, Lakeview, Mich.

FOR SALE—GUERNSEY BULL CALVES. All right in every way. Prices reasonable. J. L. SNYDER, East Lansing, Michigan.

Maple Ridge Farm Breeders and Importers of high class Guernseys. Write us your wants. E. & J. T. MILLER, Birmingham, Mich.

CHOICELY BRED HOLSTEIN-FRIESIAN Bull Calves at sensible prices. Cole Bros. Ypsilanti Farms, Ypsilanti, Mich.

FOR SALE—7 choice young registered Holstein sires ready for service. WILLIAM B. HATCH, Ypsilanti, Mich.

HOLSTEIN FRIESIANS—Bull calves. Herd headed by Canary Mercedes Royal King. W. B. Jones, Oak Grove, Mich.

5 Holstein Service Bulls for Sale. Any one of which have breeding and individuality that qualifies them to head any herd. Bull calves and a few good cows. L. E. CONNELL, Fayette, Ohio.

TOP NOTCH HOLSTEINS. Top Notch registered young Holstein Bulls combining in themselves the blood of cows which now hold and have in the past held World's Records for milk and butter-fat at fair prices. McPHERSON FARMS CO., Howell, Mich.

HOLSTEIN BULL CALF from two best families of the breed. C. D. WOODBURY, Lansing, Michigan.

HEREFORDS:—Both sexes and all ages for sale. Also Poland-China hogs. R. E. ALLEN, Paw Paw, Mich.

LILLIE FARMSTEAD JERSEYS

We have some splendid young bulls for sale. Some of them are old enough for service. They are from cows with records of 300 to 425 pounds of butter last year. Write for description and prices. COLON C. LILLIE, Coopersville, Mich.

JERSEY BULL CALF born October 4th '09. Dam gave 9,386 lbs. milk in one year, test 5 to 5½%. Sire's dam's record 10,060 lbs. milk in 10½ months test 5-2-10 per cent. The Murray-Watkinson Co., R. D. 6, Ann Arbor, Mich.

FOR SALE—12 registered Jersey Cows of St. Lambert and Island blood, from 2 to 10 years, all fresh or nearly so. Price \$100 each if taken at once. C. A. Bristol, R. F. D. 5, Fenton, Mich.

FOR SALE—Jersey Bull Calves from 3 to 9 mos. old. Fine thirty fellows and from extra good cows. A. Newman, Marlette, Mich. R. F. D. No. 1.

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

Register of Merit Jerseys. Official yearly records. T. F. MARSTON, Bay City, Michigan.

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WITH BIG MILK RECORDS. TUBERCULIN TESTED BY STATE VETERINARIAN. ROYCROFT FARM, Sidnaw, Mich.

SHORTHORN cattle of both sexes at reasonable prices. I breed for both milk and beef. Come or write. T. M. SOUTHWORTH, R. No. 13, Box 73, Allen, Mich.

SHEEP.

Parsons Poll Delaine Rams will add to the constitution and shearing qualities of your lambs. Grade X, \$15; XX, \$20; XXX, \$25. ROMEY C. PARSONS, Grand Ledge, Mich.

Oxford-Down Sheep and Polled Durham cattle for sale. A. D. & J. A. DEGARMO, Muir, Mich.

OXFORD DOWNS A few good field rams for sale. H. J. De GARMO, R. No. 1, Clyde, Mich.

SHROPSHIRE HALL STOCK FARM

Will import one hundred yearling ewes and 15 rams in June for Michigan and the same for Boise, Idaho, Branch of this Farm. Will make a fair price on yearling ewes or rams, also on some aged ewes with lambs at side, for 60 days.

L. S. DUNHAM & SONS, Concord, Michigan. 130 Reg. Rambouillet Ewes for sale, descended from the best flocks and bred to a pure Van Homeyer and a ram sired by a Gilbert ram and imported dam. All in perfect health. In lots to suit buyers—none reserved. J. Q. A. Cook, Morrice, Mich.

HOGS.

LARGE ENGLISH BERKSHIRES.

Have fine lot of spring pigs of both sexes. Few young sows for fall farrow. Vigorous and strong, the type for profitable pork production. Satisfaction guaranteed. F. A. BYWATER, Memphis, Mich.

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WON 189 PRIZES IN 1909. Stock of both sexes and all ages for sale. Breeders of Guernsey Cattle, M. B. Turkeys, Barred Rock Chickens, Pekin Ducks. GEO. C. HUPP, Mgr., Drawer A, Birmingham Michigan.

BERKSHIRES Unexcelled in breeding. Selected boars, sows and gilts. Choice fall pigs. T. V. HICKS, R. No. 11, Battle Creek, Mich.

HIGH CLASS LARGE ENGLISH BERKSHIRE Pigs, either sex. W. J. ROSS, Rochester, Michigan.

BERKSHIRES of the most fashion able type and strains. C. S. BARTLETT, Pontiac, Mich.

BERKSHIRES. A few good young boars ready for service, sows bred for fall farrow at attractive prices for immediate sale. Ask for catalog. Roycroft Farm, Sidnaw, Mich.

Berkshire—A few choice fall gilts bred for early farrowing and a choice lot of Spring Pigs with prices right and the right breed. A. A. Fattullo, Dearborn, Mich.

DAMS BROS., Litchfield, Mich., breeders of Improved Chester White and Tamworth swine. Pigs, either bred, by 1st prize State Fair winners. Buff Rock, Buff Wyandotte eggs \$1 per 15; W. Oringtons \$3 per 15.

Improved Chesters—Sows bred for Aug. and Sept. farrow. Choice March and Apr. farrow, either sex also W. Wyandotte Eggs \$1 for 15. W. O. WILSON, Okemos, Mich. (Both Phones).

CHESTER WHITES—Spring pigs and bred sows for fall farrowing. Also Guernsey Cattle. Catalog free. WILL W. FISHER, Watervliet, Michigan.

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3 Registered Duroc Jersey Boars

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DUROC JERSEY HOGS of all ages for sale. Pigs in pairs not akin, ready to ship. Meadowbrook Seed Farms, Williamsport, O.

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WALNUT HILL FARM Herd of Durocs. Bred sows all sold. 35 fine fall sows, 15 fine fall boars ready for service. 100 spring pigs to date. Write J. C. Barney, Coldwater, Mich.

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O. I. C. REGISTERED PIGS 10 to 12 weeks from World's Fair winners. Glenwood Stock Farm, Zealand, Mich. Phone 94.

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O. I. C. Spring Pigs For Sale, 14 choice boar pigs and 17 choice sow pigs. Satisfaction Guaranteed. Fred Nickel, Monroe, Mich., R. No. 1.

30 P. C. Fall Pigs—by two champion boars. Booking orders for weaned pigs by 10 different boars. WM. WAFFLE, Coldwater, Mich.

BIG WESTERN TYPE POLAND-CHINA PIGS, by three big Western Boars and from Big Sows. Prospects for 600 to 1000 lb. hogs. They keep easy and grow fast. Bred big for nearly 20 years. Bell phone. J. C. BUTLER, Portland, Mich.

FOR SALE—4 P. C. boars ready for service. Eggs for hatching & prize winning Regal White & Columbian Wyandottes, Zach Kinne, Three Oaks, Mich.

LARGE TYPE POLAND CHINAS—Largest in Mich. Booking orders for pigs to be shipped at 4 to 5 mos. of age. Write for weights and measurements. W. E. Livingston, Parma, Mich.

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Weaned Pigs each \$5.00. BROWN'S PIG FARM, Grand Rapids, Mich.

Large Improved English Yorkshires.

The hogs that make good. September gilts bred to farrow next August or September. Spring pigs of either sex. Pairs not akin. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Mich.

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Put these common sense questions to any agent who tries to sell you a disk-filled or other common, complicated cream separator. Say to him—

(1) "Are those disks or other contraptions in your separator intended to help it skim?" The agent will have to say "Yes."

(2) "Then you need such contraptions in your separator because it does not produce skimming force enough to do the work properly without them?" The agent will have to say "Yes."

(3) "Then a separator that does produce enough skimming force to do the work without disks or other contraptions must be a better and more modern machine than yours?" The agent will have to say "Yes" or else evade your question.

The agent's own answers convict him of trying to sell an out-of-date machine.

Sharples Dairy Tubular Cream Separators

contain neither disks nor other contraptions, yet produce twice the skimming force, skim faster and twice as clean as common separators. The World's Best separator works. Sales exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells. Write for Catalog No. 152



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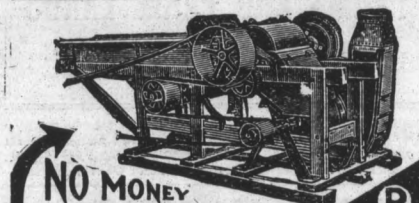
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is not an experiment. It is backed by 60 years' experience—more experience than any other machinery of its kind that is made. It is known in almost every dairy and intensive farming district in the U. S., and outside of machines themselves, their owners are their best advertisements—our best salesmen.

Our large catalog tells a most interesting story about Ensilage Cutting and Silo Filling machinery. It is free. Write for it.

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Shoo-Fly THE ANIMALS' FRIEND KILLS EVERY FLY



It strikes when our gravity sprayer is used. Keeps insect pests off animals in pasture longer than any imitation. Used since 1885. Thousands of dairymen duplicate 10 to 50 gallons annually after testing limitations. Absolutely harmless; cures all sores.

30 cents worth saves \$10

worth of milk and flesh on each cow during fly season. No Lice in Poultry House or any place it is sprayed. If dealer offers substitute, send us his name and \$1 for 3-tube gravity sprayer and enough SHOO-FLY to protect 200 cows. Name express office. \$1 returned if animals not protected. Free booklet. Special terms to agents. Shoo-Fly Mfg. Co. 1332 N. 10th St., Phila., Pa.
Editor knows from experience that Shoo-Fly is O. K.

Herdsman Wanted—I want a good reliable man to take charge of my herd of Jersey Cows. Must be a married man. House furnished. Steady job and good wages to the right man. Can use a man of limited experience if he is willing to learn.
COLON C. LILLIE, Coopersville, Michigan

WANTED—Married man to take charge of a dairy on the Cornwell Farm, Clare County. Give references and address W. C. Cornwell, Saginaw, Mich.

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

KEEPING UP THE MILK FLOW.

The extremely hot and dry weather of the past few weeks has shortened the season for June grass pastures and brought the season of supplementary feeding much earlier than dairymen are accustomed to. But where the pastures are failing it is the poorest kind of policy to allow the cows to shrink in their milk flow before supplementary feeding is commenced. A liberal grain ration will aid materially in keeping the cows up to a full flow of milk and some of the new clover hay can be fed with profit. The cows will eat the new, early cut clover hay with relish and will eat more of the dry pasture grass than would be the case if some green feed were used for soiling them to help out the pasture and they can be kept up in their milk flow fairly well on this combination of feeds. But if they are allowed to shrink in their milk flow at this season they can never be gotten back to a normal production again this season. Such extreme weather is hard on the cows, especially when the flies commence to be troublesome, even on good pasture, and is doubly so when the feed is short and insufficient or dried up to an extent which makes it unpalatable and less digestible than the fresher pasture which is generally at its best in June.

HOW TO TEST MILK ON THE FARM.

It is a simple and easy matter to test milk and cream, and it is an operation that can be done by any farmer with very little practice. The importance of testing the milk or, more exactly, the individual cows, cannot be too strongly emphasized. If those who keep cows knew how simple and easy it really is to test milk, more Babcock testers would be in use today, and it is encouraging to note that each year finds more of them in actual use on the farm.

A testing outfit consists of a machine for whirling test bottles, the test bottles which hold the milk to be tested, a pipette for measuring the milk, an acid measure for measuring the acid, and a bottle of commercial sulphuric acid. The outfit complete need not cost over five dollars, and some can be bought for even less than that amount. After one has the tester there is practically no further expense. The acid is cheap stuff and a cent's worth will test several samples. The first thing is to study the general instructions that accompany every tester.

A pipette is furnished with every machine for measuring the milk. This secures the proper amount and there is no danger of getting too much or too little milk if the pipette is filled to the mark and one is careful not to spill any before it is emptied into the bottle. Before filling the pipette the milk should be thoroughly mixed, which is best done by pouring from one dish to another several times. This mixing must be especially observed after the milk has stood for some time, but it is not so important when the sample is taken from freshly drawn milk. The best way of securing the sample is at milking time and while the milk is yet warm. Be sure to milk the cow thoroughly dry; empty it from one pail to another once or twice, fill the pipette to the mark and empty it into the test bottle. Never take a sample from a cow's milk before it is together as a whole, because different parts of the milk drawn from the first to the last stripping varies greatly in richness. I believe that the most important part of the testing is to get a fair sample of the milk, because, unless this is done, however careful the after work is carried on, the result of the test will be misleading and one will be deceived.

After the Sample Has Been Taken.

After the milk has been measured by means of the pipette and emptied into the test bottle, it is ready to be mixed with the acid. It is a good idea to get all the milk into the test bottles before mixing with the acid. The acid is poured into the small glass measure for measuring it until it reaches the mark indicating the amount to use, and then carefully poured into the test bottle containing the sample of milk. The test bottle must be held by its neck and inclined so that the acid will run down the side of the bottle and not through the milk. When it is held this way the acid collects in the bottom of the bottle under

the milk and does not mix with it. The acid must be poured into the bottle slowly and carefully.

With the acid in the bottle under the milk, it is ready for mixing. Do this gently by giving the bottle a rotary motion, and never by an up and down mixing, which might cause the contents of the bottle to go out the neck. As the acid and milk mix, the mixture becomes hot and changes to a dark brown color. Continue this mixing until it is of a uniform dark brown color and the acid and milk have been thoroughly mixed. Each bottle should be so treated and then placed in the tester.

Whirl it for five minutes at about forty-five turns per minute, more or less, depending upon the make of tester. Then fill each test bottle to the neck with hot water, preferably soft water, and turn again for three minutes. After this whirl, add more hot water until the fat comes within the graduated portion of the neck of the bottle and whirl once more for the last time, one minute.

That is all there is to making a Babcock test, and it is almost as simple as doing the milking. It is mainly a mechanical operation and requires no scientific skill except ordinary carefulness and attention. Of course, the weights of milk and acid used are designated by the metric system, such as cubic centimeters, grams, etc., but it matters not what they are called. One cannot make a mistake if he secures the sample for testing as suggested, measuring it with the regular pipette furnished, and mixes it with the acid according to directions.

Reading Test: and Figuring Total Yield of Butter.

The reading of the test is done by subtracting the lower point reached by the fat column from the upper point reached by the fat on the graduated scale. The reading should be made while the fat is yet hot and liquid. If they become cold they should be set in hot water until the fat is in a melted condition. One way to read the test is to measure the fat column with a broom splinter; then put one point on the zero mark and the mark reached by the other point will indicate the test. The best way of measuring the fat column is with a compass or pair of dividers.

The ordinary test bottles are made to read from zero to 10 per cent, each per cent being divided into fifths, or two-tenths of 1 per cent. Milk varies from about 3 to 6½ per cent. To find out the amount of fat from the test, one simply multiplies the per cent test by the amount of milk, just like the simple interest problems we used to do in the old arithmetics. No difference except that one is the commodity milk with the per cent fat, while the other is money with the per cent interest. But butter is not pure fat and contains moisture, some salt, a little casein. To reduce the fat to butter, multiply it by about 16 per cent, add it to the fat and the result will be the amount of butter. Thus, we have 30 lbs. of 5 per cent milk: 30×5 per cent = 1.5 lbs. of fat; 16 per cent $\times 1.5$ = .24 churn gain; 1.5 lb. $\times .24$ lb. = 1.74 lbs. of total butter.

Another problem, using 4 per cent milk, might suggest the practical difference between two cows giving the same quantity of milk:

30×4 per cent = 1.20 lbs. of fat; 1.2×16 per cent = .19 churn gain; 1.2 plus .19 = 1.39 lbs. of butter.

This may seem like only a small difference, but it amounts to 70 lbs. of butter in a year's milk flow of 6,000 lbs. from one cow. The Babcock tester enables every farmer to find out these facts concerning the cows of his herd, and it is one of the most profitable little investments he can make.

Pennsylvania.

L. J. HAYNES.

PEAT AS A STABLE ABSORBENT.

I saw in the Michigan Farmer that peat was a good stable absorbent and I would like to try it. Can you tell me where I can get it?

Allegan Co. W. H. S.
Dried peat, or dried muck, certainly make a most excellent stable absorbent. It will absorb odors and moisture in the stable equal to anything that you can use, but so far as I know, dried peat or dried muck has not been put on the market. Almost every neighborhood in Michigan has some peat or muck swamp where one could, if he desired, secure all of this product that he wanted. The best way to prepare it would be to throw it on the surface, let it freeze and then dry it, in order to be used as an absorbent. The action of frost pulverizes it so that it is more readily dried out and is in much better shape to be used in the stable.



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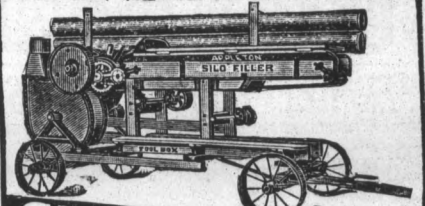
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Many people are afraid of ghosts. Few people are afraid of germs. Yet the ghost is a fancy and the germ is a fact. If the germ could be magnified to a size equal to its terrors it would appear more terrible than any fire-breathing dragon. Germs can't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

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

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A. R. GRAHAM, Flint, Michigan.

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DOGS.

FOR SALE—Pure Bred Scotch Collie Puppies.
R. L. TAYLOR, Almont, Michigan.

POULTRY AND BEES

UTILIZING POULTRY MANURE.

Many people do not fully appreciate the quality of fertilizer stored up in hen manure. Making what I consider a rather low estimate of the amount of manure produced by fowls, I think that 100 ordinary sized hens will produce at least one ton of manure in a year. After this has been mixed with about twice its bulk of earth you can see what an immense amount of first-class fertilizer you have. A great many seem, however, to regard it as more bother than it is worth, and therefore it is gotten rid of in the easiest way.

Poultry manure is very rich in ammonia and phosphoric acid, and these are prominent among the constituents of first-class fertilizers. I have been using some of this manure as a top dressing for garden crops, and find it excellent. I think that at no time is there more plant food in this manure than when it is first made, and for this reason the droppings should be gathered frequently and applied to the soil as soon as possible. The best plan is to spread it evenly over freshly worked land and then mix soil and manure thoroughly by means of the free use of the harrow or a rake of some kind. When applied to growing crops it may be worked in with the small-toothed cultivator. This, however, is only practicable during the summer season. In cold weather it should be mixed with some good garden loam and stored in some out-building, to be spread when the ground is in shape.

Old barrels are excellent for storing this by-product. If there is no building in which the barrels can be placed, they may be set in rows and covered with boards to keep out rain and snow. When the barrels are empty in the spring, store them away for use again the next winter. A great many fail to save the droppings because they do not have things as convenient as they would like. This, however, I find to be more of an excuse than a reason. If your poultry house is not so arranged that the saving of the manure is easy, it will not be a great job to so arrange it. The arrangement suggested above is very cheap. During the summer it can be applied directly to the soil; in winter it can be stored in barrels or boxes, kept sheltered from rains and snows, and applied when the ground is in shape.

This question of saving the poultry manure should concern every farmer who is keeping a flock of poultry. It will be surprising to see what the droppings will do to a piece of land if you have never tried using them as above suggested.

Illinois. **R. B. RUSHING.**

JUDGING POULTRY BY SCORE CARD.

I am very much interested in pure-bred poultry and would like to know how fanciers score their birds. I have read a great deal about poultry scoring 90 to 95 points but do not understand it.

St. Joseph Co. **L. A. P.**
The statement that a fowl has made a certain score, or has scored a certain number of points, means that the score-card system of judging was employed and that the judge found the fowl entitled to the number of points stated, out of a possible 100. When any breed gains the recognition of the American Poultry Association it is admitted to the so-called Standard of Perfection and is given a scale of points by the Association. This scale of points is simply an enumeration of the various parts and qualities of the fowl which are to receive the attention of the judge or scorer, together with a statement as to the requirements for a perfect score in each, and the penalty or "cut" for each defect or deficiency. The points considered in scoring are the same for all breeds, and the judge, in scoring a fowl, is required to pass upon the following: Symmetry, weight or size, condition; comb; head; wattles and ear lobes; neck; back; breast; body and fluff; wings; tail; legs and toes. In each of these, excepting the first four, shape and color are passed upon separately, in some instances the one being valued considerably above the other. In fact, the value placed upon each of the sections making up the scale of points varies with the different breeds, this variation being due to the fact that the breeders of one breed place greater stress upon certain features of their fowls than do those of another breed. As a general rule, those markings or features most difficult to bring to perfection are given the higher number of points in making up a scale of points, but, no matter

how many points are given to each section in the card, the total is always 100. However, in most breeds the requirements of the standard are placed so high that comparatively few fowls score above 96 points. Accurate descriptions and standard requirements of all breeds recognized by the American Poultry Association are published in the American Standard of Perfection, a volume which should be in the hands of every breeder of show-room poultry.

EXPERIENCE WITH FIRELESS BROODERS.

This season I have been trying fireless brooding to some extent, mostly with the late hatches. It has given me an excellent opportunity to add to my poultry knowledge, though at the cost of a number of chicks. Never having used the heatless brooders before I naturally made some mistakes, the more because my brooders and hovers were home-made and rather crude. On the whole, my experiments were fairly successful and I learned enough to insure much better results with later hatches. The first mistake I made was removing the chicks from the incubator too soon. Newly hatched chicks put into a cold hover are sure to be chilled. Even if the hover has been warmed there will not be sufficient heat to keep the chicks comfortable. They should be left in the incubator at least forty-eight hours and I have had better success by removing the egg tray and allowing the chicks to remain in the incubator for three or four days. They were taken out regularly to be given feed and water, being kept out only a few minutes at a time. The temperature was kept at 95 degrees the first day, then gradually lowered to 85. By the time they are four days old the chicks, if placed in a properly constructed cold brooder and kept under the hover most of the time until a week old, will generate sufficient heat to keep the temperature high enough. At first I made the mistake of not confining the chicks closely enough to the hover. They should be let out often for food and water, but after a few minutes should be returned to the hover. In this way they soon learn to go to the hover when cold, instead of bunching up outside. I am not yet ready to admit that cold brooders are, for all seasons, as successful as the heated brooders, but for the late hatches I believe they will be found superior.

Ohio. **NAT S. GREEN.**

INCREASING THE PROPORTION OF FANCY COMB HONEY.

Fancy comb honey brings from one to two cents per pound more than No. 1, and from four to six cents more than No. 2. Naturally, then, we are all interested in producing as much fancy honey as possible.

Many bee-keepers imagine that this is controlled entirely by the bees, and that no method which we may use will materially change the percentage of fancy and No. 1. Now to a certain extent this is true, for it is a fact that a certain colony will produce about the same quality of honey, no matter what method is used, with the exception that the stronger the colony the better the sections are likely to be filled. But it is not necessary to allow colonies which do not make the fancy grade to finish off any honey for the market.

Here is where method may aid in increasing the yield of fancy honey. I make a practice of allowing the poorer colonies to draw out the foundation and bring the sections up to the stage where they would soon begin capping. Then I choose several colonies in the yard which have proven themselves to be producers of fancy comb honey and give them these partially filled supers to fill out. Given these drawn and partially filled sections they will finish an enormous amount of them, for these fancy honey producing colonies are energetic fellows, and these partly filled sections give them still greater vim for the work. Consequently, four or five of these colonies will usually finish off the honey for an apiary of 20 or 25 colonies. If you have chosen the right colonies you will have from 75 to 90 per cent fancy comb honey.

Mecosta Co. **L. C. WHEELER.**

HARD TO PLEASE

Regarding the Morning Cup.

"Oh how hard it was to part with coffee, but the continued trouble with constipation and belching was such that I finally brought myself to leave it off.

"Then the question was, what should we use for the morning drink? Tea was worse for us than coffee; chocolate and cocoa were soon tired of; milk was not liked very well, and hot water we could not endure.

"About two years ago we struck upon Postum and have never been without it since.

"We have seven children. Our baby now eighteen months old, would not take milk, so we tried Postum and found she liked it and it agreed with her perfectly. She is today, and has been, one of the healthiest babies in the State.

"I use about two-thirds Postum and one-third milk and a teaspoon of sugar, and put it into her bottle. If you could have seen her eyes sparkle and hear her say "good" today when I gave it to her, you would believe me that she likes it.

"If I was matron of an infants' home every child would be raised on Postum. Many of my friends say, 'You are looking so well!' I reply, 'I am well; I drink Postum. I have no more trouble with constipation, and know that I owe my good health to God and Postum.'

"I am writing this letter because I want to tell you how much good Postum has done us, but if you knew how I shrink from publicity, you would not publish this letter, at least not over my name."

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DETROIT, JULY 9, 1910.

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We will send the Michigan Farmer to new subscribers to November 1, 1910, including one of our farmers' pocket account books of 72 pages, all properly ruled under headings, such as daily egg record, hired help, individual account, cash paid out, cash received, etc., also instructions how to keep accounts, also other general information, and 1910 calendar. The Michigan Farmer to Nov. 1, 1910, and account book sent postage paid for only 25c, or the Michigan Farmer to November 1, 1911, and a two-bladed, razor steel, brass-lined knife, worth 75 cents, postage paid, for only \$1.00. Order through agents or send direct to this office.

CURRENT COMMENT.

The report of the Senate Committee's Report, to the Senate of the United States upon the subject of the high cost of living, made pursuant to investigations of this subject, was summarized in our last issue. As noted in that issue, it contains some solid information of value and much food for thought for the producers of foodstuffs in this country. The figures given in this report make it very apparent that the great law of supply and demand has been actively at work and aided by other conditions, noted in this report, in bringing the farmers of the country an increased prosperity for which they have waited long and labored persistently, sometimes without the reward which was their earnest labor's just due. At the same time this report brings out the fact that there has been a marked increase in the cost of producing farm products, a fact which "the other half" has not fully appreciated if the sentiments publicly expressed in various ways are to be taken as an index of the general opinion of consumers upon this point. We believe that the publicity given to this report will disabuse the minds of many of the erroneous opinion that the farmers of the country have been getting more than their fair share of business prosperity through the increased price of their products.

A phase of this report which should not be passed over without special notice, is the recognition of the fact that the increased banking facilities in agricul-

tural localities have operated to the benefit of the farmers in those localities, better enabling them to hold their crops and market them to the best advantage, thus steadying and to some degree increasing the average market price for their commodities. This is a factor in the well being of the farmers of the country to which we have referred many times in these columns. In it is also a suggestion that the farmers of any section may profitably extend their relations with their banker, in this direction, to the end that they may share more equably in the benefits which undoubtedly accrue to them from such relationship and which are recognized in this report. The benefit which adequate banking facilities has proven to the farmers of the country was most thoroughly demonstrated in the near panic which has not yet passed from our acute remembrance. With the greater prosperity which has come to them, and the consequent increase in the number and strength of country banks, comes a broader field of usefulness for these institutions and a wider opportunity to profit by them to the farmers of all sections of the country.

Another factor in the higher cost of living which is made prominent in this report and which applies to farmers as well as to the city consumer to no small degree is the increased tendency to purchase supplies in small quantities and ready for consumption, instead of in quantities or in the form of raw material. In few farm homes today are to be found the barrel of sugar, the supply of flour or cured meats which were considered a necessity of a few years ago. More generally these are purchased as needed in small quantities and in the ready-to-eat form which, while a convenience to the housewife, increases the cost of living not a little. The proper relationship of these factors is a good subject for thoughtful study. Not that we would advise increasing the cares of the too often overworked housewife to reduce the cost of living, unless absolutely necessary, nor that we would deprecate that fact that a higher standard of living is more general today than in former years. On the contrary we consider these to be desirable things, but simply suggest that there may be at hand the means of somewhat cheapening the cost of living upon the farm without the disadvantages implied, if a little thought and attention is devoted to this factor by both members of the home partnership.

Another possible opportunity for bettering farm conditions which is suggested in this report is that of the organization of producers. We have dwelt upon this topic in previous issues to an extent which makes it seem unnecessary to touch upon it further at this time. It is mentioned only because of the fact that this report seems to be a little misleading in this respect, as it would be interpreted by the average reader. Organizations of producers do not necessarily increase the price to the consumer, but may, without such an effect, increase the revenue derived by the producer.

Another count made in the consideration of the increased cost of living mentioned in this report, and which would likewise seem to be misleading, is that of advertising. It is difficult to see the connection in this case, particularly as the articles which have increased most in price are not of a class which are advertised to any extent and to which the cost of advertising is in any sense added to the price to the consumer. Agricultural products are scarcely advertised at all and foodstuffs which constitute the item in which the next largest increase has been noted, are advertised little in comparison with general merchandise, in which the increase and cost to the consumer has been less marked.

There is, however, in this report sufficient material for careful thought and study by every reader, for which reason we have again called attention to it and commented upon a few of its phases.

HAPPENINGS OF THE WEEK.

Foreign.

The Russian government is about to communicate to other countries an agreement with Japan regarding the interests of the two countries in Manchuria. For a long time representatives of these two nations have been working upon a plan for the control of Manchuria that will protect the interests of each and overcome the possibility of conflict as far as possible, and it seems that a very favorable convention for the securing of such a purpose has been agreed to. The governments are to maintain jointly the status quo in Manchuria, both as regards territorial and administrative control, and they co-ordinate the railroad interests there.

Japan has taken over the police power of Korea. It is believed that this is a step in the direction of annexation of the

peninsula to Japan. The garrisons are being strengthened. Japan has promised Korea's ruler ease and luxury, which is believed to have great weight in the negotiations that recently resulted in strengthening Japan's hold upon the country.

Prof. Rutherford, an English scientist, was honored last week by being presented a Bernard medal for his researches in radio activity. Dr. Butler, of Columbia university presented the medal.

Colonel Bowen, of the 12th infantry, now located near Manila, will have to stand trial for temperamental incapacity. A court-martial was ordered last week.

Commander Gilmer landed marines at Bluefields, Nicaragua, recently, and prevented the steamer Venus bombarding the town. Complaints are now coming from all parts of the country to Washington, but the department believes the commander did his duty in stopping the vessel from taking an active part in the revolution. Former President Zelaya is now in Brussels, but it is known almost to a certainty that he is drawing heavily upon his large fortune for discontinuing the struggle. The promotion of large property interests in the western part of the country is believed by the department here to be Zelaya's purpose for assisting the Madrid cause.

Because of his skill in settling the boundary and waterways controversy between the United States and Canada the British house of commons gave Ambassador Bryce public praise for his work.

The English government will go before the people next January for the approval of a bill to restrict the veto power of the house of lords. The liberals and the Tories have failed to reach an agreement. The house of lords will turn down the proposal at the fall session according to the announcement of the leaders.

National.

The agitation for a sane "Fourth" apparently has been effective in robbing the celebration of our national holiday of some of its dangerous features, as the reports of casualties and injuries are much less than for former years. In Detroit not only was the noise much less but the injuries reported as compared with a year ago were 22 and 63 respectively. The same general change was evident throughout the state and country—district jollifications taking the place to a large extent, of the old time hilarity.

One mile west of Middleville, Ohio, a collision between a passenger train loaded with persons out for the holiday and a freight train resulted in the death of 19 persons and the injury of scores of others. Train orders were misread.

Melville W. Fuller, chief justice of the supreme court of the United States, died at his summer home near Bar Harbor, Maine, on the morning of July 4. Heart trouble coupled with a weakness superinduced by Bright's disease, was the cause of his unexpected death, although he has been in poor health for some time. He was born in Maine in 1833, studied law one year at Harvard and went to Chicago in 1856 to practice. He was scarcely known outside of the legal fraternity before his appointment to the supreme bench by President Cleveland in 1888. He was twice married, his last wife dying in 1904. He leaves eight daughters to mourn his loss. It is generally remarked the position made vacant by his death will be filled by Charles S. Hughes, who was recently appointed to the bench by President Taft, and who is now governor of New York.

Race riots were started in many places following the announcement of the result of the pugilistic contest at Reno, Nevada, in which Jack Johnson, a negro, was declared winner of the heavyweight championship of the world over James Jeffries, a white man. Many deaths resulted from the riots and in some instances the blacks were driven from the streets of municipalities where their celebrating became obnoxious to the white citizens.

The efficiency of aeroplanes as an instrument of war was proven last week when, in tests made at Hammondsport, New York, Glenn Curtiss succeeded in dropping 15 out of 22 shots upon targets. The test proved that in order to make the machines effective they must be capable of carrying two persons; and that the idea of dropping projectiles upon ships or other structures must be superseded by a gun for directing the destructive missiles.

An aeronaut fell at Caro, Mich., July 4, a distance of 100 feet, and was killed. About the same time at Vassar, a town some 13 miles distant, another balloonist fell about the same distance, but he still lives.

The town of Benton, Pa., was half destroyed by fire on July 4, causing a loss of \$300,000. The fire was started by the careless use of firecrackers.

A disastrous fire in the plant of the Ypsilanti Hay Press Co., for a time threatened to have a serious effect upon farm operations depending upon deliveries of goods from this factory. Announcement is made by authorities of the concern, however, that no disappointment whatever, will result to farmer customers of this concern. Temporary quarters have been established and orders are being filled promptly.

CROP AND MARKET NOTES.

Genesee Co., July 4.—A period of extreme heat has set corn and other crops to growing at a great rate. A fair stand is seen in most fields although hardly up to the average for this date. Beans are generally looking well. Late potatoes just starting. Sugar beets not far from the average. Haying begins this week in earnest, and a large acreage of clover will be cut in the next few days. The yield is good but scarcely up to that of last year. Wheat beginning to turn and a fair crop and better than in some instances. Old hay freely offered with quite a fair tonnage unsold. Wages for hay and harvest fields high and help scarce. Quite a number of farms in this vicinity have recently changed owners at prices around \$90 to \$100 per acre. Market quotations as follows: Wheat, \$1; corn, 63c; oats, 41c; beans, \$2.10; potatoes, 20@30c; wool, 22c; eggs, 20c; dairy butter, 22c;

dressed hogs, 11½c; veal, 10c; beef, \$9@10; baled hay, \$12.75@14; loose hay, \$10@13; rye straw, \$7.50.

Clinton Co., June 30.—June has been an exceptionally fine month for doing all kinds of farm work that comes in at this time of the year. It has been very dry, no rain since the 6th until the 23rd, when a heavy rain fell accompanied by a heavy wind which caused some damage in timber and orchards. The early cold weather, together with the destructive cutworm, wrought havoc with the corn. The latter part of June was excessively warm, together with the dry weather, for cultivating. Wheat and early oats at this time promise an abundant harvest. New seeded meadows are all that could be expected for a crop but old meadows are, generally speaking, light. Wheat, \$1; beans, \$2.05; No. 1 timothy hay, \$13@15; cloverseed, \$6; butter, 20c, eggs, 18c. About the usual output of beans, which are looking well at this writing.

Clinton Co., Ind., June 27.—The month of June has proven to be a drought month for us. A cold, wet spring followed by dry and hot weather. There have been no showers, not enough to lay the dust. Crops are beginning to show effects. Oats are beginning to head out, but are short. Farmers have cultivation well in hand, but corn is small for this time of year. Clover hay harvest is at hand, and is a good crop. Wheat is ripening very uneven. Some is turning while some is just heading. Average about one-half crop. Horses are scarce and in good demand, \$200 being the average price asked. Farmers are selling cream at loading station for 35c per lb. for butter-fat. Butter at local stores is 20c; eggs, 16c. Some complaint of loss of early hatched chickens due to cold and wet. Wheat, 92c; corn, 80c per 100 lbs.

Lucas Co., Ohio, June 27.—Continued hot and dry weather has shortened the hay crop, which will be only about three-quarters of a crop. Corn on the clay has also been affected by the dry weather, some fields having been re-fitted and replanted. Cutworms have done considerable damage. Oat straw will be short but the heads seem to be filling well, but only a medium yield may be expected. What wheat there is seems to be filling well and does not seem to be affected by the dry weather. Strawberries are only a medium crop, selling for 12½c at the farm. About the same acreage of corn has been planted as last year. Wheat, \$1; corn, 60c; oats, 40c; hogs higher, 9c; cattle, \$6.50@7; calves, \$6@8; sheep, \$4@5 per cwt. Sugar beets are looking good.

Montgomery Co., Ohio, June 27.—The weather has been hot and dry up to June 26. June 27 now starting in with a nice rain. Everything is growing fine. Tobacco planting just about finished and is starting to grow nicely. The markets are as follows: Wheat, 95c; cloverseed, \$1.50; hogs, \$4c; corn, 55c; oats, 35c; rye, 70c; butter, 18c; eggs, 18c; lard, 14c; potatoes, 30c; sheep, 4@5c; lambs, 8c.

Polk Co., Wis., June 27.—Weather has been very warm during June with no rain until yesterday and today. It has rained all night and is doing the corn much good. Winter wheat and rye are pretty good and are all headed; other grains are very poor. Hay is being harvested and is very poor, yielding about one-half to one ton to the acre, the poorest crop in ten years. Corn is doing very well and if we have plenty of rain and warm weather corn will be the best crop this year. Cattle and hogs are going down and are being shipped out by the car load on account of the dry weather in the county, especially in the northern part, where the crops are a total loss. Hay selling at \$10@12 a ton; wheat, 90c; barley, 45c; oats, 30c; poultry, 12c a lb; butter, 31½c a lb; eggs, 15c per dozen.

THE BETTER FARMING TRAIN.

During the week of June 27 to July 2, Michigan Agricultural College conducted the most successful series of railroad institutes ever held in the state. Although it was in the midst of the busy season of the farmer and the weather throughout the week was very hot and oppressive, the attendance at all points was unusually large, ranging as high as 450 at Whittemore and Rose City, with 1,000 at the evening session at Cheboygan. Governor Warner was with the train four days, speaking at each place on "The Dairy Interests of Michigan," and much interest was taken in the addresses by Prof. C. B. Smith and Prof. J. C. McDowell, upon problems relating to the handling of the lighter soils of northern Michigan and the growing of such crops as clover, sand vetch and potatoes. The subduing of quack grass was also a topic that received considerable attention.

Colon C. Lillie, State Dairy and Food Commissioner, was aboard for two days and urged the farmers to give more attention to dairying and to keep cows of the dairy breeds.

From the Agricultural College the speakers were Prof. V. M. Shoesmith, who talked upon alfalfa culture; Prof. H. L. Kempster, who discussed "The Care of Poultry," and advised the keeping of a pure breed of fowls; Prof. Geo. A. Brown, who urged the keeping of sheep on the new lands of northern Michigan and gave the characteristics desired in sheep for that section; and Prof. W. B. Liverance, who urged farmers to use the Babcock test to weed out unprofitable animals and advised greater care in handling milk and cream.

The train was in charge of Prof. L. R. Taft, State Superintendent of Farmers' Institutes, who spoke upon "Spraying and the Care of Orchards."

Secretary T. E. Marston, of the Northeastern Michigan Development Bureau, upon whose invitation the train was run and who aided in advertising the meeting, was also on board.

Four baggage cars were filled with exhibits and apparatus, including grain and forage crops, poultry, sheep and dairy and spraying machinery.

As upon previous occasions the railroads furnished the train without charge and, as all of them had previously done so on from one to four occasions it is evident that they have been satisfied with the results.

GRANGE

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

THE JULY PROGRAMS.

Suggestions for Second Meeting.

"It is one thing to indulge in playful rest, and another to be devoted to the pursuit of pleasure."—Ruskin.

Roll call, responded to by each naming the grandest sight he ever saw.

Humorous recitation.

Select reading, "In the fields with God."

"Summer plans for recreation," general discussion led by the Lecturer.

Select reading, "The Hope Farm man on playing ball."

"Picnic Lunches," a short paper or talk.

Surprise feature, music throughout the program furnished by "The Zobo Band."

POSTAL SAVINGS BANKS A REALITY.

Nearly three years have elapsed since National Master Bachelder, at the annual meeting of the National Grange, at Hartford, announced that Postmaster General Meyer would recommend, to the congress then about to convene, the establishment of postal savings banks, and that, in his judgment, the long battle which had been waged by the Grange was nearing a successful issue. Since that time the pressure of public sentiment, due largely to the well organized efforts of the Grange, has been steady and strong, and while the enactment of this much desired and long sought legislation was delayed longer than then seemed probable, a law providing for the establishment of postal savings banks was passed by the congress which closed its labors late last month. The law referred to, and which marks the end of nearly thirty years of agitation on the part of the Grange and of the farmers generally throughout the states, provides for the designation of postoffices as postal savings depository offices, the opening of such depositories being left to the discretion of a board of three trustees, consisting of the postmaster general, the secretary of the treasury and the attorney general. This board is given complete control of the depositories and of their funds. The provisions of the law as to deposits are briefly as follows: Any person over ten years of age may open an account with one dollar, deposits per month not to exceed \$100 and total deposits not to exceed \$500 at any one time. Ten-cent stamps will be provided for those who want to accumulate deposits. The government will pay 2 per cent per annum on all postal deposits and depositors can exchange their deposits at any time for government bonds, to bear 2½ per cent interest. The money accumulated by deposits is to be deposited in both state and national banks in the vicinity of the postoffices that are made postal banks, the banks receiving the deposits to pay 2½ per cent interest. Five per cent of the total deposits is to be held by the treasurer of the United States as a reserve to guarantee payment of depositors. The bill expressly declares that "the faith of the United States is solemnly pledged to the payment of the deposits made in postal savings depository offices, with accrued interest thereon as herein provided."

OCEANA POMONA ENJOYS DISCUSSION OF PRACTICAL TOPICS.

Oceana Pomona met with North Weare Grange in the village of Pentwater on Saturday, June 18. Hart Grange exemplified the third and fourth degrees in the forenoon and these numbers proved interesting. The program rendered in the public session abounded in good things. J. K. Fletcher spoke from the topic, "Are Our Country Schools Meeting the Demands of the Present?" He said in part: The pupil in the village school receives twelve years of work while the country school affords an opportunity for but eight years. The teacher in the rural school must instruct in too many grades. She has not sufficient time for each grade. The country child should be taught the things that fit him best for practical life. He has the same right to a high school education and as much need of it as the pupil in the city or village. Many of our country schools are too small to be interesting, and because they are small they are run at increased cost per pupil. If we could centralize them and make the consolidated district large enough to support a high school we could give the country pupil educational privileges equal to those of the city or village. We could teach practical agriculture, manual training and domestic science to some extent and thus educate both the hand and brain of the child.

After some splendid recitations and some very good instrumental music, Bro. Bennett read an excellent paper entitled, "Personal Responsibility in the Building

of a Man." He spoke of the responsibility of a parent to the child, not only in providing for temporal needs, but the duty of setting an example in all things that could be safely followed. The young man, he said, is largely responsible for his future. The habits he forms while young will tend, in a great degree, to influence his whole life. He may form habits of cleanliness, of telling the truth, of industry and temperance, or he may contract the tobacco habit, the liquor habit, the lying and the shiftless habits and pay a bitter and costly penalty later on.

The subject of the writer's talk was "Building and Using the Silo." He said: If you haven't time to build a silo yourself, buy a stave silo, but you can build a little cheaper if you have the time. Be sure to make the silo high enough. Let it be small enough in diameter to enable you to feed fast enough to keep the ensilage fresh all the time, even though the weather be warm. Take great care to have the foundation air tight. Do not plan to be the only one in your community who has a silo. Do not think of buying the machinery to fill it alone. Get your neighbors to build and then combine with them and buy an ensilage cutter and perhaps the engine. There are nine in our association now. We own both our machine and our power, we solve the labor problem by helping each other, and so are quite independent. If you build a silo the cows will pay the bill, but they must have grain with their ensilage. The cow that eats 40 lbs. of fairly good ensilage gets only about 4 lbs. of grain, and that is very deficient in protein. So do not hesitate to feed a liberal grain ration, rich in protein, with ensilage.

Thirteen candidates received the fifth degree in form. The next meeting of Pomona will be with Walkerville Grange in November. However, under its auspices three rallies will be held this season, the first at Pentwater on Saturday, July 23. State Master Hull has already been secured to speak on this occasion. The second rally will be held a little later in the southwestern part of the county, and the third at a point in the eastern part of the county. Most of our Granges are doing very well and, in a general way, the prospect has never looked brighter.

W. F. TAYLOR.

Charlevoix Co. Pomona.

On June 23 Ironton Grange entertained one of the most successful Pomona meetings ever held in Charlevoix county. Nearly 200 Patrons were present, and from the moment that Worthy Master Mears' gavel fell there was "something doing." After a brief fifth degree session in which the standing committees were instructed to "get busy," a most bountiful spread, furnished by the local Grange, was enjoyed by all. After dinner Worthy Lecturer Black presented a literary program of high order. Of particular note were two addresses, one by Mrs. Dora Stockman, of Lansing, on "The Farm Art Gallery." Mrs. Stockman proved a very pleasing speaker and handled her subject admirably, convincing her hearers of the wisdom and necessity of cultivating a deeper appreciation of the artistic side of farm life. Bro. E. B. Ward's presentation of the plan and purpose of the Straits of Mackinac Association was closely followed and the occasion will no doubt add substantial support to a very deserving and progressive movement to secure the proper and equitable marketing of Michigan fruit. An excellent essay, prepared and read by Mrs. Josephine Ingalls, was ordered published in local papers. Resolutions of sympathy and respect relative to the sudden death of Sister Clara Wagner, member of Boyne River Grange, were adopted and ordered published.

The public was admitted for the first half of the evening session and entertained by a varied program of songs, instrumental music, recitations, etc., furnished by the local Grange and others. Witty and interesting talks were given by Mrs. Stockman, E. S. Stacks, J. H. Milford and others. Several made pointed reference to the present status of local option in Charlevoix county, and the manner in which their remarks were received was indicative of universal satisfaction with prevailing conditions as compared with previous conditions.

Twenty-two applicants for fifth degree membership were initiated in an impressive manner by Marion Centre degree team. A committee of three, composed of Bros. Frank Hammond, John A. Newville and John H. Bugbee, was appointed to arrange for Grange rallies. A rising vote of thanks was given Marion Centre degree team for their excellent work, and Ironton Grange for their hospitable entertainment. The next Pomona meeting will be held with Norwood Grange, Aug. 18. The special order at that meeting will be the adoption of new by-laws. As several important changes will be recommended by the committee on by-laws, every Pomona member should make it a point to attend this meeting.—R. A. Brintnall, Sec.

Minard Grange.—A Grange of 43 members was organized by Deputy Wilde at Minard, Jackson Co., Friday evening, June 24. The officers are as follows: Master, Arthur Lincoln; overseer, J. B. Strong; lecturer, James C. Thomson; steward, Homer Vedder; ass't steward, Floy McArthur; lady ass't steward, Floy McArthur; chaplin, Emma Vedder; treasurer, Fred Whitmore; secretary, R. Z. Reardon; gate keeper, John Elder; Ceres, Mary Cheetham; Pomona, Hattie McCrum; Flora, Flossie Peterson.

COMING EVENTS.

Grange Rallies and Picnics.

Oceana Co., at Pentwater, Saturday, July 23.

Lenawee Co. Pomona, with Fruit Ridge Grange, Thursday, Aug. 4.

Kent Co. Pomona, at Silver Lake, Cannon township, Kent Co., Wednesday, Aug. 17.

Pomona Meetings.

Charlevoix Co., with Norwood Grange, Thursday, Aug. 18.

FARMERS' CLUBS

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—B. A. Holden, Wixom.
Vice-president—Mrs. C. A. Mathews, St. Johns.

Secretary—Mrs. C. B. Johnson, Metamora.

Treasurer—Henry T. Ross, Brighton.

Corresponding Secretary—N. A. Clapp, Northville.

Directors—T. B. Halladay, Norvell; E. C. Hallock, Almont; A. R. Palmer, Jackson; Wm. H. Marks, Fair Haven; C. L. Wright, Caro; E. W. Woodruff, Blanchard.

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.

CLUB PICNICS.

The Highland and Hartland and the Hartland Farmers' Clubs, of Oakland and Livingston counties, will unite in a basket picnic on the shores of Maxfield Lake, in Hartland township, Livingston county, on the last Saturday in July.

THE DEBATING CLUB.

There was held in June, a reunion of a debating club which flourished in one of the prosperous rural sections of Michigan a few years ago. This reunion was held at the country school house, where the society met and flourished in former years, and the program consisted of a debate participated in by a half dozen of the old members of the organization, most of whom are no longer residents of the community, while other participants in the program as well as the audience were former members of the organization who had many times participated in its meetings. This organization, the West Novi Debating Club, organized in 1868 and for many years the oldest in point of years and the most famous literary society in Oakland county, was blessed with many able members. Or shall we rather say it aided in the development of its members in a manner which made many of them prominent factors in affairs of state importance as well as in their local community. Among those who participated in the debate were two members of the legislature, two ex-presidents of the Michigan State Association of Farmers' Clubs and two who have served in the capacity of directors of the same organization, while all of the others have attained distinction in private and semi-public capacities.

So enjoyable and profitable was this meeting to those who participated in it, that it was decided to effect a permanent organization for the purpose of holding a similar annual re-union of the old members each year. There are, no doubt, other organizations of a similar kind which might as profitably emulate the example of this club. The writer was a member of a similar organization which developed a number of young men who achieved honor in public service in similar capacities, and which did not a little to make the Farmers' Club which now exists in that community a permanent success by the taste and faculty for debate which was instilled into the young people of that community through its interesting and profitable meetings. But, like the West Novi Debating Club, it no longer exists as an active organization. In fact, it has passed out of existence altogether, except in the memories of its old members who profited to such a degree by the training and experience gained in its meetings. The same is true of a number of similar societies of which the writer had knowledge in years gone by, and unfortunately in each case there is nothing to replace them which will inure a similar benefit to the younger generation of young people. True, the Farmers' Club has taken the place of these earlier organizations in many communities, but the Farmers' Club has not proven as attractive a medium for the young people for obvious reasons.

Is there not in this a suggestion which might be profitably followed out to a logical conclusion by the leaders in Club work in every community? Would it not be entirely practicable and feasible to promote the organization of debating societies as subsidiary organizations to the Farmers' Clubs, in which the young people might be interested to their great benefit, and thus prepare them to be more interested and active members of the parent organization in future years?

We believe that the plan is well worthy of a trial. The cost would be nothing more than a little effort on the part of a few persons in each Club community, who would get more than enough pleasure from the meetings of the debating Club to more than repay them for their trouble, to say nothing of the benefit which they would be doing to the young people of the community. Club members, think over this plan during the summer months and be prepared to suggest to the young people of your community a plan for conducting a successful debating society next winter. The long winter evenings could not be better employed, and the young people of the community had far better get together for some useful purpose of this kind than as a mere pastime, for get together for mutual enjoyment they will in any event.

We hope that this plan may be tried out in more than one Club community during the coming year. Take it up in the Club meeting and get the young people interested in making definite plans to that end.

CLUB DISCUSSIONS.

Discuss Single Tax.—A most enjoyable occasion and delightful surroundings, was the unanimous verdict of the large company present at the last meeting of the Hartland Farmers' Club, recently held at the very pleasant home of Mr. and Mrs. Vescelius. All were heartily welcomed by our genial entertainers and considered themselves fortunate to be there. After a most bountiful chicken-pie dinner, to which all did ample justice, the president called the meeting to order and a very good program was eagerly listened to. The children gave several recitations which were well rendered, and an honor to their parents. The question box contributed its full share of interest to the occasion. The best of the wine came at the close of this feast of good things; as James Green, former prosecuting attorney, gave us a most sensible and convincing talk on "Single Taxation," which was a credit to the speaker and a subject of vital importance to the encumbered farmer. The Highland and Hartland Club extended a cordial invitation to our Club to join with them in a picnic at Maxfield Lake the last Saturday in July, which was accepted. The Club then adjourned to meet with Mr. and Mrs. Frank Travis, August 6.

ENORMOUS SALARIES PAID TO FAMOUS SINGERS.

Singers of such renown as Caruso, Melba, Tetrassini and several other famous opera stars, receive more money for a single performance than many doctors, lawyers or business men make in a year.

Even the lesser lights in the world of music receive handsome salaries; there is hardly a singer cast for the smaller roles, in either the Metropolitan or the Manhattan opera forces, who receives less than five or six hundred dollars a performance.

Despite the exorbitant prices charged for admission to these performances, which the tremendous cost of production makes necessary, the demand for seats is often so great that hundreds of people are turned away.

Until the wonderful phonograph was perfected and the services of these great artists were secured to sing exclusively for making records, it was impossible for the great majority of music lovers ever to hear these famous singers.

But with the wonderful growth and the development of the modern phonograph, the spread of good music, especially in agricultural communities, has been remarkable. Today the sons and daughters of the farmer can often talk with more intelligence and familiarity upon a noted singer's rendering of an opera aria, and the range and quality of his voice, than their city cousins who proudly profess to be constant opera goers.

Nothing shows so plainly the steady trend of farm life toward culture, refinement and happiness in the home than the number of phonographs which are to be found on the farm.

In the farmers' homes where a phonograph is to be found, there is no such thing as dull nights or lack of appreciative company. Whatever the whim of the moment happens to be, the machine can satisfy it, band, orchestra, choir, humorous songs and stories in abundance, sweet love songs and plaintive ballads; sacred, holy hymns if you wish, or the classical arias from immortal operas. Whatever you desire is at your command from the best artists in the world.

MARKETS

DETROIT WHOLESALE MARKETS.

July 6, 1910.

Grains and Seeds.

Wheat.—The market has strengthened since last week, with the improvement widest in futures. The cash deal is almost lost sight of in the activity of September and December deals. Dry weather in wheat sections is responsible for a large part of the strength which the market is showing. For a long time the plants have been suffering for moisture and now the injury is being impressed upon the minds of those interested and to date no rains of importance are reported to help out the crop. Abroad the trade is following the prices here, instead of leading them. No new wheat is being delivered in the southwest where threshing is in progress. The receipts of old grain in the northwest is quite liberal but the supplies are being cut down. The visible supply shows a substantial decrease. One year ago the price for No. 3 red wheat was \$1.40 per bushel. Quotations for the week are:

	No. 2	No. 1	Sept.	Dec.
Thursday	1.03	1.03	1.00 1/2	1.02 1/2
Friday	1.03	1.03	1.01	1.03
Saturday	1.03	1.03	1.01	1.03
Monday	1.04	1.04	1.03 1/2	1.05 1/2
Tuesday	1.04	1.04	1.03 1/2	1.05 1/2

Corn.—The strength of the wheat situation, the poor hay outlook and the dried-up pastures are lending their influence to put up and keep up corn values. The crop itself appears to be coming along well considering the disadvantage of the cold spring and the late planting. Trading is not active. Visible supply is small and has decreased but a few thousand bushels for the week. One year ago we were paying, upon this market, 73 1/2¢ per bu. Quotations for the past week are:

	No. 2	No. 3	Yellow.
Thursday	62 1/2	63 1/2	64 1/2
Friday	62 1/2	63 1/2	64 1/2
Saturday	62 1/2	63 1/2	64 1/2
Monday	63	64 1/2	65 1/2
Tuesday	63	64 1/2	65 1/2

Oats.—Oats are not selling as high as a week ago. Crop conditions are quite promising in Michigan with the exception of some sections where moisture is wanted. The trade is not active and the stocks in elevators are low. September oats are up from the price paid last Saturday. One year ago the value of No. 3 oats on this market was 54¢ per bu. Quotations for the week are:

	Standard.
Thursday	40 1/2
Friday	40 1/2
Saturday	40 1/2
Monday	40 1/2
Tuesday	40 1/2

Beans.—The nominal prices of the beans here are a little lower than those of last week. As no trading is being done it is difficult to state what the understanding of the trade is of the growing crop. Michigan promises a good acreage this year and the present stand appears to be good generally. Quotations are as follows:

	Cash.	Oct.
Thursday	2.22	2.02
Friday	2.22	2.02
Saturday	2.22	2.02
Monday	2.22	2.02
Tuesday	2.22	2.02

Cloverseed.—The demand for seed now has practically ceased except from those who wish to invest and as a consequence the market is very quiet and little attention is being given it except that a close watch of the growing crop is being kept by traders and farmers. The hay crop will come off in good season, which, if rains do not fall us, will put the plants in good shape for the growing of seed. Cash seed is quoted at the same price as a week ago, while October is lower. The prices are:

	Spot.	Oct.
Thursday	7.00	6.75
Friday	7.00	6.70
Saturday	7.00	6.70
Monday	7.00	6.70
Tuesday	7.00	6.70

Rye.—There is nothing doing in rye. The nominal quotation is 78¢ per bu., which is 1/2¢ below the price of a week ago.

Visible Supply of Grain.

	This week.	Last week.
Wheat	12,034,000	13,141,000
Corn	5,224,000	5,614,000
Oats	4,245,000	4,792,000
Rye	378,000	406,000
Barley	1,443,000	1,448,000

Flour, Feed, Provisions, Etc.

Flour.—No further advance has been made and the market is firm at former values.

Clear	4.90
Straight	5.40
Patent Michigan	5.70
Ordinary Patent	5.50

Hay and Straw.—All grades except No. 1 timothy are lower. Quotations on baled hay in car lots f. o. b. Detroit, are: No. 1 timothy, \$17.50@18; No. 2 timothy, \$15.50@16; clover, mixed, \$15.50@16; rye straw, \$7@7.50; wheat and oat straw, \$6.50@7 per ton.

Feed.—Prices are steady. Carlot prices on track: Bran, \$25 per ton; coarse middlings, \$26; fine middlings, \$28; cracked corn, \$27; coarse corn meal, \$27; corn and oat chop, \$24 per ton.

Potatoes.—The calls for old potatoes are fast diminishing with the improvement in the quality and quantity of the new crop. Old stock is quoted at 20@25¢ per bu. for car lots and 25@30¢ in store lots. New potatoes are \$2@2.50 per bbl.

Provisions.—Mess pork, \$25; family pork, \$26; medium clear, \$25@26; smoked hams, 19 1/2¢; dry salted briskets, 16 1/2¢; shoulders, 15¢; picnic hams, 14 1/2¢; bacon, 13¢; lard in tierces, 13 1/2¢; kettle rendered, 14 1/2¢ per lb.

Hides.—Steady. No. 1 cured, 9¢; No. 1 green, 7 1/2¢; No. 2 cured bulls, 8¢; No. 2 green bulls, 6 1/2¢; No. 1 cured veal kip,

10¢; No. 1 green veal kip, 8¢; No. 1 cured calf, 14¢; No. 2 kip and calf, 12 1/2¢; No. 1 horsehides, \$3.50; No. 2 horsehides, \$2.50; sheepskins, as to amount of wool, 20@60¢.

Dairy and Poultry Products.

Butter.—While the production of butter has been increasing rapidly a strong demand from different sources has kept up values and at the same time prevented the trade from becoming draggy. On this market prices are the same as a week ago except for dairy which is 1¢ higher. Quotations are: Extra creamery, 27 1/2¢; firsts, do., 26 1/2¢; dairy, 23¢; packing stock, 21¢ per lb.

Eggs.—Just one cent has been taken from last week's price for eggs. The market is receiving a liberal supply and the demand is fair. Fresh eggs, case count, cases included, are quoted at 17 1/2¢ per dozen.

Poultry.—Because of the small number of offerings, the poultry market is firm and values are up a little from last week for hens and broilers. The quotations on live are: Broilers, 26@28¢; chickens, 15@15 1/2¢; hens, 15@15 1/2¢; old roosters and stags, 12¢; ducks, 15¢; geese, 11@13¢; turkeys, 16@16 1/2¢ per lb.

Cheese.—Michigan, late made, 15¢; Michigan, fall made, 17 1/2@18¢; York state, 18@18 1/2¢; limburger, old, 17@18¢; Swiss, domestic block, 23@24¢; cream brick, 16@16 1/2¢.

Calves.—Steady. Choice to fancy, 11@11 1/2¢; ordinary, 10 1/2¢.

Fruits and Vegetables.

Apples.—Apples are not having a large market. Steele Red are quoted at \$6.50 @7 per bbl.

Cabbage.—Steady. Selling at \$1.25 @1.75 per crate for new.

Strawberries.—Crop is about all harvested. Michigan fruit quoted at \$2.25 @2.50 per bu.

Raspberries.—Offerings are increasing. Crop is not large. Reds are quoted at \$2.25 per 24-pt. case; blacks, \$4.25 per bu.

Blackberries.—Market steady. Offerings few. Selling at \$4.25 per 24-pt. case.

Huckleberries.—Selling at \$4.25 per 24-pt. case.

Gooseberries.—Quoted at \$2.25 @3 per bushel.

Cherries.—Rather scarce but lower than a week ago. Now selling at \$3 per bu. for sour.

Vegetables.—Beets, 25¢ per doz; carrots, 25¢ per doz; cucumbers, 50@60¢ per doz; eggplant, \$1.25 @1.50 per doz; green onions, 10@12¢ per doz; head lettuce, 75@90¢ per bu; mint, 25¢ per doz; parsley, 20@25¢ per doz; radishes, 15¢ per doz; spinach, 65¢ per bu; turnips, 40¢ per doz; watercress, 20@25¢ per doz; wax beans, \$1.50 per bu; pieplant, 20¢ per doz; asparagus, 90¢ @ \$1 per doz.

OTHER MARKETS.

Grand Rapids.

Live poultry, delivered, are bringing the following prices: Fowls, 12 1/2¢; broilers, 20¢; ducks, 12¢; turkeys, 12¢; old roosters, 8¢; geese, 7¢. Dressed hogs are firm at 11@11 1/2¢. Hot weather and a poorer quality of butter has weakened the dairy butter market, the price paid ranging from 21@22¢. Creamery butter is worth 27 1/2¢. Grain prices are steady, wheat around the dollar mark. White pea beans are quoted on a \$2 basis for hand picked, while red kidneys are very scarce and are easily worth \$3. Strawberries are practically out of the market. Red raspberries brought an average of \$1.70 on Tuesday's market, while cherries sold at \$2.50 per bushel.

New York.

Butter.—Market steady with values practically unchanged. Creamery specials quoted at 28 1/2@29 1/4¢; process butter, 22@25 1/4¢ per lb.

Eggs.—Market weak with quotations showing a drop of 1@3¢. Nearby eggs are quoted at 24@27¢; fresh gathered extras, 19@20¢; firsts, 17@18¢ per doz.

Poultry.—Trade is quiet. Western fowls, 17@17 1/2¢; western broilers, 25@26¢; turkeys, 10@14¢ per lb.

Chicago.

Wheat.—No. 2 red, \$1.02 @1.03 1/2; July, \$1.01 1/2; September, \$1.01 1/2.

Corn.—No. 2 mixed, 60@61¢; July, 59 1/2¢; September, 61 1/2¢.

Oats.—No. 3 white, 39@40 1/2¢; July, 40¢; September, 39 1/2¢.

Butter.—Market steady and unchanged. Receipts are fairly liberal for the season and demand good. Prices unchanged. Quotations are: Creameries, 24 1/2@27 1/2¢; dairies, 23@26¢.

Eggs.—Market easy at last week's figures. Prime firsts, 18¢; firsts, 17¢; at mark, cases included, 15@16 1/2¢ per dozen.

Hay and Straw.—All grades of hay about \$1 per ton higher. Quotations are: Choice timothy, \$18@18.50; No. 1 timothy, \$16@17; No. 2 do. and No. 1 mixed, \$15@15.50; No. 3 do. and No. 2 mixed, \$11@14.50; rye straw, \$8.50@9; oat straw, \$6.50 @7; wheat straw, \$6@6.50.

Potatoes.—Market rather weak; old stock not quoted. Choice to fancy new, 65@70¢ per bu; fair to good, 60@62¢.

Beans.—Trade quiet with prices a trifle lower. Choice hand-picked are quoted at \$2.33 @2.38; fair to good, \$2.23 @2.28; red kidneys, \$2.75 @3 per bu.

Wool.—Market easy with prices showing no change. Fine delaine, unwashed, 20@22¢; fine medium, 22@24¢; medium, 23@25¢.

Boston.

Wool.—The wool situation continues uncertain. Just what the trouble is no one appears to know. Some say that the brokers are not insisting upon buying because the mills are not getting the orders for manufactured goods that they should and are not running at full capacity. On the other hand, some of the large mills bought quite heavily this past week and it is suggested that the buyers for these mills are satisfied that the market has reached the bottom and that there will be better values later. But the clip is not moving very rapidly from the country and the farmers are proving themselves

quite as good waiters as the buyers for they are still of a mind that better values should be paid. Some Ohio quarter bloods were sold last week for 27¢ per lb., while a good sized block of 3/4 blood went for 29¢. Washed delaines from Michigan were exchanged at 35¢, quarter bloods at 25¢. In the country everything is quiet and there is a large bulk of the fleeces to move out of the growers' hands yet.

Elgin.

Butter.—Market is firm at 27 1/4¢ per lb., which is the same as last week. The sales for the week amounted to 1,098,500 lbs., compared with 1,333,600 lbs. for the week previous.

THE LIVE STOCK MARKETS.

Buffalo.

July 4, 1910.

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

Receipts of stock here today as follows: Cattle, 90 cars; hogs, 8,000; sheep and lambs, 2,000; calves, 850.

Ninety cars of cattle on the market here today. This being the Fourth of July, the attendance of buyers was very light, and quality of cattle, especially the tops, the poorest seen here in four months; quality considered, cattle selling 10@15¢ higher today.

We quote: Best 1,350 to 1,400-lb. steers \$7.75@8; good prime 1,200 to 1,350-lb. do., \$7.25@7.75; best 1,100 to 1,200-lb. shipping steers, \$6.50@7.25; medium butcher steers, 1,000 to 1,100 lbs., \$5.50@6; light butcher steers, \$4.75@5.25; best fat cows, \$5.25@5.75; fair to good cows, \$4.25@4.75; common to medium do., \$3@3.75; best fat heifers, \$6@6.75; good fat heifers, \$5@5.50; fair to good do., \$4.25@5; stock heifers, \$3.25@3.50; best feeding steers, \$4.75 @5; medium to good do., \$4@4.25; stockers, all grades, \$3.50@3.75; best bulls, \$5.25@5.50; bologna bulls, \$4@4.50; light thin bulls, \$3.50@4; best milkers and springers, \$5@6; common to good do., \$3@3.50.

Receipts of hogs, 50 cars; market opened strong, and 5@10¢ higher than Saturday's low time, and closing steady to strong at the opening.

We quote prices as follows: Mixed, medium and heavy, \$9.60@9.70; yorkers, \$9.70@9.75; light yorkers and pigs, \$9.80 @10; roughs, \$8.35@8.40; stags, \$6.75 @7.25.

The lamb market opened active today, with most of the best spring lambs selling from \$8.75@9; yearlings lambs, \$6@6.50. All selling; look for active market balance of week. Sheep market was active today, and ewes and wethers selling quarter higher. Look for steady prices balance of week on sheep.

We quote: Spring lambs, \$8.75@9; yearlings, \$6@6.50; wethers, \$5@5.15; handy ewes, \$4.25@4.50; heavy ewes, \$4@4.25; cull sheep, \$2.50@3.50; bucks, \$2.50 @3; veals, choice to extra, \$9.25@9.50; fair to good do., \$7@9; heavy calves, \$5@6.

Chicago.

July 4, 1910.

This is the Fourth of July and a holiday at the stock yards. Stock arriving on the railroads is cared for by the stock yards authorities, but no sales are made, and the packing house workers are taking a rest. Buyers of some kinds of live stock took hold last week more freely than they would have done ordinarily, as they had to stock up ahead in anticipation of the holiday, and this was especially the case regarding spring lambs, for prime lamb is always in urgent demand in high-class butcher shops for the Fourth of July trade.

Cattle were strengthened in price last week after a sharp decline on Monday due to too generous receipts on that day. Country shippers thought it advisable to wait for a healthy reaction in the market, and this took place after Tuesday, the early decline being recovered, so far as offerings that were at all desirable were concerned. A large share of the beef steers crossed the scales at \$6@8, the commoner class of light-weight grassy killers going at \$5.15@6.25, while the choicer class of heavy shipping beefs were purchased readily at \$7.75@8.50. The falling off in the average grading of the cattle received was very marked, there being an inadequate supply of long-fed steers, while the proportion of grass cattle was much larger. Cattle that passed as good sold at \$7.25@7.70, and medium steers went at \$6.75@7.20. A year ago steers were selling at \$5@7.50, two years ago at \$4.50@8.40 and three years ago at \$4.60@7.25. Cattle are selling well compared with former years, this being true of even the common kinds, notwithstanding their great decline in recent weeks. Increasing supplies of Texas grass cattle may be expected to cause further depression in prices for farm fed grassy cattle, as the Texans are greatly preferred by killers, but the future looks promising for choice beefs, as there is believed to be a shortage in feeding districts. Cows and heifers of the better class rallied with steers, the best heifers selling at \$6@7, while ordinary cows sold at \$3.85@4.50. Canners and cutters sold at \$2.25@3.80 and bulls at \$2.90@5.50, while calves were purchased at \$3@8, choice vealers being in inadequate supply. Seventeen cars of strictly grass range steers from Wyoming showed up on Wednesday, the first of the season, and sold to feeders at \$5.10@5.40, their average weights ranging from 975 lbs. to 1,063 lbs. Stockers and feeders had a rather larger sale, as was natural after their recent great slump in prices, and the choicer lots were higher under limited offerings. Stockers sold at \$3.10 @4.90 and feeders at \$4.60@5.85. Milksters and springers were in moderate supply and in poor demand at \$25@55 per head. About 43,400 cattle were received last week, compared with 58,859 a week earlier and 43,391 a year ago. Late prices for fat cattle were some higher than a week earlier.

Hogs showed a rather firm undertone for the choicer consignments much of the time, but getting advances last week was more difficult than usual, as purchases by eastern shippers were lowered to ex-

tremely small proportions. Heavy hogs comprised the greater part of the daily offerings, the recent receipts having averaged in weight 242 lbs, compared with 222 lbs. a year ago, 216 lbs. two years ago and 235 lbs. three years ago. The demand has been chiefly for choice light and medium, butcher weights, and these have ruled the highest with prime 130 to 150-lb. pigs commanding a substantial premium, while rough, heavy old sows sold slowly at declining prices. This is in accordance with the experience of former years, and a further widening out between desirable and undesirable offerings is looked for with the advance in the season. There are a great many feeders who have little left except big, heavy, matured hogs, and they naturally are desirous of marketing them as quickly as possible. Light hogs are becoming scarcer all the time, and extremely few pigs are included in the daily receipts. Consumption of fresh pork and cured meats continues large throughout the country, and light hogs are wanted for fresh meat and bacon trade. Last week's receipts amount to 114,120 hogs, compared with 115,545 the preceding week and 96,735 a year ago. The market closed in bad shape Saturday, as buyers did not care to load up before two holidays. Hogs closed at \$8.50@9.25, compared with \$9.05 @9.65 a week earlier.

Sheep and spring lambs came on the market much more freely last week, the offerings embracing good supplies of grass lambs from California and Washington ranges, while grass wethers and yearlings arrived rather freely from Idaho. Feeders made increased purchases of lambs, yearlings, and sheep, and there was an excellent demand for the better class of spring lambs for mutton purposes at much higher prices. Lambs were invariably much the best sellers and brought much higher prices than in most former years. Eastern shippers did not take hold with any great degree of freedom, although their purchases were on a larger scale than a short time ago, and sheep were very slow to advance in price. A bad feature was the drought in various sections, which checked the demand for feeders, dry pastures and prospects of a poor hay crop being reported. About 77,000 sheep and lambs arrived last week, compared with 56,291 a week earlier and 72,321 a year ago. Sheep prices failed to undergo much improvement, but lambs were largely 25@50¢ higher, closing at \$5@8.50, with feeders at \$6@6.50. Wethers sold at \$4@4.75, ewes at \$2@4.50 and yearlings at \$4.50@5.75.

Horses have been in very poor general demand for still another week, and almost too many were received, prices ruling the lowest seen this year. Drivers had a poor sale at \$150@300 per head, while drafters were slow at \$170@220, with a few choice heavy drafters taken at \$225@275, while a few matched pairs of superior quality went at \$650@700. Light wagon horses had a fair sale at \$140@175, and medium weight chunks sold at \$130@160, while several range branded horses found buyers at \$140@172.50. Aside from a few fancy horses that sold as high as ever, the market was highly unsatisfactory, and some sound horses weighing from 1,300 to 1,400 lbs. went at \$125@150, figures below their country cost. The only bright spot, with the exception of a satisfactory market for fancy horses of the draft type, is the improved demand for high-class stallion service in this state.

LIVE STOCK NOTES.

Louis Penwell of the Montana Wool Growers' Association says: "We are consigning our clips to the Chicago warehouse. There is no reason why growers should not get as much for their wool as last year. If everybody refuses to accept current bids we will ultimately secure fair prices. In Montana dealers are offering 18 to 18 1/2 cents for clips they bought freely at 21 to 25 cents a year ago."

Reports come from various parts of the corn belt states that spring pigs may be expected to show up in the markets of the country some six weeks earlier than usual, and pigs that would ordinarily not be shipped until November and December will be marketed along in September and October. Usually March pigs are born at a period when climatic conditions are extremely unfavorable, and many succumb to cold, wet weather, but this year usual conditions were completely reversed, and March was warm and pleasant, while April and May were cold and wet. The March pigs have had the very best of care, farmers realizing fully their unusual value at a time when hogs are such valuable property on the farm, and plenty of corn has been fed to them. As a general rule farmers bred far more sow gilts than usual, as high prices had induced them to part with their matured brood sows, and hence average litters were considerably smaller than in most years.

Woolen manufacturers are endeavoring to get sheepmen to sell their wool to them direct and are offering liberal advances on the wool at 6 per cent and offer to furnish sacks free of charge.

About 100,000 Mexican cattle were imported into the United States during the first five months of this year, the duty amounting to about \$350,000. Most of these cattle were forwarded to Montana, North Dakota, South Dakota, Wyoming and Colorado to be matured, and two years hence they will be marketed as beef cattle.

Dairymen have not been in the market for cows during the recent hot spell of weather, and as shippers had some cows die while in transit, they are slower to make shipments of milkers and springers. Supplies on the Chicago market have undergone a great falling off, but the reduction in the demand has been even larger, and prices are materially lower than several weeks ago, when there was a good trade.

Wyoming sheepmen complain that wool buyers will not even make any offer. A year ago buyers were traveling all over the west and buying up wool eagerly, but now they show perfect indifference as a rule, and when sales are made prices are several cents lower than last year.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

July 7, 1910.

Cattle.

Receipts, 652. Market strong at Wednesday's prices; 25¢ to 50¢ higher than last week.

We quote: Extra dry-fed steers and heifers, \$7.50; steers and heifers, 1,000 to 1,200, \$6.25; steers and heifers, 800 to 1,000, \$5.25 to \$6; grass steers and heifers that are fat, 800 to 1,000, \$4.50 to \$5.50; grass steers and heifers that are fat, 500 to 700, \$4.40 to \$5; choice fat cows, \$4.50 to \$4.75; good fat cows, \$3.75 to \$4.25; common cows, \$3 to \$3.50; canners, \$2.75 to \$3; choice heavy bulls, \$4.50 to \$4.75; fair to good bolognas, bulls, \$3.75 to \$4.25; stock bulls, \$3.50 to \$4; choice feeding steers, 800 to 1,000, \$4.75 to \$5; fair feeding steers, 800 to 1,000, \$4.25 to \$4.50; choice stockers, 500 to 700, \$4.40 to \$4.75; fair stockers, 500 to 700, \$3.50 to \$4; stock heifers, \$3.25 to \$3.75; milkers, large, young medium age, \$4.00 to \$5; common milkers, \$2.50 to \$3.50.

Bishop, B. & H. sold Mich. B. Co. 9 steers av 955 at \$6.25, 12 do av 835 at \$5.25, 6 cows av 1,025 at \$4.25; to Thompson Bros. 2 cows av 980 at \$3.50; to Goose 18 butchers av 780 at \$4.75; to Kamman B. Co. 4 do av 712 at \$4, 23 do av 735 at \$5; to Bresnahan 11 stockers av 650 at \$4.10; to Sullivan P. Co. 5 cows av 972 at \$4, 1 do weighing 840 at \$3.25, 23 do av 970 at \$4.50, 4 do av 1,017 at \$3.50, 2 bulls av 1,175 at \$4.25, 2 do av 785 at \$4, 6 steers av 800 at \$5.15; to Erban Bros. 6 do av 583 at \$4.50; to LaBoe 23 butchers av 755 at \$4.75; to Lachalt 9 do av 711 at \$4.60; to Mich. B. Co. 5 steers av 920 at \$6, 3 cows av 940 at \$4.50, 2 bulls av 675 at \$4, 2 heifers av 695 at \$5; to Schlischer 13 butchers av 815 at \$4.50, 2 bulls av 865 at \$4; to Regan 6 butchers av 600 at \$4.75; to Kamman 11 steers av 715 at \$5.20, 10 butchers av 750 at \$4.50, 1 cow weighing 1,190 at \$3.50, 2 do av 890 at \$3.75; to Newton B. Co. 10 steers av 1,063 at \$6.35, 15 do av 850 at \$5, 5 do av 880 at \$5.50, 18 do av 995 at \$6.35, 1 do weighing 1,000 at \$5.35; to Sullivan P. Co. 8 butchers av 881 at \$5.25, 1 cow weighing 1,000 at \$2.50, 1 do weighing 1,000 at \$3.25; to Kamman B. Co. 4 butchers av 820 at \$5.50, 5 cows av 950 at \$4.25.

Roe Com. Co. sold Smith 2 stockers av 715 at \$4.75; to Sullivan P. Co. 7 butchers av 780 at \$4.50, 2 do av 690 at \$3.85, 1 bull weighing 1,050 at \$4.25, 15 heifers av 762 at \$4.55; to Sullivan P. Co. 2 steers av 715 at \$6, 8 do av 500 at \$4.50, 1 heifer weighing 340 at \$3.50, 1 do weighing 780 at \$3.75; to Applebaum 3 butchers av 850 at \$4.60; to Rattkowsky 8 do av 762 at \$4.60; to Mich. B. Co. 12 do av 712 at \$4.25; to Cohen & Co. 5 cows av 920 at \$3.60.

Spicer & R. sold Mich. B. Co. 8 cows av 791 at \$4.50, 1 do weighing 780 at \$3.50, 8 do av 720 at \$4.50, 3 do av 943 at \$3.50, 6 do av 1,008 at \$4.50, 2 do av 965 at \$3.25, 1 do weighing 980 at \$3.50, 6 steers av 816 at \$5.10, 1 bull weighing 830 at \$4, 2 do av 910 at \$4, 4 butchers av 675 at \$4.75; to Fronn 9 do av 568 at \$3.85; to Goose 3 cows av 810 at \$3.25; to Starrs 1 do weighing 830 at \$3.75; to Sullivan P. Co. 1 bull weighing 1,080 at \$4.25, 3 do av 530 at \$4, 2 do av 455 at \$3.50; to Schlischer 5 butchers av 650 at \$4.80, 7 do av 600 at \$4.50, 2 do av 565 at \$4.50; to Hammond, S. & Co. 1 bull weighing 850 at \$4, 12 steers av 830 at \$5.50, 1 cow weighing 1,200 at \$4.50, 3 do av 923 at \$4.50.

Haley & M. sold Sullivan P. Co. 1 cow weighing 920 at \$3, 1 do weighing 920 at \$3.75, 2 do av 1,125 at \$4, 2 do av 850 at \$3.60; to Mich. B. Co. 2 bulls av 1,035 at \$4.25, 1 do weighing 670 at \$3.75, 2 heifers av 810 at \$4.60, 1 cow weighing 1,000 at \$4; to Thompson Bros. 7 butchers av 626 at \$4.50, 1 bull weighing 580 at \$4.50; to Smith 3 stockers av 673 at \$4.50; to Kamman 3 heifers av 663 at \$5, 2 do av 475 at \$4; to Applebaum 7 butchers av 580 at \$4.15, 2 cows av 790 at \$3.25; to Goose 2 do av 1,085 at \$3.90; to Sullivan P. Co. 3 cows av 813 at \$3, 2 steers av 1,390 at \$5.50, 2 do av 1,215 at \$7.50, 2 bulls av 1,160 at \$4.25, 1 cow weighing 930 at \$3, 1 heifer weighing 740 at \$4.25; to Goose 1 cow weighing 1,130 at \$3, 3 do av 1,026 at \$4.50; to Erban 2 steers av 615 at \$4.50; to Gerish 6 do av 871 at \$5.90.

Johnson sold Kamman 4 heifers av 725 at \$5.

McLachen sold Thompson Bros. 11 butchers av 823 at \$5.

Johnson sold Regan 7 butchers av 483 at \$4.

Same sold Gerish 2 bulls av 1,100 at \$4.75, 1 do weighing 870 at \$4.

Veal Calves.

Receipts, 768. Market steady with Wednesday; 50¢ higher than last Thursday. Best, \$8.50 to \$9; others, \$4.50 to \$8; milch cows and springers steady.

Bishop, B. & H. sold Newton B. Co. 20 av 160 at \$8.50; to Marx 5 av 120 at \$6, 6 av 165 at \$7; to Sullivan P. Co. 20 av 165 at \$8.75; to Marx 4 av 130 at \$6; to Newton B. Co. 14 av 160 at \$8.50; to Parker, W. & Co. 14 av 155 at \$8.75, 21 av 160 at \$8.75; to Sullivan P. Co. 15 av 145 at \$8.50; to Hammond, S. & Co. 2 av 110 at \$7, 6 av 145 at \$8.75, 5 av 110 at \$7, 21 av 175 at \$8.75; to Newton B. Co. 18 av 155 at \$8.65, 22 av 155 at \$9; to Strauss & A. 10 av 175 at \$8.50, 4 av 200 at \$6, 3 av 170 at \$8.75, 8 av 180 at \$8.25, 10 av 137 at \$9.

Spicer & R. sold Mich. B. Co. 9 av 155 at \$8.65, 6 av 165 at \$8.50, 8 av 150 at \$8.50; to Breitenback Bros. 4 av 205 at \$6.50, 12 av 150 at \$8; to Parker, W. & Co. 6 av 250 at \$5, 28 av 155 at \$8; to Burnstine 10 av 140 at \$8.25; to McGuire 6 av 155 at \$8.50; to Nowhisky 7 av 145 at \$7.50; to Gordon & B. 7 av 155 at \$6.50.

Haley & M. sold Hammond, S. & Co. 11 av 140 at \$8.25; to Thompson Bros. 2 av 145 at \$8.50; to Newton B. Co. 1 weighing 330 at \$4, 6 av 155 at \$7, 17 av 155 at \$8.25, 22 av 165 at \$8.75; to Mich. B. Co. 30 av 170 at \$8.75; to Sullivan P. Co. 3 av 110 at \$6, 20 av 140 at \$8, 4 av 150 at \$7.50; to Thompson Bros. 9 av 150 at \$8.

Roe Com. Co. sold Goose 2 av 185 at \$7, 23 av 145 at \$8.50; to Bront 4 av 140 at \$8.50, 2 av 135 at \$7; to Thompson Bros. 2 av 220 at \$7, 13 av 150 at \$8.50; to Mich. B. Co. 13 av 155 at \$8.75.

Belheimer sold Mich. B. Co. 14 av 160 at \$8.75.

Johnson sold same 15 av 150 at \$7.75.

Adams sold Sullivan P. Co. 7 av 155 at \$8.75.

Wagner sold same 4 av 120 at \$5, 17 av 160 at \$8.50.

Downey sold Burnstine 9 av 160 at \$8.25.

Cheney & H. sold same 18 av 155 at \$8.25.

Sheep and Lambs.

Receipts, 1,285. Market steady with Wednesday. Lambs 75¢ to \$1 higher than last week; sheep steady.

Best lambs, \$8.25; fair lambs, \$7.75 to \$8; light to common lambs, \$6.50 to \$7; fair to good sheep, \$4.40 to \$4.75; culls and common, \$3 to \$3.50.

Haley & M. sold Hammond, S. & Co. 12 sheep av 115 at \$4, 60 lambs av 75 at \$8; to Thompson Bros. 25 lambs av 55 at \$6.50, 14 sheep av 90 at \$3.25; to Mich. B. Co. 91 lambs av 68 at \$3.10, 8 sheep av 120 at \$4; to Thompson Bros. 17 lambs av 55 at \$6.50; to Newton B. Co. 16 do av \$5 at \$8.25.

Roe Com. Co. sold Sullivan P. Co. 18 lambs av 75 at \$8, 29 sheep av 125 at \$4.

Spicer & R. sold Breitenback Bros. 23 lambs av 75 at \$6.50; to Mich. B. Co. 14 sheep av 75 at \$3.50, 4 do av 100 at \$4.25, 12 lambs av 65 at \$8.50; to Stocker 11 do av 77 at \$6.50, 4 sheep av 95 at \$4.

Bishop, B. & H. sold Sullivan P. Co. 6 lambs av 50 at \$6, 31 do av 70 at \$8; to Thompson Bros. 9 sheep av 105 at \$4, 16 do av 85 at \$4.25; to Fitzpatrick Bros. 32 lambs av 70 at \$8, 8 do av 65 at \$8, 22 sheep av 155 at \$3.50, 44 do av 75 at \$4, 4 do av 115 at \$4, 29 do av 85 at \$4.75, 59 lambs av 65 at \$8.25, 6 do av 67 at \$8; to Newton B. Co. 29 do av 65 at \$8, 38 sheep av 105 at \$3.75, 10 do av 125 at \$3.50; to Mich. B. Co. 66 sheep av 90 at \$3.50; to Newton B. Co. 16 lambs av 60 at \$8.

Wagner sold Sullivan P. Co. 1 sheep weighing 120 at \$4, 6 lambs av 72 at \$7.50.

McLaughlin sold same 63 lambs av 75 at \$7.50.

Johnson sold Mich. B. Co. 20 lambs av 75 at \$7.50, 6 yearlings av 80 at \$5, 7 sheep av 135 at \$4.

Hogs.

Receipts, 2,024. Market 10¢ to 15¢ lower than last Thursday.

Range of prices: Light to good butchers, \$9.40; pigs, \$9.50; light yorkers, \$9.35; heavy, \$9.25 to \$9.30; stags ½ off.

Bishop, B. & H. sold Hammond, S. & Co. 115 av 270 at \$9.25, 156 av 215 at \$9.30, 680 av 180 at \$9.40, 110 av 200 at \$9.35.

Haley & M. sold Parker, W. & Co. 20 av 200 at \$9.30, 39 av 200 at \$9.35, 84 av 170 at \$9.40.

Spicer & R. sold same 125 av 190 at \$9.40, 30 av 200 at \$9.35, 7 av 260 at \$9.30.

Sundry shippers sold same 255 av 200 at \$9.35.

Roe Com. Co. sold Sullivan P. Co. 206 av 170 at \$9.40.

Sundry shippers sold same 200 av 180 at \$9.40.

VETERINARY.

(Continued from page 24).

Iron, gentian, ginger, rosin, fenugreek and bicarbonate soda and give a tablespoonful at a dose to each horse in feed three times a day. It will do your horses no harm to run in pasture all night. Horses work well on grain and grass. I have no doubt that the remedy company, "whoever they are," will make good their guarantee. Atrophied Shoulder Muscles.—We have a horse whose one shoulder seems to be wasting away as though sweened; he has not shown any lameness on this leg, but I would like to know what to do for him. J. L., Hudsonville, Mich.—Clip the hair off atrophied parts and apply cerate of cantharides once a week.

Navel Infection.—I would like to have you tell me what to do for my colt. He was so weak that we had to help him up until a week old, then his leg began to swell, especially one hock. About that time we noticed him leaking from the navel. We healed the navel by applying one part carbolic acid and seven parts lard, also bathed the leg in hot water three times a day. The joint opened, since then applied peroxide-hydrogen and poulticed with flaxseed meal. The swelling has reduced, but the joint discharges a great deal of pus. A. L. C., Owosso, Mich.—The mistake you made was in not treating the navel from birth. had you applied a good healing remedy his joint would not have become infected; besides, poulticing is one of the worst things you could have done. After applying peroxide-hydrogen use equal parts boric acid and iodoform and the leg should be treated twice a day and if the navel has not healed use the same remedy to it. Give 2 grs. quinine and 20 grs. hypophosphite soda at a dose three times a day.

Wind Sucker.—My two-year-old colt appears to suck wind and when doing so squeals and is getting in an unthrifty condition. F. S. C., Fennville, Mich.—If your colt sucks wind buckle a strap around his neck tight enough to prevent the air passing down his gullet; also give him a dessertspoonful of cooking soda and two tablespoonfuls of powdered wood charcoal at a dose in feed three times a day.

Bone Spavin.—Bog Spavin.—I have two horses that are wrong—one has a bony bunch on lower part of hock, the other has a puff in fore part of hock and is also troubled with knuckling. Two weeks ago I blistered these bunches; the blister is composed of cantharides, corrosive sublimate, iodine and turpentine. Had I better continue using this blister, or apply something else? B. A. S., Kingsley, Mich.—Apply one part red iodide mercury and eight parts lard to bone spavin once a week; blister puff and fetlock joints with cerate of cantharides every ten days.

Bloating.—Have a two-year-old heifer due to come fresh next October that is running on clover; she bloats considerably every afternoon. Is there any help for her? E. B. D., Montague, Mich.—Your heifer no doubt eats ravenously and takes in too much clover which soon ferments, causing bloat. She should be allowed to eat about an hour night and morning, then stabled or turned in a lot where there is rather poor pasture. Give her 1 oz. of cooking soda half an hour before turning her out, it will help her, but soda should never be given when she is bloated for if given then it will increase the bloating instead of diminishing it. Give 4 drs. salicylic acid every hour until three doses have been given, or give 2 oz. doses aromatic spirits of ammonia in a quart of water as a drench until three doses are given.

Injured Tendon.—Last winter my mare cut her fore leg near fetlock joint; after it healed I applied a blister; some time later had the shoe set and she seemed to have recovered. Later she commenced going crooked and at times does not travel as well as she should. W. H. S., Kingsley, Mich.—Apply spirits of camphor to fetlock and tendon twice a day. It is possible that she strikes the tendon with opposite foot which may make the leg sore for a short time after the blow.

Bruised Hock.—Colt now about six weeks old met with an accident two weeks ago; since then one hock joint has been swollen and appears like a capped hock; bunch is about size of a hen's egg; is a little larger and more solid than it was a week ago. Can I remove it by home treatment? It does not cause lameness. O. L. F., Bath, Mich.—During the hot weather you had better avoid the use of strong drugs. Apply the following remedy: Dissolve ¼ lb. sugar of lead in a gallon of water, add 1 pt. tincture arnica and apply this lotion to hock night and morning. Some thickening will be left; however, it can be reduced during the winter months.

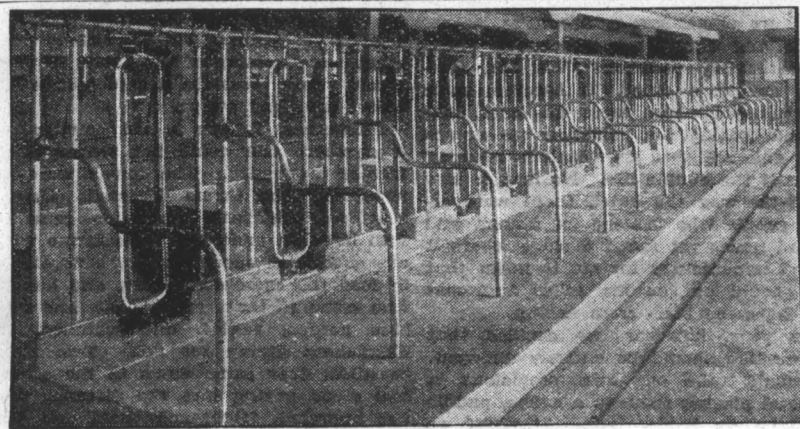
Sore Feet.—Feeding Pigs Buttermilk.—We read veterinary department with interest and have derived much benefit therefrom. Have an ox with sore fore feet; heels are cracked open and wound discharges some pus; have applied a liniment made of equal parts ammonia, kerosene, sweet oil and turpentine, but it does not seem to do the work. The feet have a bad odor. Would also like to know if buttermilk can be fed with safety to pigs six weeks old. Some hog raisers tell me it will do them harm. J. S., Allegan, Mich.—Apply 1 part carbolic acid in 15 parts water; also apply equal parts oxide of zinc, powdered alum and iodoform. The feet should be kept as clean as possible, especially away from barnyard filth. The liniment you applied must have made the sores worse. If you feed buttermilk to your young pigs add a small quantity of cooking soda with it—a teaspoonful to every 3 or 4 qts.

Bog Spavin.—Thoroughpin.—Have received some valuable information from the veterinary department. My five-year-old mare has bog spavin and thoroughpin which first made appearance a few days ago. Both of these bunches developed quite suddenly, but are not causing lameness. I have been using her for light work and when not working she runs in pasture lot. Have applied a liniment that acts as a mild blister and put it on twice a day, but it fails to reduce bunches. Can she be cured, or the bunches at least reduced, and will it hurt her to do light work? A. J. G., Marcellus, Mich.—Apply 1 part tincture iodine and 3 parts spirits camphor to bunches every day or two. Using her moderately will do her no harm? Bunches of this kind are difficult to reduce during the hot months; however, treatment always reduces them somewhat during cold weather. Had this injury been going to produce lameness it would have done so before now.

Roarer.—Heaves.—Middle-aged horse has heaves. A few years ago he had distemper and heaved some; after that he apparently got over it and caused me no trouble until this spring. He now heaves all the time, rattles in head and throat, coughs, wheezes and has a nasal discharge. He also has trouble drinking. This horse does not gorge himself with hay as I have seen broken-winded horses do. W. B., Saline, Mich.—From the history you give, I am inclined to believe that your horse is incurable; most of his trouble, however, is in the throat and head. A surgical operation on the throat might give him relief, and this I believe is the only remedy. His vocal chords are perhaps paralyzed, causing him to wheeze, or the throat may have changed somewhat at the time he had distemper—enough to cause difficulty in breathing and drinking. Give 2 drs. powdered sulphate iron, 2 drs. muriate ammonia and 1 dr. powdered lobelia at a dose in feed two or three times a day. A broken-winded horse should be fed no clover, nor musty, dusty, badly cured fodder of any kind. Grain and grass are best in summer, and if you feed him dry fodder it should be wet with lime water, which is made by dropping a pound or two of lime into a bucket of water; pour off the first water, then refill and use.

Sitfast.—My three-year-old colt has a hard bunch on shoulder caused by hard work when doing heavy plowing. G. H. B., Jeddo, Mich.—Dissolve ¼ lb. sugar of lead, 3 ozs. sulphate of zinc and 2 ozs. of tannic acid in a gallon of cold water and apply to shoulder three or four times a day; besides, wetting the bunch with salt water will help reduce the swelling and if the bunch has no soft center avoid opening it, but it may be necessary to remove a portion of the face of collar in order to prevent undue pressure on bunch while the horse is working. A sitfast can never be gotten rid of without cutting it out.

Weakness.—I have a horse 13 years old that ran against a wire fence last September, at which time he nearly bled to death. The wound healed all right, but the horse has been weak ever since and when exerted seems to have heart trouble; besides, his hind quarters appear to wobble, so much so that he almost falls down. What ails him? E. F., Milford, Mich.—Your horse no doubt has spinal trouble and a very weak heart. Avoid exerting him much and give 1 dr. ground nux vomica, 2 drs. powdered buchu leaves and ½ dr. powdered digitalis at a dose in feed three times a day.



INTERIOR OF DAIRY BARN AT MICHIGAN AGRICULTURAL COLLEGE, EAST LANSING, MICH.

A. C. ANDERSON'S LETTER.

East Lansing, Mich., March 24th, 1910.

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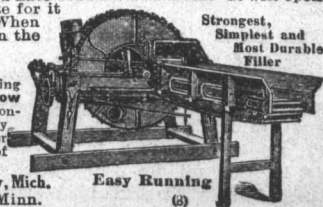
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HOME AND YOUTH

THE OLD WATERMILL.

BY ALONZO RICE.

'Neath shadows of yon vine-clad ledge
The old-time watermill, aloof
From dreary wastes of sand and sedge,
Leans, with its broken roof.

The barren rafters lift on high
Their signals of distress, and dark
They gleam against the summer sky,
Lone, featureless and stark.

Half-open swings the creaking door;
But beams of morning, fair and sweet,
Across the threshold bring no more
The sound of hurrying feet.

Above where worn and lichen'd eaves
Filter the sunshine and the rain,
In tireless mood, the spider weaves
His radiating skein.

The leaves of many autumns sleep,
Winnowed about the dusty floor;
Winds of each wild November reap
And garner to the store.

The race that lent the full supply
Of water to the busy wheel,
Is but a pool where rushes sigh,
And frogs their chorus peal.

Tall trees their glossy banners flaunt
Above the channel long run dry;
And there the rain-crows hide and haunt,
Sounding their boding cry.

The miller sleeps. His monument
Is white as was his raiment when
He left the mill at night and went
Homeward along the glen.

His time in deeds that bless and cheer
He made sweet service to employ;
Gladly each day and month and year
Gave him its toll of joy.

He knew the burrs each other ground
When running without corn or wheat,
And so each day some task he found
To fill the hours complete.

His round of duties like the wheel's
Was daily made with little noise;
The roar of towns, the heartless deals,
With him found counterpoise.

And while he watched the dropping meal,
And soaring swallows circling near,
His cheerful song and whirling wheel
Made music sweet to hear.

The happy voice at last grew low;
And where the softest zephyr sighs,
His rest, by fairest flowers that blow,
The summer sanctifies.

No more the whirling water-wheel's
Insistent music greets the ear;
No song nor laughter upward steals
When early stars appear.

But often comes to fancy's sight,
At twilight, by the open door,
The miller, in his vesture white,
A moment—and no more!

BACK TO NATURE.

BY ELIZABETH L. STOCKING.

Tom and I had never spent a really soul-satisfying vacation. We had generally sought a quiet (?) hotel in some secluded spot where there was good fishing and boating, but somehow we seemed never able really to get "back to nature," and lead the simple life. No matter how out-of-the-way the hotel, there were always people who dressed for dinner, and we had never yet found a place where it seemed unnecessary for me to insist that Tom should put on his collar and coat when he came back from fishing.

This year, however, we decided that our vacation should be entirely different. We would take our own provisions, a tent, and placing them in a canoe, paddle down the Au Sable river. At night we would pitch our tent and make a camp-fire. We would live like free children of the forest.

How we dreamed of the days we would spend gently drifting down the stream, Tom lazily plying an occasional paddle, while I rested among the cushions drinking in the beauties of nature or reading aloud from one of our favorite poets.

Consequently, on a warm afternoon in August, we found ourselves in a queer little lumber town near the source of the Au Sable, with our canoe, tent, and provisions. We bought some vegetables at brigandish prices, and hired a man to help us pack our "duffel" into the canoe and get started.

I think a large portion of the inhabitants of the town came down to the river to see us off. Among them was a stately old Indian wearing a silk plug hat, his breast covered with medals and badges. One man told us that he was the chief of all the Indians left in that part of the state.

The Au Sable proved to be a narrow, rapid stream. Our canoe was loaded heavily, and when we were fairly launched it rocked so that I cried, "O, Tom, I'm frightened!"

"It's just because I forgot to part my hair in the middle this morning," explained Tom with provoking calmness.

"It's shaller, lady," shouted one of the men on the shore. "No danger."

In addition to the rapidity of the current, there were a great many logs in the stream, some of them sunken below the surface, and we had to look out for them every moment. Once, indeed, we bumped against one and were nearly upset. There was no quiet drifting down the stream that night, I can assure you. We both had to work all the time with the paddles to keep the boat straight and to avoid the snags.

"This, Edith, is the simple life," remarked Tom breathlessly.

It had been almost dusk when we started. We wanted to reach our first camping-place before bedtime. As we went on, the moon came and shone splendidly, and hundreds of fireflies made the night still more brilliant.

About nine o'clock we found a suitable camping-place. My, we were tired, but we had to put up our tent, unpack our grub (that is what Tom persisted in calling it, although at the beginning of our trip I considered it a very inelegant expression), start a fire, and cook our supper.

While Tom was making the fire I went down to the river to get some water, and saw, coiled up on a rock, a big black snake—a perfect monster. I gave a yell and ran, and Tom came hurrying to see what was the matter.

"That won't hurt you, honey," he declared. "We're just getting back to nature. Weren't you talking about reaching the garden of Eden? Well, this is it, snake and all."

"The snake is the only thing here to remind one of Eden," I retorted, rather crossly I am afraid.

O, we were hungry! I don't believe I ever before tasted anything so good as that bacon, camp biscuit and coffee. Soon after supper we rolled ourselves up in some blankets and dropped into perfect oblivion until morning. We might have been bitten by snakes or gobbled up by bears and never have known it.

The next morning, after we had eaten our breakfast, with a dessert of huckleberries which grew thick all about our camp, we packed up and started onward. There was no chance for lingering, as the time for our trip was limited, and we must cover a certain distance every day.

The stream got more rapid, wider, and deeper, as we went on, and the fiction of the lazy drifting grew more and more remote. On one side of the river was marshland, on the other, low hills. It had been a rich lumber district, but the trees were nearly all gone. There was a growth of underbrush, poplars, scrub pine, and some silver birches, but the stately white pines were a thing of the past. In many places were desolate tracts where the forest fires had swept.

Altogether, it was a sad country, for everywhere one could see traces of its former prosperity. The towns were depopulated, the farms deserted. Only a scattered, shiftless population remained who lived on miserable little farms without enterprise enough to raise vegetables to feed the campers, fishers, and hunters who come to that region. We saw some blue herons, eagles, and watched, the kingfishers diving for fish. Two sleek, beautiful deer came down to the stream and stood gazing into the distance until our approach frightened them and they scampered away.

Shortly after we had seen the deer we noticed a flock of ducks rising from the bank of the river. We heard a shot, then another one, and a bullet whizzed by close, close to my face.

"Oh, oh!" I screamed, and Tom dropped his paddle and turned white at my narrow escape.

Two men came running down to the river bank. I was excited and began scolding them.

"You ought to be arrested for criminal carelessness," I cried. "You came very near murdering me."

The men were desperate looking fellows, poachers undoubtedly. They just laughed, and one of them remarked: "You seem to be a long way from dead yet."

Well, we kept on down the river, paddling all day and camping at night. Sometimes the mosquitoes were thick and swarmed about Tom while they let me severely alone. Tom smeared himself with a black "mosquito dope" which made him look like a negro. If I had not seen him put it on I certainly would not have believed that he was my own husband.

We came to a little town that is twenty-eight miles from a railroad. There we talked with an old man who had several grown-up sons, none of whom had ever seen a railroad train. We camped a little

way outside of this town, and while we were there an old German came along with some eggs in a wagon. Being anxious to secure some of the eggs, we inquired the price.

"Vell," he replied, "I don't know what dey sell for today."

We told him what we had paid for eggs a day or two before.

"Vell, I don't know," he said. "I go to town ant find out how much today."

We argued with him, and tried to convince him that it would be to his advantage to sell them to us, even offering him more than we had paid before, but he was obdurate and insisted that he must go to town and learn the correct market price.

"I vill come back in von hour," he said. "If the people 'round here aren't the dumdest!" commented Tom, as the wagon leisurely disappeared down the road.

We waited two hours, but no German, and we were obliged to break camp and go on eggless.

One day, when we had been traveling nearly a week and were nearing the railroad which was to carry us the remainder of the way to the mouth of the river, we came up with two young men in bathing-suits floating down stream astride of logs. They had a tent on the shore, but they told us a story of having lost their canoe, their clothes, and most of their grub.

As we were so near the end of our journey and had a lot of provisions left, we landed, unpacked our stores, and gave them a can of cocoa, some camp biscuit, canned goods, and quite a number of other things.

Packing up again we went down the river a little further and stopped at a farmhouse.

"Where's my coat?" inquired Tom, as we landed.

We looked in the boat and finally unpacked again, but the coat was nowhere to be found. Tom remembered having it when we were talking with the young men to whom we had given the supplies.

"They must have stolen my coat, the ungrateful wretches!" exclaimed Tom.

A pathetic little widow whose husband and one son had been killed in a lumber jam, lived in the farmhouse. She had another son with her. She did not see many people and was often lonely. She seemed to think it a real treat to talk with us. We told her about the coat, and she was very sympathetic and said she would try to find something. She finally produced a coat that had belonged to her husband—a little old-fashioned pepper-and-salt affair, considerably too small for Tom, but as it was the only thing available, Tom managed to get into it. He looked so funny I could hardly keep from laughing, but we both appreciated the kind-heartedness of the widow.

We waded down a sandy road to the track, carrying our canoe, tent, etc., and sat down in the shadow of an old box-car to wait. Fifteen minutes passed, and as the train hadn't come, Tom said: "Suppose we read one of those books you brought. It would be too bad to carry them all the way here and back without looking into them."

I produced "The Marble Faun," and let me tell you that we read it nearly through before that train appeared. Finally, after several hours, we heard it coming, the engine puffing and snorting as if it were protesting every yard at the load it had to carry.

Tom climbed onto the box-car and waved his handkerchief tied to a stick, and the train came to a stop. It consisted of a number of truck cars loaded with logs and one passenger coach divided into two compartments.

"First or second-class?" asked the conductor.

"O, first-class," responded Tom in his most lordly manner, whereupon we were directed to one of the two compartments, a stuffy little affair occupied by a dozen rather rough looking men, two women, and a baby.

When we reached Au Sable, at the mouth of the river, we went to the hotel. I saw the proprietor sizing us up as we asked for a room. Judging from the kind of a room he gave us, I fear his impressions were not altogether favorable. Not that I blame him. Tom had on the queer pepper-and-salt coat, a large berry stain on the front of his pants, and a cap which had seen many tribulations, while I wore a suit in which I had slept some of the coldest nights, and a hat trimmed with some very sad and drooping flowers.

We went to the dining-room for our supper and sat at a table with quite a dressy lady and gentleman who regarded us with curiosity and some scorn, I thought. The lady wore a very handsome

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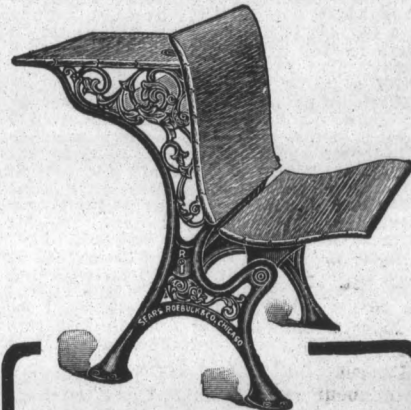
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diamond pin. Tom has kind of a weakness for jewels.

"Isn't that a beautiful diamond?" he whispered to me.

The lady must have heard, for she darted a glance of suspicion at us.

Almost directly after supper we went to our room, but such a room! There was a cracked mirror, a dilapidated washstand, two or three chairs, and the legs of our bed were set in small tin cans partly filled with kerosene.

"I wonder whether that's to keep 'em in or keep 'em out," remarked Tom thoughtfully.

In a hall right next to our room a wheezy piano played until the small hours of the night and the sounds of revelry were heard. I spent the night dozing in a rocking-chair, but Tom stretched himself on the bed and slept the sleep of the weary and the just.

We had breakfast again with the dressy lady and gentleman. I noticed that she did not have on her diamond pin.

They rose from the table at the same time as we did and, in some awkward and inexplicable manner, Tom managed to collide with the lady. Of course, he apologized, but the silent and stony stare with which she regarded us both was withering, to say the least.

An hour later we came down from our room, bag and baggage, prepared to board the Detroit boat which was to leave in half an hour.

As we entered the corridor of the hotel we beheld an excited group, the center of which seemed to be our lady of the breakfast table.

"Here they are!" she declared in a loud voice as soon as we came into view.

The proprietor walked over to us and seized Tom firmly by the shoulder.

"This lady accuses you of stealing her diamond," he stated.

"Well, then, she lies!" declared Tom hotly.

"Listen to that!" cried the woman. "He purposely bumped against me in the dining-room. The diamond was in my pocket. Now it's gone."

My, Tom was mad! "I want you to understand," said he, "that I am treasurer of the firm of Mayfield & Co., of Detroit. You can telegraph and find out all about me. This is an outrage!"

"It would be easy enough for him to give some other man's name," broke in the woman's husband.

"And look at him!" shrieked the woman. "Does he look like the treasurer of Mayfield & Co.?"

"My good man," interposed the proprietor of the hotel, "unless you give up the diamond immediately it will be necessary to detain you until this afternoon when you can have a court hearing, and we will have to ask this officer to do his duty," motioning to a policeman who stood near.

Tom clenched his fists and looked defiant, and I could hardly keep from crying.

Just at this crucial moment the housekeeper of the hotel appeared carrying a wastebasket in one hand and a small crumpled wad of paper in the other. Behind her, looking rather frightened, came a young woman in a white apron.

"I just found this in the wastebasket," said the housekeeper, opening the wad of paper and revealing—the diamond pin. "Bein' a honest woman, I brought it to you," handing it to the proprietor. "The chambermaid must have throwed it in the basket by mistake."

"I thought it was just a piece of crumpled paper lying on the dresser," explained the girl.

"It's mine—my lost diamond," cried the dressy woman. "I thought I put it in my pocket. I must have left it on the dresser. 'Well, I'm sorry I accused you, sir, but I thought by your appearance—"

"You can't always tell by the looks of a toad, Marie, how far he will jump," interrupted her husband with a loud but somewhat embarrassed laugh.

"No," said Tom, looking like a thundercloud, "that's what I've just been finding out."

An hour later, Tom and I were sitting in a secluded corner of the Detroit steamer, hoping that neither friend nor foe would spy us.

"What a restful vacation we've had, Tom!" I remarked, with a bit of wicked sarcasm, I fear.

"This has been a fine trip, Edith," declared Tom. "We've got back to nature at last. We've found out how the pioneers roughed it. We've had experiences and adventures. I feel just bully. I want to go again next year."

But I didn't feel quite so sure that I wanted to.

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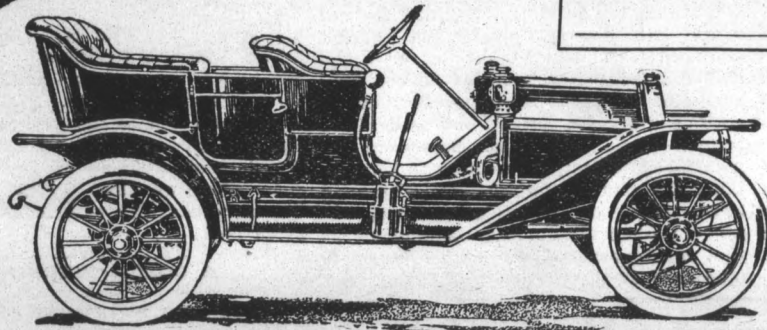
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WOMAN AND HER NEEDS

A LITTLE TALK ON FLETCHERISM.

Its Rules and Claimed Results.

IF I was as fat as that fellow I'd Fletcherize," remarked the slim chap on the back platform of a car as a fat man waddled out the front door.

"Come to think of it, you look as though you needed Fletcherizing yourself," replied his friend, and then the laugh was on the first speaker.

What sort of principle is this that makes fat folks thin and thin folks fat, wondered many. And the answer epitomized is, simply a sane method of eating. The theory was worked out by Mr. Horace Fletcher, who, at the age of 40, found himself an old man; refused by life insurance companies as a "bad risk;" weighing 217 pounds though but five feet six inches tall; afflicted with indigestion, and subject to attacks of influenza every six months. Mr. Fletcher decided that, as the body is kept going by what is put into it, a sane, natural manner of eating ought to keep it in a normally healthy condition. He immediately set about trying to find out what is the natural way of eating, and having experimented on himself until returned health, strength and vigor showed him he was right, he began preaching his doctrine to others. His principles he has reduced to five simple rules.

Wait for a real appetite.

Select the food called for by your own appetite, not something suggested to you by someone else.

Get all the good taste possible out of the food by thorough mastication and insalivation. If the food is a liquid, sip it slowly and hold in the mouth to get the taste. If a solid, chew it slowly until it is thoroughly divided and "swallows itself."

Enjoy your meals and do not let any gloomy thoughts keep you from getting all the good there is out of the process of eating.

Eat as long as your appetite calls for food. Then stop eating and wait until nature calls for another meal. Do not eat three times a day just because the meals are there. Eat only when hungry with a true, earned appetite, not the gnawing hunger of indigestion.

Mr. Fletcher, himself, usually eats but two meals a day, sometimes only one. He does not advise others to follow his example because he finds he needs food only that frequently. Instead, he urges each person to study his own individual needs, because he recognizes the fact that different bodies call for different treatment. Certain forms of work call for greater expenditure of energy than others, and thus the body would call for more food. Each person must then be a law to himself.

"Trust to nature" is Mr. Fletcher's slogan. He is a firm believer that nature knows what she wants and that if we listen to her voice she will call for what she needs. For this reason the followers of Fletcherism have no cut and dried rules of diet. The founder of the cult does not feel his appetite calling for meat, so he does not eat it. But he does not, for that reason, urge everyone to give it up. He does, indeed, say that he believes people who follow his rules of simple living will not feel their appetite calling for meat, but if it does call for flesh, then eat it.

The whole scheme is so simple, it is hard to understand how it can benefit us. Eat only when truly hungry, eat slowly and get all the good out of the food, all the taste there is in it, swallow only when the food slips down of itself, do not eat a crumb when appetite begins to lessen, and think only cheerful thoughts while eating.

It is hard to see how such a scheme can work such wonders in health as the Fletcherites claim for it. Yet Mr. Fletcher has reduced his weight by it from 217 pounds to 170; has increased his powers of endurance so that on his fiftieth birthday he rode nearly 200 miles on his bicycle and got up next morning and took a little spin of 50 miles before breakfast, and has broken endurance records set by the world's athletes, without athletic training of any sort.

He believes that most of the ills to which flesh is heir come from overeating and over drinking. If we take more than the stomach can digest and the excretory organs can throw off, it simply remains in the system to putrefy and engender poisons.

It is such a simple thing it seems a pity all can not try it, especially the poor dyspeptics who are dragging out a life of misery. Just a little more time at table, would solve the problem. Half the cranky, disagreeable folks in the nation are made so by the way we Americans bolt our food. We are always in a hurry to eat and rush back to work or to play.

Why not try to stop everything for say a full half hour at meal time. Forget work, worry, business, care of all sorts, and for those few minutes devote ourselves to the really all-important task of getting the most out of our foods. No farmer would expect his horses or his machinery to last six months if he gave them the sort of care he gives his own body. Surely our bodies are of more importance than the dumb animals or insensate machinery. Then let us begin to take care of them.

DEBORAH.

Michigan Country Women as Money Earners.

No. 8.

Boarding and Raising Thoroughbred Dogs is Fascinating Work.

HOW many women have thought of caring for dogs, or breeding them, as a means of earning that extra money they want for their very own? Mrs. Alex. Hay, of Wayne Co., manager of Glengarry Kennels, has found it a most profitable business, as a china cabinet filled with handsome silver trophies, and kennels full of valuable dogs will testify.

Ten years ago, Mrs. Hay started in a small way with thoroughbred collies. Four years later she added Boston terriers to her kennels, and for the past six years has devoted most of her time to breeding these high priced canines. Besides, she boards from 50 to 60 dogs every summer while the owners are away on vacations, and from these two sources makes a handsome income.

Glengarry kennels is the popular summer resort for Dogdom. The building is about the size of a prosperous



Denver's Reno.

mother and her family, are partitioned off down three sides, and fastened with grated iron doors upstairs and down. Clean straw covers the floor. The building is well lighted and sunny, and in winter is heated with a big coal stove. On either side of the building are large runways where the doggies who are good natured and friendly can run at liberty and enjoy the fresh air and sunshine.

"I should not call it easy work," said Mrs. Hay, "but it is so interesting that I do not think of the work. The dogs have different dispositions, just like human beings, and I have to study each one and learn how to handle it. I began with two females which I bought for \$35 when they were two months old. For breeding they were bred to the New York winner, Little Vet. I had to pay \$25, but when the puppies were six weeks old, they were weaned and sold for from \$30 to \$50 each, so the returns for the outlay were good. I should advise anyone beginning to buy only the best stock, even if the price is high, for in selling you can command high prices yourself.

"In selecting your stock, there are certain things to look for. In Bostons, look for a flat skull, square muzzle, good screw tail, short, straight back, straight front, and see that the dog is well up on the pads of the feet, has a good carriage, and a solid color, with a white blaze up the face and a white collar. All these things taken together make up the 100 points necessary to make your dog a winner."

Among Mrs. Hay's dogs are Champion Caddy Bell. This dog was the best in 300 at the Batavia state fair in New York. Encliffe Dora, another favorite, lacks only one point of being champion, which means, by the way, perfection.

The prize dog from Glengarry kennels, however, is Champion Hanley's Babe Boy, owned now by H. E. Dodge. He showed first at Erie where he went through his classes undefeated. In six months after his purchase by Glengarry kennels, he was the best male champion. As a sire his puppies are said to be marvelous.

The dogs are fed plenty of meat and vegetables, everything being first put through a food chopper. Stale bread and dog biscuit add to the diet and of course they are given plenty of fresh water. As the puppies are sold as rapidly as possible after weaning, which takes place at six weeks, the cost of food is not a great one.

A DOZEN WEDDINGS.

BY INEZ DE JARNATT COOPER.

The cotton wedding, first on the list, offers an excellent chance for decoration. The bride of a year has many pretty articles untouched and it is easy to give the house a dainty, fresh appearance. Serve as far as possible, white foods. For a centerpiece have a mock bale of cotton, partially covered with white flowers. At each place have one of the tiny cotton bolls. Tuck place cards carefully into the whiteness of the bolls. The bride's cake must be of the whitest, the bride dressed in white, and as far as possible have the color scheme white.

The second year brings the paper wedding. Crepe paper offers wonderful scope for decorations that are beautiful and inexpensive. Have the lamp shades covered with soft crepe paper, looped with paper roses, which can be made to look so natural. Crepe paper, stripped and ruffled at the edges, can be used for festoons. Use but one shade, blended if you will, but just one color. Yellow may be blended to brown beautifully. Dainty paper roses, from the heart of which protrudes a tiny slip of paper, on which the name is written, should be laid at each place on the luncheon table. The prizes, if games are played, can be of paper and may range from the really choice affair to a shaving pad or a paper doll to be used as booby prizes.

Third year, or leather wedding, gives the pyrography worker a chance to show her skill. If the hostess have no talent in that direction she may buy for place cards the leather postals used recently. An enormous imitation shoe overflowing

with flowers, may be used as a centerpiece. If games are played the hostess has a wide range from which to make her selections as so many leather articles are now in vogue. Black-eyed Susans make a good decoration. Pick them with long stems that they may stand as tall as possible. Fruit cans filled with water are good for this purpose. The jars may be covered with asparagus, rushes or other foliage.

The wooden, or fifth wedding, is an opportunity for the couple who are still young enough to enjoy fun. A lap supper would be best in this instance. Give each guest a wooden picnic plate. Chopping bowls may be utilized, the contents of which may be served with wooden spoons. Let shavings, clean and curly, be your only decoration. For teaspoons use tiny



Encliffe Dora.

wooden paddles. If in the city one may get small wooden churns, which make delightful favors. Let the prizes be a rolling pin for the lady and for the gentleman, a wooden hammer.

It would be difficult to have woolen decorations on the seventh anniversary but one could, as far as possible, imitate the fleecy whiteness of the lamb. The small wooly lambs, which can be bought in any department store for a few pennies could bear the place cards on their tiny backs. A bride's cake containing a ring would add to the enjoyment of the occasion.

The tenth, or tin wedding, is another occasion for fun. Tin plates, cups and spoons may be used instead of the regular service. Give small tin horns for favors. If there is a contest let a tin horn serve as a prize for the male winner and a sugar scoop for the lady. Little savings banks made of tin and so labeled may be used for the place cards, the names protruding from the slot.

At the crystal or fifteenth anniversary, the decorations can be made a thing of beauty. If you have cut glass, well and good. If not, use your service with cut glass patterns. Wash with soap, ammonia and water, using a brush, then polish until it glistens like clear crystal. Bring out all your glassware, vases and all, you will be surprised to find out how many pieces you have laid away since that time, 15 years ago, when you "started housekeeping." A toothpick holder of cut glass and a bag of glass marbles may be used as prizes. Have your centerpiece a crystal lake, which can be made with a looking glass, the frame being covered with flowers. A tiny silver painted craft, designated "The Crystal," would add a finishing touch. The place cards could be spattered with crystals of diamond dust but be careful to have but little color about them.

The twentieth wedding anniversary gives the woman of taste an opportunity to use her fine china service and display her other treasures in that line without the appearance of ostentation. If the color scheme of the rooms can stand it, use delft blue, the color of that famous china, for your decorations. Small china dolls, charmingly dressed, can bear the place cards and a china dog may be used for a booby prize, while for a first prize a dainty china dish may do service.

Another idea for a china wedding is to let all the decorations suggest China. Have umbrellas suspended everywhere; use several imitations of miniature trees and a lavish supply of flowers. Serve tea and wafers and give tiny umbrellas and fans for favors.

At the twenty-fifth anniversary the

decorations may be of silver paper and color. Let the hostess wear silver gray and in the wedding cake have a silver ring. This is an occasion for the free display of the accumulated silver of years. A pair of tiny mercury wings, so much in vogue now, cut from silver paper, would make charming place cards. A sterling spoon and key ring would do for prizes.

The thirtieth anniversary is pearl; fortieth, ruby; fiftieth, golden, and seventy-fifth, diamond, do not come to all, nor indeed many, and when they do they are often occasions of sadness, although at a recent golden celebration in an Illinois village the old people were as merry as could be. They had decorations, too, of golden color; and actually had some of their bridesmaids and ushers, they called them groomsmen in those older days, "stand up" with them and receive. And right brazenly did the old guests, when returning on the various interurban cars, wear their great bunches of golden glow; making us middle-aged folks feel real youngsters, and at least outsiders. Everything was done in the good old style. In marked contrast was a golden wedding in an adjoining town, where on a cold, bitter day, nothing but dainty ices were served to the elderly callers, many of whom had to travel several miles home after leaving the house—in a raw March wind. There are but two things to be said for these latter life celebrations. First: It is generally best to have them in the form of a reception so that elderly people, who prefer, may come and go at will, and second: if anything is served have something warm and digestible so that delicate persons, who may, from politeness and sociability, desire to partake, may not be made ill.

THE NECESSITY OF EATING MEAT AND EGGS.—No. 19.

Some time ago prophets arose who proclaimed to the world at large the cult of vegetarianism. The great good to be gained by eschewing flesh was preached, and practiced, and all sorts of substitutes for the nitrogen, or proteid, to be found in meat and fowl were hatched in the brains of the votaries of this new diet. Some even went so far as to declare that all foods should be eaten in the uncooked state, just "as nature provided them," and I have now a wonderful and curious recipe book, telling how to prepare raw foods, so that woman need no longer "unfurl the dishrag over a fiery furnace, gilded with greasy pots and plates, blood and bones," and stand there an "imprisoned vassal" instead of a "queen."

Undoubtedly many people eat far more meat than is good for them, and many more do not eat a great enough variety of vegetables. Many people can not buy the vegetables, and many who can have them for the raising do not eat them "because they do not like them." This last reason might be taken as a valid excuse if those people were always well and strong, but when they are suffering from indigestion and anaemia, biliousness, constipation and kindred ills, it would be better for them to cultivate a liking for simple home-grown vegetables, which contain many medicinal properties, and leave drugs alone.

What everybody needs is a well-balanced ration, consisting of both vegetables, meat and fruit. Each of these contains some food principle needed by the human system, and none can be omitted without having to make up that principle in some other way. Of the solid food eaten, about 55 per cent should be starch, and the remainder equally divided between proteids and fats. Experience has proven that the most satisfactory way to provide the proteids is by means of meat, fowl, fish, eggs, etc. This is the most palatable way, as everyone enjoys good meat, and it is also most economical. The proteids might be made up by using vegetables, but such large quantities would have to be eaten to make up for the amount contained in a smaller bulk of meat, that nothing would be saved.

This might not be true if everyone could eat the leguminous vegetables, peas and beans, as they contain a large per cent of proteid in a small bulk. But many people could not digest these vegetables, and would have to get their protein in the cereals.

Of course, there are times and conditions when a vegetable diet might be highly beneficial, but it should never be tried without competent medical advice and supervision. The great trouble with Americans is their proneness to fads. One person is told by his doctor to live

on a vegetable diet. Immediately he jumps to the conclusion that this is the only right way to live and preaches the doctrine to his friends. They, with their proclivity to try everything new, adopt the new manner of eating, and a fad is inaugurated. This is wrong. No one should deliberately drop meat and eggs from his dietary unless advised to do so by a competent physician. Indeed, most women would do better to eat more meat and eggs than they do, as these foods make for strength.

SHORT CUTS TO HOUSEKEEPING.

This department is opened as a means of exchange of new and successful ideas in homemaking. If you have learned something in cooking, sewing, child raising, fancy work, economy, anything which is helpful, and new, send it in. Twenty-five cents will be paid for every article used, but none will be returned. Keep your suggestions short.

When laundering a white brilliantine waist it became perfectly dry before time could be taken to iron it, so I dampened a sheet thoroughly, laid on ironing board and ironed waist on it. Continued dampening sheet and ironing until waist was thoroughly dampened. Then removed sheet and ironed perfectly dry.—Mrs. J. C. T.

To brighten carpets and take up dust moisten salt with coal oil and sprinkle over them. Sweep at once and it will leave no spots.—M. S.

A quick way to make a light and dark layer cake is to bake the dark part first. When almost done remove from the oven, pour the light part over it and replace in the oven and bake quickly.—E. L.

If pudding, scalloped potatoes, or in fact, anything covered with milk, be heated before placing in the oven, they will cook much quicker.—E. L.

To polish floors: First see that the floor is dry and free from dust; apply hot paraffine and polish with a long-handled hair-scrubbing brush, heavily weighted to lessen labor. When finished you have a smooth, glossy surface.—G. W.

You will be surprised at the small amount of kneading required to make good light bread or rolls if the yeast sponge is given a vigorous beating of from three to five minutes before it is put to rise. Two risings for the sponge with a good beating each time, gives a good texture to the bread.—Mrs. H. F. G.

Prepare pieplant same as for pies. Put in an enameled basin and cover with cold water. Place on range where it will heat slowly until it reaches the boiling point. Remove and drain. This takes out the rank flavor and acid.—M. B. S.

TO DRESS UP A PLAIN WAIST.

A dainty touch is given to many shirt-waists by the adjustable pleats and ruffles. These are made either of muslin with lace edged ruffles, of muslin with lace ruffles, or all of lace and insertion, the insertion forming the "pleat."

A dainty one is made by using a strip of insertion the length of your waist from throat to belt, and sewing to it on either side a ruffle of lace to match the insertion. Equally dainty ones have a strip of hemstitched muslin with accordion plaited muslin ruffles. The ruffle on the left side is usually slightly wider than that on the right. These ruffles may be either hemstitched or edged with a tiny bit of narrow lace.

A New Trimming for Kerchiefs.

A dainty finish for handkerchiefs is the narrowest lace imaginable. Indeed, it is nothing more than a series of tiny points, or picots, not deep enough to be dignified by the term "scallops." The woman who loves to crochet could deck two or three linen kerchiefs in an afternoon with these points, using fine thread, and fashioning her own pattern.

Those Dutch Collars.

This is to be a summer for the girl with the pretty, plump neck. For her the Dutch collar is the thing. But let her scrawny sister stick to the more becoming, if warmer, stand up collar. The Dutch collars are about four inches deep, with plain or fancifully cut edges. They may be trimmed with narrow or wide lace, val or torchon or Irish crochet. Or you may dispense with the lace and embroider them, or cover them with dots in a color to match the waist with which you will wear them. If you like to sew, buy one for a quarter, get the right shape from it for your neck, and make yourself a half dozen from the bits of muslin in your scrap box. You can vary them to suit your own dresses and odd waists.

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HORTICULTURE

CUCUMBERS FOR THE PICKLE STATION.

We are trying an acre of cucumbers for the salting station that is to be erected here this summer. While we do not claim to know much about growing cucumbers, much less to tell any one how to do it, perhaps if the subject is opened up some one will give some experience valuable to all of us who are growing them.

Our advice from the factory is to plow early and work the ground often until about the 5th of June. Then mark the ground one way only and make a trench on each mark with a plow. Fill this nearly full of well rotted manure, cover lightly with soil, then drop the seed by hand several inches apart in the row and cover with about an inch of soil. Commence cultivating when the plants are about three inches high. Thin out the weak plants, leaving three strong plants in a place about 2½ feet apart in the row. Cultivate frequently, and rather shallow until the vine begins to run.

We did not follow this advice to the letter because it did not seem to be the best plan for our location. We are growing the cucumbers in a young orchard alongside of crops of strawberries, corn and potatoes, and everything is rowed both ways so as to save hand work, consequently the cucumbers had to be planted in hills and spaced to correspond with the other crops, which is three feet apart one way, and seven the other. A row of beans were planted between the rows the wide way. We used from six to ten seeds to the hill, planting with a hoe and leaving hills about level with the surface, a few being hilled somewhat and some dropped a little as an experiment. We shall not wait until the plants are three inches high but cultivate at once before the plants are up, and perhaps once a week afterward until the vines have run considerably. It would seem that if the plants are kept in rows one way like a wide matted row of strawberries by moving the vines lengthwise with the cultivator as they begin to spread, that the picking operation will be easier.

As to the furrows and manure in them, we did not think this necessary, as this ground had an application of ten loads of manure per acre in the winter and another ten in the spring, being treated in this respect the same as our strawberry bed alongside it. Considerable hoeing and loosening the soil about the plants will also be done which is not mentioned in the instructions.

In growing a few hills in the garden we have always been troubled considerably with the striped cucumber beetle and have found no really good remedy. The manager of the factory states that ashes and turpentine will drive them away, and we will add this to our list of things already tried. It is also likely that a larger patch will not suffer from these pests as would a small one. We should be glad to have some advice from experienced growers through these columns.

Calhoun Co. S. B. HARTMAN.

WAYS OF ENRICHING ORCHARD SOILS.

Nature has provided ample fertility for the growing of all the crops that man will ever need. Much of it, however, is so hidden that it is not known to any but the closest students of science, and to them only imperfectly. Much of the fertility that is so greatly needed is in the soil, and also in the water and air. There is not a rivulet connecting its flow with the ocean that does not carry tiny particles of fertility in its water.

The beds of sluggish streams, lakes and the great oceans are strewn with the washings from the land, and their waters hold in solution mineral salts that plant life may utilize in some future time. The air holds carbon in the form of gas that yields the principal material from which all woody substances are built, and also one of the most invigorating agents, nitrogen, known to plant life. These are boundless in extent and inexhaustible in quantity.

Along with all other cultivators of the soil the fruit grower must know the sources of supply of the plant food that he must have and how to secure them whenever needed. Practically all of us look first to the barnyard for plant food. This is, largely, the most natural and reasonable thing to do. A large part of the animal waste and also the vegetable

waste of the farm finds its way to the manure piles about the stables and feed lots.

Barnyard refuse contains the very elements that plants need to cause them to grow vigorously. But the supply is often insufficient and we ought to know what they are and how to provide them in suitable quantities at moderate cost.

There are certain elements that plants must have in such proportions as they require, or else suffer. They must also have them in available forms. There are, according to the best scientific men, thirteen of these elements in all. Almost every tillable soil contains all of them in sufficient amounts for the ordinary needs of plant growth except about four.

One of the latter materials is lime, and this is only needed to be applied occasionally. On certain soils that are acid in character, from too much decaying vegetable matter, or that are naturally deficient in lime, it pays to apply it.

Lime that has been slacked for a long time should never be put on land, because it has gone through a chemical change that makes it of little value. It is best when perfectly fresh, and if possible, un-slaked, but ground fine. Twenty-five bushels per acre is sufficient and will do for years. An orchard or any other fruit plantation that needs liming will show the benefits by invigorated growth and better bearing.

Of the three leading elements that are most likely to be needed in enriching the soil, nitrogen, phosphorus and potash, the former is by far the most costly to procure in a commercial way, and yet the cheapest, by taking advantage of nature's provision.

Nitrogen is a gas and four-fifths of the bulk of the air is composed of it, and in a state of purity. In chemical combination with other elements it becomes plant food in the soil and is found there in abundance, in what we call rich soils. What we call poor soils are always sure to be wanting in nitrogen.

Plants cannot feed directly on the nitrogen of the air, but it is a most fortunate fact that there is a class of plants that can and do extract the nitrogen from the air and store it in their roots through the agency of bacteria. These are the legumes, of which the clovers, peas, beans and other pod-bearing plants are prominent examples.

Nitrogen Gatherers for the Orchard.

When the bacteria have once fixed the nitrogen in the soil it is in available condition for any future crops that may be grown and it will also add humus to the soil which is usually much needed. There is no crop that will yield larger return for every fruit grower for small outlay than a crop of some kind of nitrogen gatherer in the orchard. It will invigorate the growth of the trees to have a crop of this kind plowed under, and at almost no cost except labor.

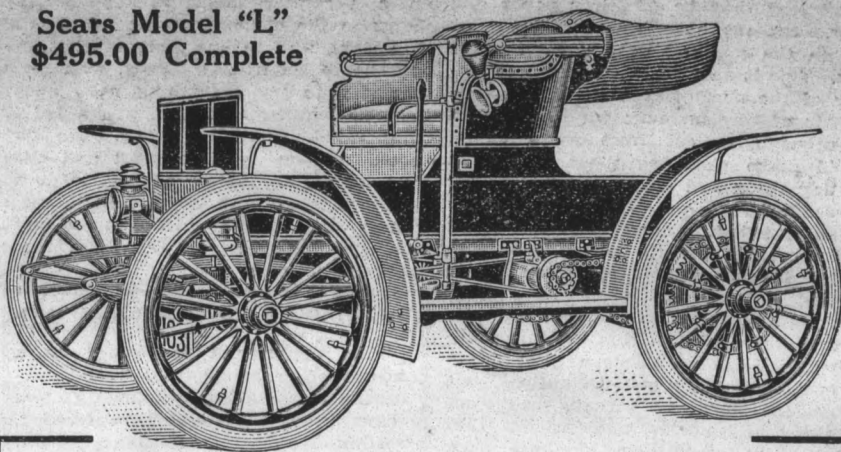
From my own experience with crimson clover I believe it is worth fully \$20 per acre to an orchard. It will not succeed over so wide an area as the common red clover, but where it does succeed it has the advantage of being quickly grown and turned to account, because it is an annual. Crimson clover should not be allowed to grow to maturity in an orchard, but be turned under by the time it has begun to bloom. Otherwise, it may sap the soil of too much of its moisture. An orchard needs early and thorough tillage and this should not and need not be defeated at the expense of securing a good crop of crimson clover worked into the soil.

Another most valuable crop for growing in an orchard for the purpose of adding nitrogen to the soil, and humus as well, is the cowpea. It was thought for many years that this crop was only suitable for the southern states, but this has been found to be a mistake. It has been grown with good results as far north as Wisconsin and New York. In northern sections only the earliest kinds should be planted. Although cowpeas will do well when sown broadcast it is better to plant them in drills about two and one-half feet apart and cultivate at least twice. From half a bushel to a bushel is enough for an acre. This will insure a stand, provided the seed is good, that will cover the ground completely.

It is best to leave the crop to mature and rot on the ground, that all of the fertility may be added to the soil when plowed under after frost or the next spring. An orchard so treated will be wonderfully stimulated by the nitrogen gathered from the soil and stored in the pea roots. The soil will also be loosened and made more porous by reason of the humus that is added to it.

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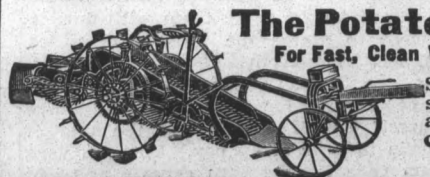
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